

**GEL**

**Engineering of NC INC**

an affiliate of **The GEL Group INC**

## **PRELIMINARY SITE ASSESSMENT REPORT**

**3050 Old Cullowhee Road (SR 1002)  
Arnold Ashe Property, Parcel 011  
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

April 30, 2014

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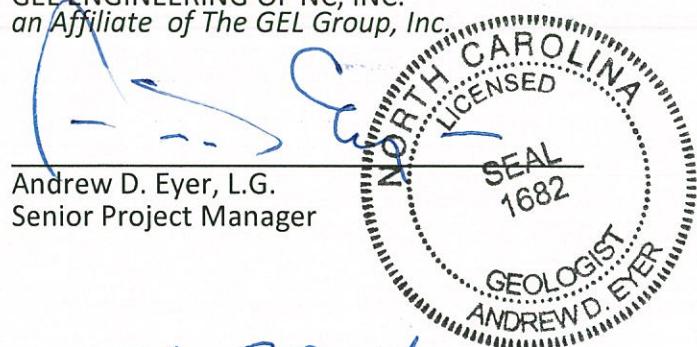
## Signature Page

This document, entitled *Preliminary Site Assessment Report*, has been prepared for the Arnold Ashe Property, located at 3050 Old Cullowhee Road (Parcel 011) 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.

GEL ENGINEERING OF NC, INC.  
an Affiliate of The GEL Group, Inc.

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

Date



04-30-14

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**Jackson County**

### **Executive Summary**

The subject site is the WNC Ventures, Inc. property (Parcel 011) located at 3050 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 North Carolina Department of Transportation (NCDOT) existing and proposed Rights-of-Way (ROWs) and easements adjacent to Parcel 011, as a result of previous and/or current operations at the subject site.

Parcel 011 contains an unoccupied one-story building and basement in the northern portion of the Parcel, and an occupied residence in the southern portion of the Parcel, that currently is currently vacant. North Carolina Department of Environment and Natural Resources (NCDENR) Groundwater Incident No. 7281 was assigned to the Cullowhee Service Center in 1990 following the removal of five petroleum USTs. The five former USTs were replaced with four petroleum USTs in 1990. Based on a review of files at NCDENR's Asheville District Office for Incident No. 7281, the "Cullowhee Service Center" evidently encompassed Parcel 013 and the northern half of adjacent Parcel 011, which shared a common front parking area where the five former USTs were previously located. The Center included a "gasoline retail store" and auto repair shop at Parcel 013, and a restaurant at Parcel 011. An active groundwater remediation system (recovery and treatment of impacted groundwater beneath Parcels 011, 013, and 015) was shut down in 1998, and corrective action since 1998 for Incident No. 7281 has consisted of groundwater monitoring and reporting.

## **Executive Summary (continued)**

GEL performed a preliminary site assessment within the NCDOT westerly ROW and proposed easements adjacent to Parcel 011 in December 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, and it has been concluded that there are no USTs present within the existing and proposed ROWs and proposed easements adjacent to the site.

Soil samples were collected for analysis from three borings, S11-1, S11-2, and S11-3, constructed within the preliminary site assessment investigation area. The soil samples were analyzed for diesel range organics (DRO) and gasoline range organics (GRO). GRO was not detected in any of the samples, but DRO levels exceeding the NCDENR action level of 10 milligrams per kilogram (mg/kg) were detected in two samples, S11-2 and S11-3. In addition, benzo(a)pyrene was detected in soil sample S11-2 at a concentration exceeding the Maximum Soil Contaminant Concentration (MSCC) established by NCDENR for benzo(a)pyrene.

Based on the detection of elevated DRO concentrations in the S11-2 and S11-3 soil samples, it is estimated that there is an approximate total volume of 415 cubic yards of impacted soil (DRO >10 mg/kg) in the vicinity of borings S11-2 and S11-3.

A groundwater sample was collected from an existing groundwater monitoring well at Parcel 011 during the preliminary site assessment, and the sample was analyzed for volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs). No VOCs or SVOCs were detected in the sample.

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 S11-2 and S11-3 as part of planned construction activities by NCDOT be handled appropriately and further characterized for petroleum constituents, as needed.

## **PRELIMINARY SITE ASSESSMENT REPORT**

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Arnold Ashe Property, Parcel 011  
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 within the North Carolina Department of Transportation (NCDOT) existing and proposed Rights-of-Way (ROWS) and easements at the WNC Ventures, Inc. property (Parcel 011) located at 3050 Old Cullowhee Road (SR 1002) in Cullowhee, North Carolina.

The northern portion of Parcel 011 contains an unoccupied one-story building and basement and the southern portion contains an occupied two-story residence on a landscaped tract. 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 in soil within the NCDOT ROWs and proposed easements at the subject site 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 area in the ROW and proposed easements on the west side of Old Cullowhee Road fronting Parcel 011 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 011.

North Carolina Department of Environment and Natural Resources (NCDENR) Groundwater Incident No. 7281 was assigned to the Cullowhee Service Center in 1990 following the removal of five petroleum USTs. The five former USTs were replaced with four petroleum USTs in 1990. Based on a review of files at NCDENR's Asheville District Office for Incident No. 7281, the "Cullowhee Service Center" evidently encompassed Parcel 013 and the northern half of adjacent Parcel 011. The Center consisted of a "gasoline retail store" and auto repair shop located on Parcel 013, and a restaurant located on Parcel 011, all of which shared a common front parking area where the five former USTs were previously located.

According to the son of the owner of Parcel 011, Mr. Ashe, the residence located in the southern portion of the parcel is over 100 years old and has been in the Ashe family since it was built. The building has only been used as a residence, and USTs have never been located at the site. Mr. Ashe also confirmed that the structure located in the northern portion of Parcel 011 (as part of Cullowhee Service Center) has always been used as a restaurant and has never had any USTs associated with the restaurant operation.

Over 800 tons of contaminated soil were excavated from the Cullowhee Service Center parking lot in 1990 following the removal of the five USTs, and a groundwater remediation system was installed to recover and treat impacted groundwater from beneath Parcels 011 and Parcel 013, as well as the westerly portion of Parcel 015, which is located adjacent to and west of Parcels 011 and 013, as shown in Figures 2 through 4.

Based on discussions with representatives of the NCDENR Asheville District office, active groundwater remediation (groundwater recovery and treatment) for Incident No. 7281 has been completed and, as of June 1998, corrective action consists of groundwater monitoring and reporting. NCDENR indicated that it has no record of submittal of groundwater monitoring reports for Incident No. 7281 since 1998, and that a No Further Action status for the Incident has not been issued for the Incident by NCDENR.

There is currently no visible evidence of existing USTs or vents at the site, and representatives of the NCDENR Asheville District Office indicated that there are no files for the site in its database.

Two groundwater monitoring wells were observed on Parcel 011, as shown on Figure 4, and are located within the preliminary site investigation area shown in Figure 2. GEL assigned IDs of MW11-1 and MW11-2 to the wells as part of preliminary assessment. Files in the NCDENR Asheville District Office for UST Incident No. 7281 (Cullowhee Service Center) indicated that well MW11-2 was originally identified as well Q94a8, and was part of series of groundwater monitoring wells that were installed at properties located along Old Cullowhee Road by NCDENR approximately 20 to 25 years ago in an effort to locate the source of a petroleum-impacted groundwater contaminant plume that had impacted a drinking water well in Cullowhee. Well MW11-1 was originally identified as well MW-103, which was installed in 1993 and used as part of previous groundwater assessments to address UST Incident No. 7281.

The most recent groundwater quality data reported for well MW11-2 (Q94a8) is provided in a 2002 report prepared by SEI, P.C. that indicates that the well was sampled in April 2002. The data for that sampling event indicate that detected toluene, ethylbenzene, total xylenes, and isopropyl ether levels in the well exceeded the NCDENR 2L standard. The well is currently inaccessible. Northing and Easting coordinates for the well are listed in the table in Section 4.2 of this report.

Well MW11-1 (MW-103) was also sampled in April 2002, and SEI, P.C.'s 2002 report indicated that no constituents were detected above the NCDENR 2L standard. GEL sampled well MW11-1 during the preliminary site assessment conducted at parcel 011 in December 2013 because the well was accessible, and the sampling is discussed below in Section 4.2 of this report. Northing and Easting coordinates for the well are also listed in the table in Section 4.2.

### **3.0 Local Geology and Surroundings**

Parcel 011 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. The soils encountered at the site during the preliminary site assessment consisted predominantly of red/brown silty, sandy clay.

Groundwater was not encountered in borings constructed at the site 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 10 to 20 feet below ground surface (bgs). Based on the USGS topographic map presented as Figure 1, the site is located approximately 2100 feet above mean sea level. The topography in Figure 1 indicates that groundwater in the vicinity of Parcel 011 most likely flows in a westerly or northwesterly direction towards the Tuckasegee River.

#### 4.0 Subsurface Investigation

To evaluate the presence or absence of USTs and/or impact to subsurface soil within the NCDOT ROW and proposed easements for Parcel 011, GEL performed a limited site assessment that consisted of the following tasks:

- Performance of a geophysical investigation to identify the presence or absence of USTs and associated appurtenances within the northerly ROW and proposed easements of Old Cullowhee Road fronting Parcel 011.
- Soil vapor screening of soil samples collected from subsurface soil borings located within the northerly ROW and proposed easements of Old Cullowhee Road fronting Parcel 011 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 soil 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 17, 2013, within the existing and proposed ROWs and easements fronting Parcel 013, 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 011 prior to the initiation of the preliminary site assessment field activities at the site and were marked with paint.

The TDEM and GPR data did not indicate the presence of “Known USTs,” “Probable USTs,” or “Possible USTs” in the subsurface of the investigation area. Additionally, there was no visual evidence of USTs in the investigation area.

#### 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 three subsurface soil borings, S11-1, S11-2, and S11-3 at Parcel 011 on December 16-17, 2013, for analysis of total petroleum hydrocarbon indicator parameters. The soil borings were constructed within the westerly ROW and proposed easements of Old Cullowhee Road, as shown on Figure 4 and Photograph 2 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 and Existing Monitoring Wells at Parcel 011**

<b>Soil Boring</b>	<b>Depth Interval of Soil Sample Collected for Analysis (feet bgs)</b>	<b>PID Reading (ppm)</b>	<b>Northing</b>	<b>Easting</b>
S11-1	7-8	0.0	596513.078	754170.033
S11-2	7-8	0.0	596557.612	754212.296
S11-3	7-8	0.0	596591.468	754234.464
<b>Monitoring Well</b>				
MW11-1	N/A	N/A	596584.627	754215.439
MW11-2	N/A		596581.160	754219.649

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 below ground surface (bgs). Soil samples were collected at depths of 3-4 feet and 7-8 feet from each borehole. 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 direct push technology (DPT) provided by Regional Probing. 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 two borings. Therefore, to assess the subsurface soil quality, soil

samples collected at a depth of 7-8 feet bgs from borings S11-1, S11-2, and S11-3 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. Borings S11-2 and S11-3 were topped with asphalt patch material. Splits for each soil sample were submitted to QROS' analytical laboratory affiliate (KB Labs, Inc.) in Gainesville, Florida for analysis of petroleum hydrocarbon constituents using Ultra-violet Fluorescence Spectrometry, and Pace Analytical Services, Inc. (Pace) in Huntersville, North Carolina for analysis of diesel range organics (DRO) by EPA Method 8015 with EPA Method 3545 sample preparation, and gasoline range organics (GRO) by EPA Method 8015 with EPA Method 5035A/5030B sample preparation. 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.

Both the QROS and Pace results indicate that GRO was not detected in the soil samples collected from borings S11-1, S11-2, and S11-3. However, as shown in Table 1, DRO was detected in samples S11-2 and S11-3 analyzed by QROS (37.4 milligrams per kilogram (mg/kg) in S11-2 and 39.1 mg/kg in S11-3) at concentrations exceeding the NCDENR DRO action level of 10 mg/kg. In addition, QROS detected benzo(a)pyrene in soil sample S11-2 at a concentration of 0.16 mg/kg, which exceeds the Maximum Soil Contaminant Concentration (MSCC) of 0.088 mg/kg established by NCDENR for benzo(a)pyrene. A DRO level of 10.2 mg/kg was detected by Pace in soil sample S11-3, which slightly exceeds the NCDENR action level, but DRO was not detected in soil samples S11-1 and S11-2.

It is estimated that there is an approximate total volume of 415 cubic yards of impacted soil (DRO >10 mg/kg) in the vicinity of borings S11-2 and S11-3 based on the following assumed areas within the investigation area (as shown on Figure 4) and assumed depths of impacted soil:

Borings S11-2 and S11-3 Area

- 1400 square feet x 8 feet = 415 cubic yards

Existing groundwater monitoring well MW11-1 described in Section 2.0 was sampled by GEL on December 19, 2013 as part of the preliminary site assessment for Parcel 011. A groundwater samples was collected following evacuation of three well volumes from the well. A total depth of 52.16 feet bgs was measured in the well, and the water table was encountered at a depth of 22.02 feet bgs. The groundwater sample was analyzed by Pace for VOCs by EPA Method 8260B and SVOCs by EPA Method 8270D. The Certificate of Analysis for the sample is included in Appendix III. No VOCs or SVOCs were detected in the sample.

## 5.0 Conclusions and Recommendations

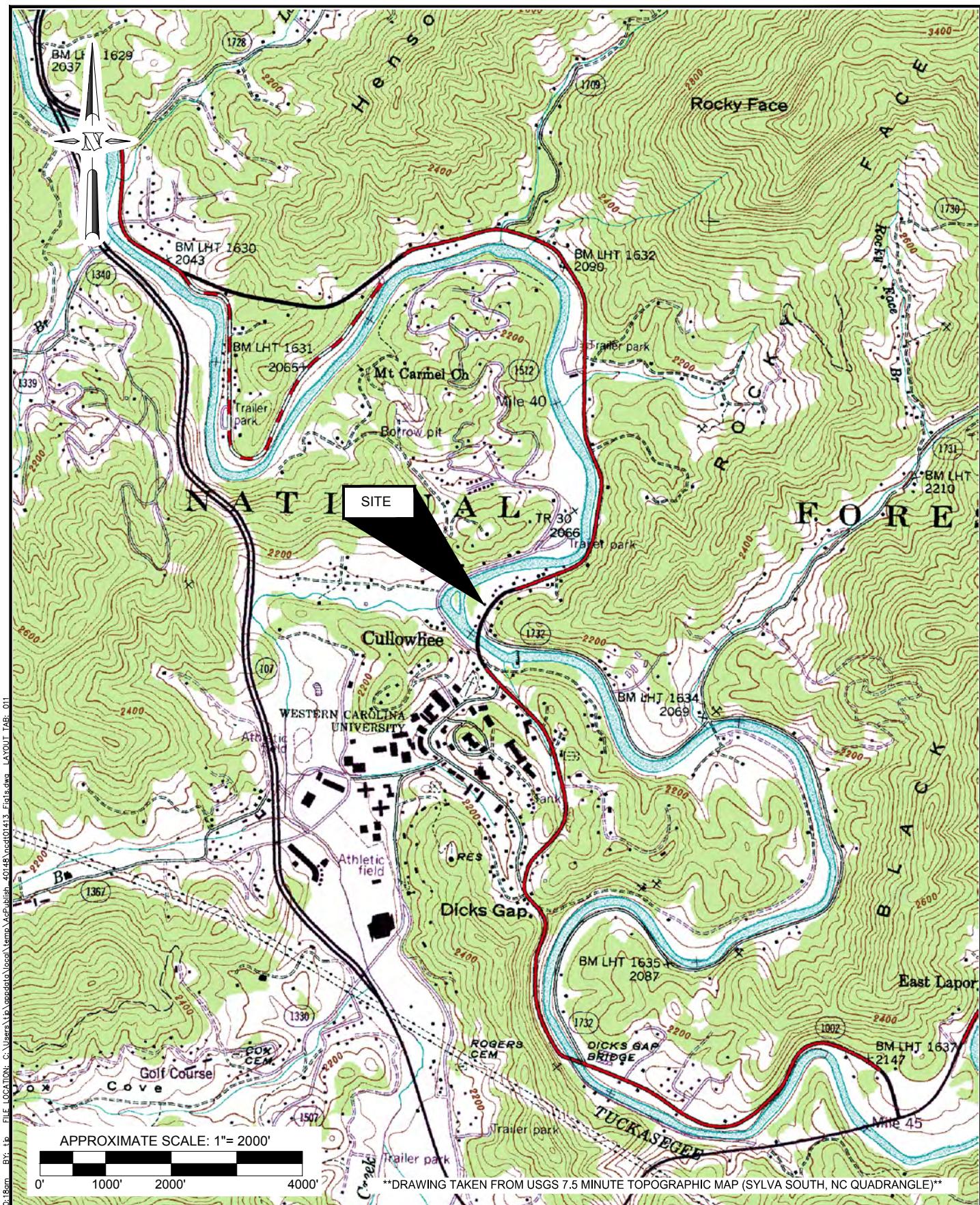
GEL performed a preliminary site assessment within the NCDOT westerly ROW and proposed easements adjacent to Parcel 011 that included a geophysical investigation, and the collection and analysis of soil samples. No subsurface anomalies indicative of suspected or known USTs were identified within the investigation area, and it has been concluded that there are no USTs present within the existing and proposed ROWs and proposed easements adjacent to the site.

Soil samples were collected for analysis from three borings, S11-1, S11-2, and S11-3, constructed within the preliminary site assessment investigation area. The soil samples were analyzed for petroleum hydrocarbon constituents. GRO was not detected in any of the samples, but a DRO levels exceeding the NCDENR action level of 10 mg/kg were detected in samples S11-2 and S11-3. In addition, one SVOC exceeding NCDENR MSCCs was detected sample S11-2.

Based on the detection of elevated DRO concentrations in the S11-2 and S11-3 soil samples, it is estimated that there is an approximate total volume of 415 cubic yards of impacted soil (DRO >10 mg/kg) in the vicinity of borings S11-2 and S11-3.

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 S11-2 and S11-3 as part of planned construction activities by NCDOT be handled appropriately and further characterized for petroleum constituents, as needed.

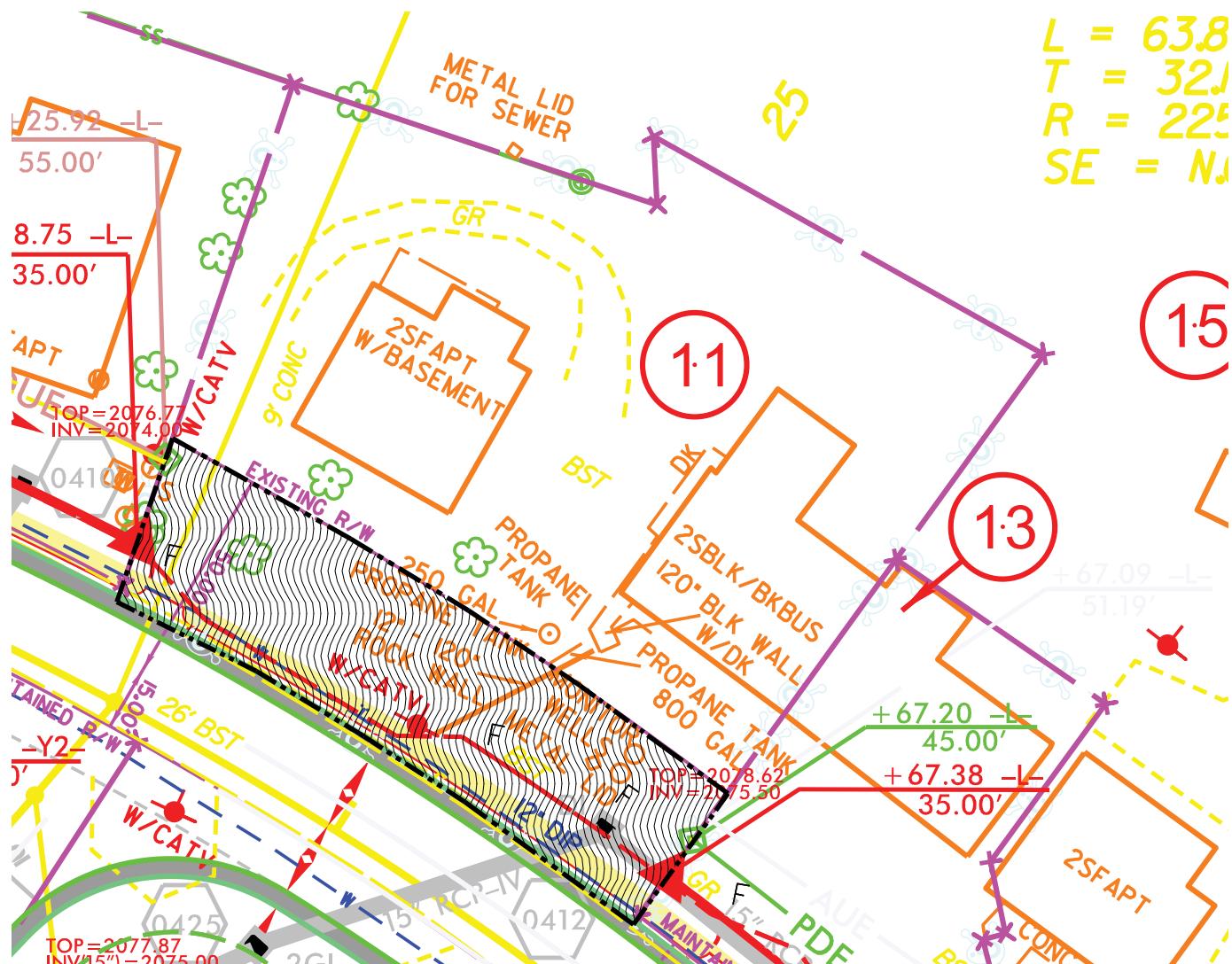
## **FIGURES**



**GEL** Engineering LLC  
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ENVIRONMENTAL ■ ENGINEERING ■ SURVEYING  
problem solved

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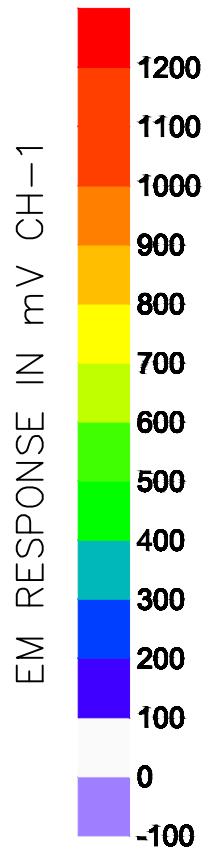
PROJECT: ndcdt01413	PRELIMINARY SITE ASSESSMENT PARCEL 011 CULLOWHEE, JACKSON COUNTY, NORTH CAROLINA TIP NO. B-4159, WBS ELEMENT NO. 33507.1.1	SITE LOCATION MAP	FIGURE 1
		DATE: February 3, 2014	DRAWN: TJP APPR.: ADE



SEE FIGURE 5 FOR  
SUPPLEMENTAL LEGEND  
FOR USE WITH FIGURE 2

GEL ENGINEERING of NC, Inc. <i>an Affiliate of THE GEL GROUP, Inc.</i>		PROJECT: nc01413	DESIGNATED INVESTIGATION AREA FOR PARCEL 011	FIGURE 2
<b>GEL</b> <small>Post Office Box 14262 Research Triangle Park, NC 27709 (919) 544-1100</small>		PRELIMINARY SITE ASSESSMENTS JACKSON COUNTY, NORTH CAROLINA TIP NO. B-4159, WBS ELEMENT NO. 33507.1.1 DATE: April 2, 2014	DRAWN BY: ADE	

SEE FIGURE 5 FOR  
SUPPLEMENTAL LEGEND  
FOR USE WITH FIGURE 3

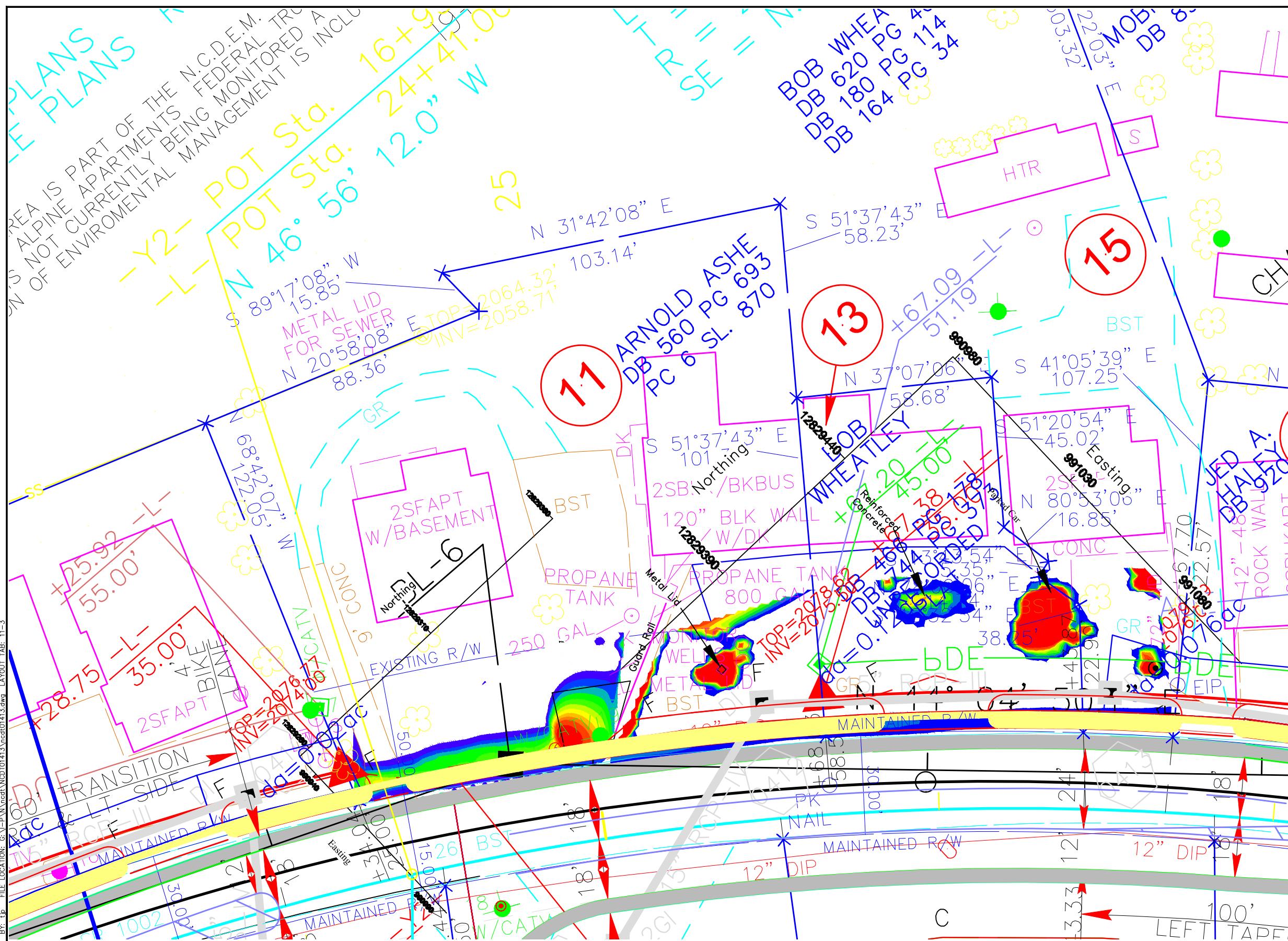
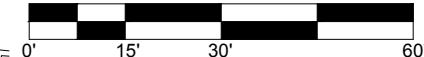


EM RESPONSE IN  $mV\ CH-1$

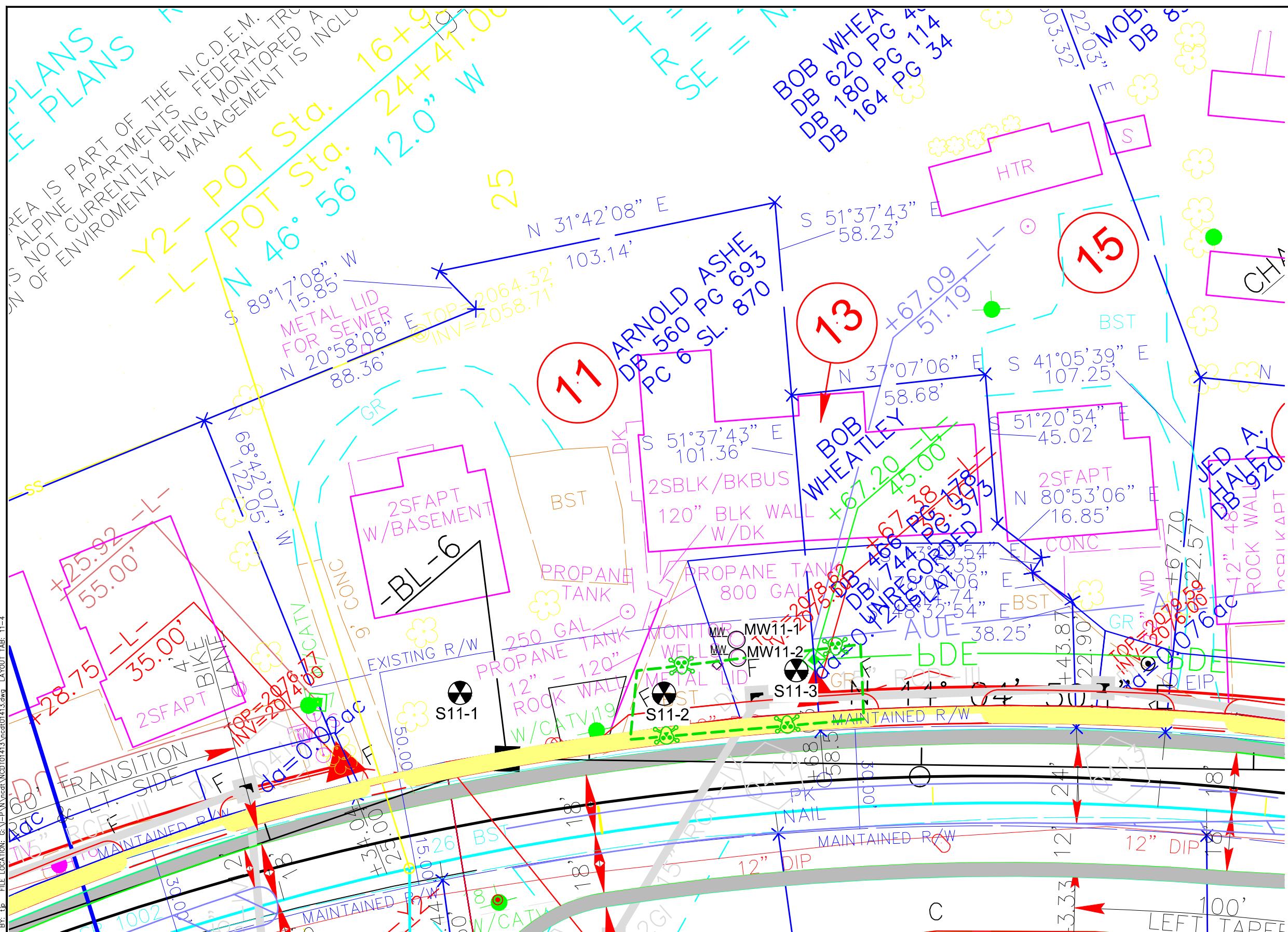
#### NOTES

1. UNDERGROUND FEATURES WERE LOCATED USING VISUAL EVIDENCE, GROUND PENETRATING RADAR (GPR), AND TIME DOMAIN ELECTROMAGNETIC (TDEM) METHODS. OTHER BURIED UTILITIES AND STRUCTURES MAY EXIST BUT WERE NOT DETECTED DUE TO LIMITATIONS OF THE GEOPHYSICAL METHODS, SITE ACCESS, AND/OR HIGH TARGET CONGESTION. THEREFORE, DUE CAUTION SHOULD BE USED WHEN PERFORMING SUBSURFACE EXCAVATION ACTIVITIES WHERE POTENTIAL CONFLICTS EXIST. GEL ENGINEERING OF NC, INC. IS NOT RESPONSIBLE FOR DAMAGES THAT MAY OCCUR. IDENTIFYING THE LOCATION OF SOME UTILITIES MAY ONLY BE POSSIBLE WITH VACUUM OR OTHER EXCAVATION METHODS.
2. FIELD SURVEY CONDUCTED ON 12.16-19.13.
3. DATA FROM GEONICS, LTD. EM-61 MKII AND MALA GEOSCIENCE GROUND PENETRATING RADAR.
4. BASE MAP PROVIDED BY NCDOT. GEL ENGINEERING OF NC IS NOT LIABLE FOR ACCURACY.

APPROXIMATE SCALE: 1" = 30'



SEE FIGURE 5 FOR  
SUPPLEMENTAL LEGEND  
FOR USE WITH FIGURE 4



84/5/11  
Note: Not to Scale

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

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO. SHEET NO.  
P-50C 4

## CONVENTIONAL PLAN SHEET SYMBOLS

### 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 UG 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 RW Marker
- Proposed Control of Access Line with Concrete CA Marker
- Existing Control of Access
- Proposed Control of Access
- Existing Easement Line
- Proposed Temporary Construction 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
- Single Tree
- Single Shrub
- Hedge
- Woods Line

- Orchard
- Vineyard

### EXISTING STRUCTURES:

- MAJOR:  
Bridge, Tunnel or Box Culvert
- MINOR:  
Bridge Wing Wall, Head Wall and End Wall
- 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
- UG Power Cable Hand Hole
- H-Frame Pole
- Recorded UG Power Line
- Designated UG Power Line (S.U.E.)

### TELEPHONE:

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

### WATER:

- Water Manhole
- Water Meter
- Water Valve
- Water Hydrant
- Recorded UG Water Line
- Designated UG Water Line (S.U.E.)
- Above Ground Water Line

### TV:

- TV Satellite Dish
- TV Pedestal
- TV Tower
- UG TV Cable Hand Hole
- Recorded UG TV Cable
- Designated UG TV Cable (S.U.E.)
- Recorded UG Fiber Optic Cable
- Designated UG Fiber Optic Cable (S.U.E.)

### GAS:

- Gas Valve
- Gas Meter
- Recorded UG Gas Line
- Designated UG Gas Line (S.U.E.)
- Above Ground Gas Line

### SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- UG 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 UG Line
- UG Tank; Water, Gas, Oil
- Underground Storage Tank, Approx. Loc.
- AG Tank; Water, Gas, Oil
- Geoenvironmental Boring
- UG Test Hole (S.U.E.)
- Abandoned According to Utility Records
- End of Information

NOTE: LEGEND WAS PROVIDED BY NCDOT

<b>GEL ENGINEERING of NC, Inc.</b> <i>an Affiliate of THE GEL GROUP, Inc.</i>	<b>GEL</b> Post Office Box 14262 Research Triangle Park, NC 27709 (919) 544-1100	PROJECT: nc01413 PRELIMINARY SITE ASSESSMENT PARCEL 011 CULLOWHEE, JACKSON COUNTY, NORTH CAROLINA TIP NO. B-4159, WBS ELEMENT NO. 33507.1.1 DATE: April 2, 2014	SUPPLEMENTAL LEGEND FOR USE WITH FIGURES 2, 3, AND 4 DRAWN BY: ADE	FIGURE 5
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## **TABLES**

**TABLE 1**  
**SUMMARY OF ANALYTICAL RESULTS FOR COLLECTED SOIL SAMPLES**

**Preliminary Site Assessment**  
**Parcel 011, 3050 Old Cullowhee Road**  
**Cullowhee, Jackson County, North Carolina**  
**State Project No. B-4159, WBS Element #33507.1.1**

Sample ID	Diesel Range Organics (DRO)		Gasoline Range Organics (GRO)		QROS Analytical Results				
	QROS	Pace	QROS	Pace	BTEX (C6-C9)	TPH (C5-C35)	Total Aromatics (C10-C35)	16 EPA PAHs	Benzo(a)pyrene
S11-1	< 0.5	< 5.9	< 0.5	< 4.9	< 0.5	< 0.5	< 0.54	< 0.05	< 0.027
S11-2	37.4	< 6.6	< 1.1	< 6.6	< 0.5	37.4	28.99	0.94	0.16
S11-3	39.1	10.2	< 2.4	< 6.3	< 1.1	39.1	29.43	0.7	< 0.122
<b>NCDENR Action Level</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>					
<b>NCDENR MSCC</b>									<b>0.088</b>

**Notes:**

- 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) Reported values exceeding corresponding NCDENR Action Levels or MSCCs are highlighted in yellow.

## **APPENDICES**

**APPENDIX I**  
**PHOTOGRAPHS**



Photograph 1: Aerial view showing boring locations S11-1, S11-2, and S11-3, and existing groundwater monitoring wells MW11-1 and MW11-2 on parcel 011. West is at the top of photo (aerial photo is from Google Earth).

**APPENDIX II**

**SOIL BORING LITHOLOGIC LOGS**

## SOIL BORING LOG

Boring/Well No.: **S11-1**

Date Started: 12/16/13

Date Completed: 12/16/13

No.	Depth Interval	Blow Counts	PID (ppm)	Soil Description	Soil Type
1	0.0' – 3.0'	--	--	Brown Sandy Silt; Moist; Noncohesive	ML
2	3.0' – 4.0'	--	0.0	Brown Silty Sand; Moist; Noncohesive	SM
3	4.0' – 8.0'	--	0.0	Red/Brown Sandy Silt with Gravel-weathered; Moist; Increasing sand with depth	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'

## SOIL BORING LOG

Boring/Well No.: **S11-2**

Date Started: 12/17/13

Date Completed: 12/17/13

No.	Depth Interval	Blow Counts	PID (ppm)	Soil Description	Soil Type
1	0.0' – 4.0'	--	0.0	Red Brown Silty Sand with Gravel; Dry-Moist; Asphalt/gravel 0'-0.5'	ML
2	4.0' – 8.0'	--	0.0	Red Brown Silty Sand with Gravel; Moist; Noncohesive	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.: **S11-3**

Date Started: 12/17/13

Date Completed: 12/17/13

No.	Depth Interval	Blow Counts	PID (ppm)	Soil Description	Soil Type
1	0.0' – 4.0'	--	0.0	Red Silty Clay; Moist; Cohesive; Asphalt/gravel 0'-0.5'	CL
2	4.0' – 8.0'	--	0.0	Red Silty Clay; Moist; Cohesive	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'

### **APPENDIX III**

#### **Certificates of Analysis and Chain of Custody Records for Soil Samples and Groundwater Sample**

## **Soil Samples**

## **KB Labs, Inc. Results**

## Hydrocarbon Analysis Results

Client: GEL ENS of NC

Samples taken

12/16 &amp; 12/17/13

Address:

Samples extracted

12/16 &amp; 12/17/13

Samples analysed

Thursday, December 19, 2013

Contact: Andrew Eyer

Operator

CSB

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-18-3	10.9	<0.5	<0.5	28.7	28.7	20.94	0.48	< 0.027	57.2	39.9	2.9	V.Deg.PHC 98.5%
s	S-18-2	14.0	<0.7	<0.7	26.7	26.7	19.79	0.58	0.07	53.6	38.9	7.5	V.Deg.PHC 80.9%
s	S-18-1	60.2	<3	<3	179.4	179.4	133.97	3.02	< 0.15	52.2	44.5	3.3	V.Deg.PHC 98.5%
s	S-19.1	11.6	<0.6	<0.6	<0.6	<0.6	< 0.58	< 0.06	< 0.029	0	0	100	Deg.Fuel 700.2%
s	S-20-2	11.4	<0.6	<0.6	<0.6	<0.6	< 0.57	< 0.06	< 0.028	0	41	59	PAH
s	S-20-1	10.9	<0.5	<0.5	3.7	3.7	3.08	< 0.05	< 0.027	55.4	37.6	7	Degraded Fuel (PFM)
s	S-11-1	10.7	<0.5	<0.5	<0.5	<0.5	< 0.54	< 0.05	< 0.027	0	0	100	Match not possible
s	S-11-2	21.2	<1.1	<1.1	37.4	37.4	28.99	0.94	0.16	44.9	37.8	17.4	V.Deg.PHC 74%
s	S-11-3	48.8	<2.4	<2.4	39.1	39.1	29.43	0.7	< 0.122	50.6	40.8	8.6	V.Deg.PHC 99.9%
s	S-13-1	10.8	<0.5	<0.5	12.4	12.4	11.6	0.43	0.08	45.3	44.7	10	V.Deg.PHC 73.9%
Initial Calibrator QC check				OK	Low Range Calibrator Final check				Low	0.067			
					High Range Calibrator Final check				OK	1.536			

Results generated by a QED HC-1 analyser

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

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

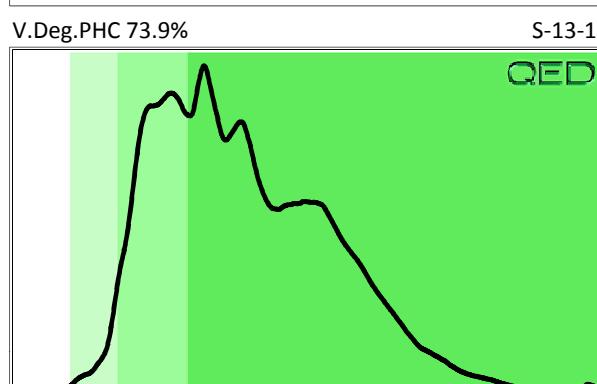
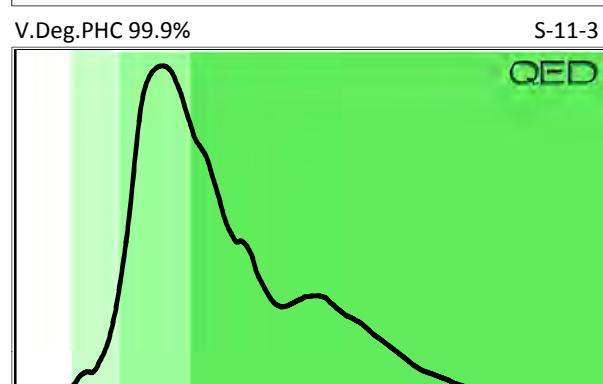
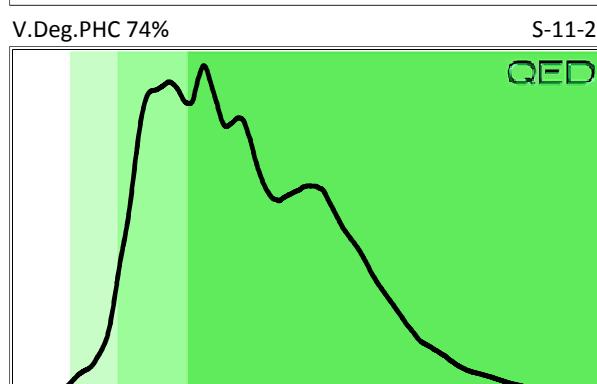
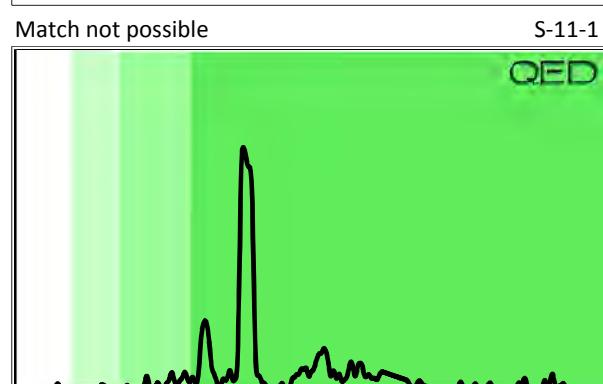
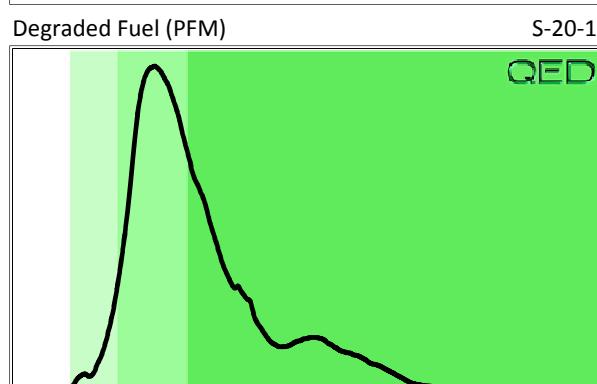
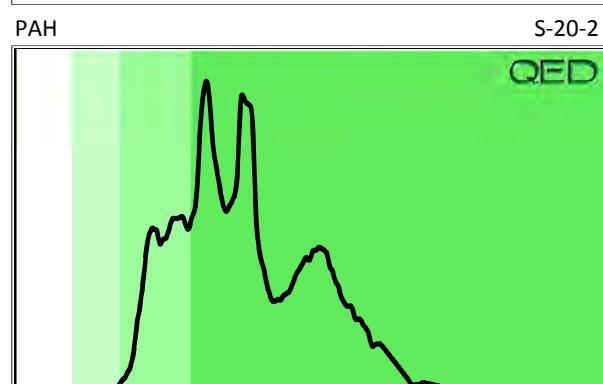
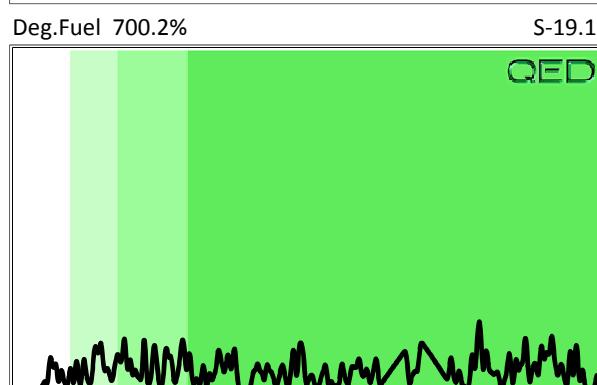
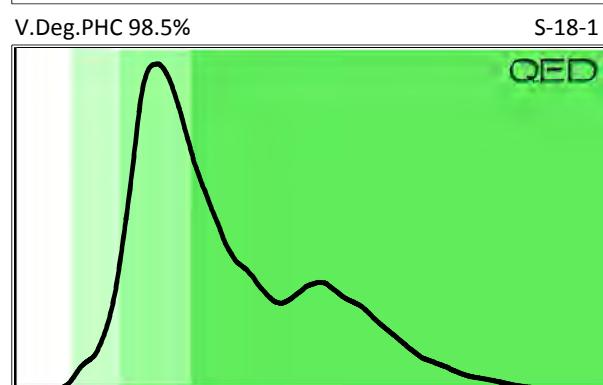
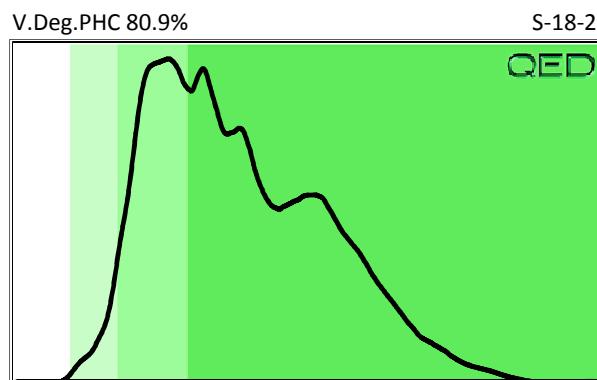
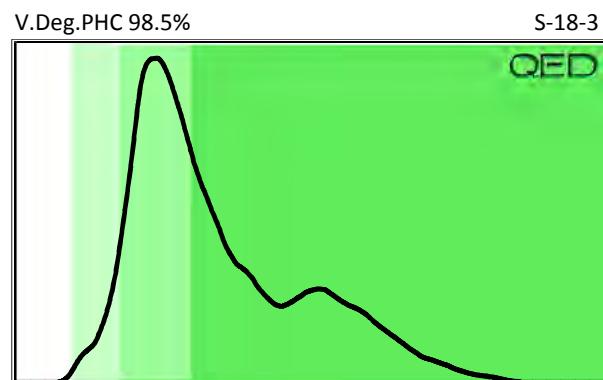
Fingerprint match abbreviations

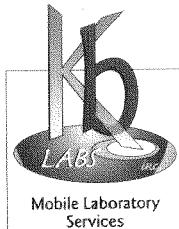
Est = Specific calibrator not used, result estimated (PFM)= Poor library fingerprint match

Soil values are not corrected for moisture or stone content

(SBS)= site specific background subtracted (LBS)= Library background subtracted

% = match confidence





# CHAIN-OF-CUSTODY RECORD

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						SAMPLE MATRIX	NUMBER OF CONTAINERS	IDENTIFY PARAMETERS DESIRED AND NO. OF CONTAINERS	PRESERVATION	
	SAMPLERS	CONTACT PERSON	BATCH # (Lab Use Only)							C Chilled	H HCL
SAMPLE FIELD ID\ NUMBER	DATE SAMPLED	TIME SAMPLED	COMP.	GRAB	DATE REC'D	TIME REC'D	STATION LOCATION / No.		LUVF	Weight (g)	Ot Other (see Remarks)
S-18-3	12/16/13	1330	X				S	1	✓	12.8	48 hr TA
S-18-2		1350	X				S	1	✓	(10)	48 hr TA Low volume
S-18-1		1420	X				S	1	✓	10.3	48 hr TA
S-19-1		1525	X				S	1	✓	12.1	48 hr TA
S-20-2		1555	X				S	1	✓	12.3	48 hr TA
S-20-1		1615	X				S	1	✓	12.9	48 hr TA
S-11-1		1650	X				S	1	✓	13.03	48 hr TA
S-11-2	12/17/13	0920	X				S	1	✓	6.6	48 hr TA
S-11-3		0945	X				S	1	✓	12.7	48hr TA
S-13-1		1015	X				S	1	✓	13	48hr TA
S-13-2		1045	X				S	1	✓	13.3	48hr TA
S-15-1		1110	X				S	1	✓	13.02	48hr TA
S-12-1		1155	X				S	1	✓	12.17	48 hr TA
S-12-2		1230	X				S	1	✓	(10)	48 hr TA Low volume
S-12-4		1245	X				S	1	✓	(10)	48hr TA Low volume
Precleaned Containers Relinquished by: (Signature) <i>Steve Rucker</i>	Date / Time	Received by: (Signature)		Date / Time	Remarks and Observations						
Belinquished by: (Signature) <i>Andrew Eyer</i>	Date / Time	Received by: (Signature)		Date / Time							

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

## **Pace Analytical Services Results**

January 10, 2014

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

RE: Project: NCDT01413 WBS33507.1.1  
Pace Project No.: 92184006

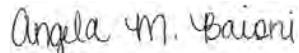
Dear Andrew Eyer:

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.

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

Sincerely,



Angela Baioni

angela.baioni@pacelabs.com  
Project Manager

Enclosures

cc: Chemical Testing Engineer, NCDOT



## REPORT OF LABORATORY ANALYSIS

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

## CERTIFICATIONS

Project: NCDT01413 WBS33507.1.1  
Pace Project No.: 92184006

---

### 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

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## SAMPLE ANALYTE COUNT

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92184006001	S-18-3	EPA 8015 Modified	NU1	2	PASI-C
		EPA 8015 Modified	GAW	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92184006002	S-18-2	EPA 8015 Modified	NU1	2	PASI-C
		EPA 8015 Modified	GAW	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92184006003	S-18-1	EPA 8015 Modified	NU1	2	PASI-C
		EPA 8015 Modified	GAW	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92184006004	S-19-1	EPA 8015 Modified	NU1	2	PASI-C
		EPA 8015 Modified	GAW	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92184006005	S-20-2	EPA 8015 Modified	NU1	2	PASI-C
		EPA 8015 Modified	GAW	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92184006006	S-20-1	EPA 8015 Modified	NU1	2	PASI-C
		EPA 8015 Modified	GAW	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92184006007	S-11-1	EPA 8015 Modified	NU1	2	PASI-C
		EPA 8015 Modified	GAW	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92184006008	S-11-2	EPA 8015 Modified	NU1	2	PASI-C
		EPA 8015 Modified	GAW	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92184006009	S-11-3	EPA 8015 Modified	NU1	2	PASI-C
		EPA 8015 Modified	GAW	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92184006010	S-13-1	EPA 8270	BPJ	74	PASI-C
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92184006011	S-13-2	EPA 8270	BPJ	74	PASI-C
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92184006012	S-15-1	EPA 8270	BPJ	74	PASI-C
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92184006013	S-12-1	EPA 8015 Modified	NU1	2	PASI-C

## REPORT OF LABORATORY ANALYSIS

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(828)254-7176

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

## SAMPLE ANALYTE COUNT

Project: NCDT01413 WBS33507.1.1  
Pace Project No.: 92184006

Lab ID	Sample ID	Method	Analysts	Analytics Reported	Laboratory	
92184006014	S-12-2	EPA 8015 Modified	GAW	2	PASI-C	
		ASTM D2974-87	TNM	1	PASI-C	
92184006015	S-12-4	EPA 8015 Modified	NU1	2	PASI-C	
		ASTM D2974-87	GAW	2	PASI-C	
92184006016	S-12-3	EPA 8015 Modified	NU1	2	PASI-C	
		ASTM D2974-87	GAW	2	PASI-C	
92184006017	S-12-5	EPA 8015 Modified	ASTM D2974-87	TNM	1	PASI-C
		EPA 8270	BPJ	74	PASI-C	
92184006018	S-12-6	EPA 8260	DLK	70	PASI-C	
		ASTM D2974-87	TNM	1	PASI-C	
92184006019	S-12-7	EPA 8270	BPJ	74	PASI-C	
		EPA 8260	DLK	70	PASI-C	
92184006020	S-12-8	ASTM D2974-87	TNM	1	PASI-C	
		EPA 8270	BPJ	74	PASI-C	
92184006021	S-12-9	EPA 8260	DLK	70	PASI-C	
		ASTM D2974-87	TNM	1	PASI-C	
92184006022	S-8-1	EPA 8270	BPJ	74	PASI-C	
		EPA 8260	DLK	70	PASI-C	
92184006023	S-8-2	ASTM D2974-87	TNM	1	PASI-C	
		EPA 8270	BPJ	74	PASI-C	
92184006024	S-8-5	EPA 8260	DLK	70	PASI-C	
		ASTM D2974-87	TNM	1	PASI-C	
		EPA 8270	BPJ	74	PASI-C	
		EPA 8260	DLK	70	PASI-C	
		ASTM D2974-87	TNM	1	PASI-C	

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

**Sample: S-18-3** Lab ID: **92184006001** Collected: 12/16/13 13:30 Received: 12/19/13 11:15 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015 GCS THC-Diesel</b>		Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546						
Diesel Components	<b>24.2</b> mg/kg		6.2	1	12/19/13 12:58	12/20/13 23:54	68334-30-5	
<b>Surrogates</b>								
n-Pentacosane (S)	62 %		41-119	1	12/19/13 12:58	12/20/13 23:54	629-99-2	
<b>Gasoline Range Organics</b>		Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B						
Gasoline Range Organics	ND	mg/kg	5.7	1	12/28/13 09:55	12/28/13 16:28	8006-61-9	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	99 %		70-167	1	12/28/13 09:55	12/28/13 16:28	460-00-4	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	<b>18.9</b> %		0.10	1			12/20/13 08:43	

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

**Sample: S-18-2** Lab ID: **92184006002** Collected: 12/16/13 13:50 Received: 12/19/13 11:15 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015 GCS THC-Diesel</b>		Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546						
Diesel Components	<b>35.9</b> mg/kg		6.0	1	12/19/13 12:58	12/21/13 00:40	68334-30-5	
<b>Surrogates</b>								
n-Pentacosane (S)	80 %		41-119	1	12/19/13 12:58	12/21/13 00:40	629-99-2	
<b>Gasoline Range Organics</b>		Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B						
Gasoline Range Organics	ND	mg/kg	5.5	1	12/28/13 09:55	12/28/13 16:51	8006-61-9	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	104 %		70-167	1	12/28/13 09:55	12/28/13 16:51	460-00-4	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	<b>16.9</b> %		0.10	1			12/20/13 08:43	

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

**Sample: S-18-1** Lab ID: **92184006003** Collected: 12/16/13 14:20 Received: 12/19/13 11:15 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015 GCS THC-Diesel</b>		Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546						
Diesel Components	<b>49.2</b> mg/kg		6.0	1	12/19/13 12:58	12/21/13 00:40	68334-30-5	
<b>Surrogates</b>								
n-Pentacosane (S)	54 %		41-119	1	12/19/13 12:58	12/21/13 00:40	629-99-2	
<b>Gasoline Range Organics</b>		Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B						
Gasoline Range Organics	ND	mg/kg	6.8	1	12/28/13 09:55	12/28/13 17:14	8006-61-9	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	98 %		70-167	1	12/28/13 09:55	12/28/13 17:14	460-00-4	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	<b>16.2</b> %		0.10	1			12/20/13 08:43	

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

**Sample: S-19-1** Lab ID: **92184006004** Collected: 12/16/13 15:25 Received: 12/19/13 11:15 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015 GCS THC-Diesel</b>		Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546						
Diesel Components	<b>7.6</b> mg/kg		6.7	1	12/19/13 12:58	12/21/13 01:03	68334-30-5	
<b>Surrogates</b>								
n-Pentacosane (S)	71 %		41-119	1	12/19/13 12:58	12/21/13 01:03	629-99-2	
<b>Gasoline Range Organics</b>		Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B						
Gasoline Range Organics	ND	mg/kg	6.2	1	12/28/13 09:55	12/28/13 17:37	8006-61-9	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	97 %		70-167	1	12/28/13 09:55	12/28/13 17:37	460-00-4	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	<b>25.5</b> %		0.10	1			12/20/13 08:44	

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

**Sample: S-20-2** Lab ID: **92184006005** Collected: 12/16/13 15:55 Received: 12/19/13 11:15 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015 GCS THC-Diesel</b>		Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546						
Diesel Components	ND mg/kg		6.7	1	12/19/13 12:58	12/21/13 01:03	68334-30-5	
<b>Surrogates</b>								
n-Pentacosane (S)	75 %		41-119	1	12/19/13 12:58	12/21/13 01:03	629-99-2	
<b>Gasoline Range Organics</b>		Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B						
Gasoline Range Organics	ND mg/kg		6.2	1	12/28/13 09:55	12/28/13 18:00	8006-61-9	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	98 %		70-167	1	12/28/13 09:55	12/28/13 18:00	460-00-4	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	<b>25.0</b> %		0.10	1			12/20/13 08:44	

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

**Sample: S-20-1** Lab ID: **92184006006** Collected: 12/16/13 16:15 Received: 12/19/13 11:15 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015 GCS THC-Diesel</b>		Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546						
Diesel Components	ND mg/kg		6.0	1	12/19/13 12:58	12/21/13 01:27	68334-30-5	
<b>Surrogates</b>								
n-Pentacosane (S)	75 %		41-119	1	12/19/13 12:58	12/21/13 01:27	629-99-2	
<b>Gasoline Range Organics</b>		Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B						
Gasoline Range Organics	ND mg/kg		5.6	1	12/28/13 09:55	12/28/13 18:22	8006-61-9	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	99 %		70-167	1	12/28/13 09:55	12/28/13 18:22	460-00-4	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	<b>16.9 %</b>		0.10	1			12/20/13 08:44	

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

**Sample: S-11-1** Lab ID: **92184006007** Collected: 12/16/13 16:50 Received: 12/19/13 11:15 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015 GCS THC-Diesel</b>		Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546						
Diesel Components	ND mg/kg		5.9	1	12/19/13 12:58	12/21/13 01:27	68334-30-5	
<b>Surrogates</b>								
n-Pentacosane (S)	71 %		41-119	1	12/19/13 12:58	12/21/13 01:27	629-99-2	
<b>Gasoline Range Organics</b>		Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B						
Gasoline Range Organics	ND mg/kg		4.9	1	12/28/13 09:55	12/28/13 18:45	8006-61-9	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	97 %		70-167	1	12/28/13 09:55	12/28/13 18:45	460-00-4	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	<b>15.4 %</b>		0.10	1			12/20/13 08:44	

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

**Sample: S-11-2** Lab ID: **92184006008** Collected: 12/17/13 09:20 Received: 12/19/13 11:15 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015 GCS THC-Diesel</b>		Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546						
Diesel Components	ND mg/kg		6.6	1	12/19/13 12:58	12/21/13 01:50	68334-30-5	
<b>Surrogates</b>								
n-Pentacosane (S)	66 %		41-119	1	12/19/13 12:58	12/21/13 01:50	629-99-2	
<b>Gasoline Range Organics</b>		Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B						
Gasoline Range Organics	ND mg/kg		6.6	1	12/28/13 09:55	12/28/13 19:08	8006-61-9	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	96 %		70-167	1	12/28/13 09:55	12/28/13 19:08	460-00-4	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	<b>24.7 %</b>		0.10	1			12/20/13 08:44	

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

**Sample: S-11-3** Lab ID: **92184006009** Collected: 12/17/13 09:45 Received: 12/19/13 11:15 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015 GCS THC-Diesel</b>		Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546						
Diesel Components	<b>10.2</b> mg/kg		6.7	1	12/19/13 12:58	12/21/13 01:50	68334-30-5	
<b>Surrogates</b>								
n-Pentacosane (S)	77 %		41-119	1	12/19/13 12:58	12/21/13 01:50	629-99-2	
<b>Gasoline Range Organics</b>		Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B						
Gasoline Range Organics	ND	mg/kg	6.3	1	12/28/13 09:55	12/28/13 19:31	8006-61-9	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	97 %		70-167	1	12/28/13 09:55	12/28/13 19:31	460-00-4	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	<b>25.9</b> %		0.10	1			12/20/13 08:44	

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

**Sample: S-13-1      Lab ID: 92184006010      Collected: 12/17/13 10:15      Received: 12/19/13 11:15      Matrix: Solid**
*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV Microwave</b>		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
Acenaphthene	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	83-32-9	
Acenaphthylene	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	208-96-8	
Aniline	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	62-53-3	
Anthracene	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	120-12-7	
Benzo(a)anthracene	<b>598</b> ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	56-55-3	
Benzo(a)pyrene	<b>583</b> ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	50-32-8	
Benzo(b)fluoranthene	<b>478</b> ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	205-99-2	
Benzo(g,h,i)perylene	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	191-24-2	
Benzo(k)fluoranthene	<b>520</b> ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	207-08-9	
Benzoic Acid	ND ug/kg		2020	1	12/19/13 13:00	12/20/13 20:03	65-85-0	
Benzyl alcohol	ND ug/kg		809	1	12/19/13 13:00	12/20/13 20:03	100-51-6	
4-Bromophenylphenyl ether	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	101-55-3	
Butylbenzylphthalate	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	85-68-7	
4-Chloro-3-methylphenol	ND ug/kg		809	1	12/19/13 13:00	12/20/13 20:03	59-50-7	
4-Chloroaniline	ND ug/kg		2020	1	12/19/13 13:00	12/20/13 20:03	106-47-8	
bis(2-Chloroethoxy)methane	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	111-91-1	
bis(2-Chloroethyl) ether	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	108-60-1	
2-Chloronaphthalene	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	91-58-7	
2-Chlorophenol	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	95-57-8	
4-Chlorophenylphenyl ether	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	7005-72-3	
Chrysene	<b>768</b> ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	218-01-9	
Dibenz(a,h)anthracene	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	53-70-3	
Dibenzofuran	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	132-64-9	
1,2-Dichlorobenzene	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	95-50-1	
1,3-Dichlorobenzene	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	541-73-1	
1,4-Dichlorobenzene	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	106-46-7	
3,3'-Dichlorobenzidine	ND ug/kg		2020	1	12/19/13 13:00	12/20/13 20:03	91-94-1	
2,4-Dichlorophenol	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	120-83-2	
Diethylphthalate	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	84-66-2	
2,4-Dimethylphenol	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	105-67-9	
Dimethylphthalate	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	131-11-3	
Di-n-butylphthalate	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	84-74-2	
4,6-Dinitro-2-methylphenol	ND ug/kg		809	1	12/19/13 13:00	12/20/13 20:03	534-52-1	
2,4-Dinitrophenol	ND ug/kg		2020	1	12/19/13 13:00	12/20/13 20:03	51-28-5	
2,4-Dinitrotoluene	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	121-14-2	
2,6-Dinitrotoluene	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	606-20-2	
Di-n-octylphthalate	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	117-84-0	
bis(2-Ethylhexyl)phthalate	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	117-81-7	
Fluoranthene	<b>1790</b> ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	206-44-0	
Fluorene	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	86-73-7	
Hexachloro-1,3-butadiene	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	87-68-3	
Hexachlorobenzene	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	118-74-1	
Hexachlorocyclopentadiene	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	77-47-4	
Hexachloroethane	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	67-72-1	
Indeno(1,2,3-cd)pyrene	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	193-39-5	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

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**Sample: S-13-1** Lab ID: **92184006010** Collected: 12/17/13 10:15 Received: 12/19/13 11:15 Matrix: Solid

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*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV Microwave</b>		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
Isophorone	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	78-59-1	
1-Methylnaphthalene	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	90-12-0	
2-Methylnaphthalene	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	91-57-6	
2-Methylphenol(o-Cresol)	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03		
Naphthalene	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	91-20-3	
2-Nitroaniline	ND ug/kg		2020	1	12/19/13 13:00	12/20/13 20:03	88-74-4	
3-Nitroaniline	ND ug/kg		2020	1	12/19/13 13:00	12/20/13 20:03	99-09-2	
4-Nitroaniline	ND ug/kg		809	1	12/19/13 13:00	12/20/13 20:03	100-01-6	
Nitrobenzene	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	98-95-3	
2-Nitrophenol	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	88-75-5	
4-Nitrophenol	ND ug/kg		2020	1	12/19/13 13:00	12/20/13 20:03	100-02-7	
N-Nitrosodimethylamine	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	62-75-9	
N-Nitroso-di-n-propylamine	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	621-64-7	
N-Nitrosodiphenylamine	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	86-30-6	
Pentachlorophenol	ND ug/kg		2020	1	12/19/13 13:00	12/20/13 20:03	87-86-5	
Phenanthere	1190 ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	85-01-8	
Phenol	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	108-95-2	
Pyrene	1180 ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	129-00-0	
1,2,4-Trichlorobenzene	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	120-82-1	
2,4,5-Trichlorophenol	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	95-95-4	
2,4,6-Trichlorophenol	ND ug/kg		405	1	12/19/13 13:00	12/20/13 20:03	88-06-2	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	55 %		23-110	1	12/19/13 13:00	12/20/13 20:03	4165-60-0	
2-Fluorobiphenyl (S)	53 %		30-110	1	12/19/13 13:00	12/20/13 20:03	321-60-8	
Terphenyl-d14 (S)	61 %		28-110	1	12/19/13 13:00	12/20/13 20:03	1718-51-0	
Phenol-d6 (S)	62 %		22-110	1	12/19/13 13:00	12/20/13 20:03	13127-88-3	
2-Fluorophenol (S)	56 %		13-110	1	12/19/13 13:00	12/20/13 20:03	367-12-4	
2,4,6-Tribromophenol (S)	65 %		27-110	1	12/19/13 13:00	12/20/13 20:03	118-79-6	
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
Acetone	ND ug/kg		92.2	1		12/21/13 18:29	67-64-1	
Benzene	ND ug/kg		4.6	1		12/21/13 18:29	71-43-2	
Bromobenzene	ND ug/kg		4.6	1		12/21/13 18:29	108-86-1	
Bromochloromethane	ND ug/kg		4.6	1		12/21/13 18:29	74-97-5	
Bromodichloromethane	ND ug/kg		4.6	1		12/21/13 18:29	75-27-4	
Bromoform	ND ug/kg		4.6	1		12/21/13 18:29	75-25-2	
Bromomethane	ND ug/kg		9.2	1		12/21/13 18:29	74-83-9	
2-Butanone (MEK)	ND ug/kg		92.2	1		12/21/13 18:29	78-93-3	
n-Butylbenzene	ND ug/kg		4.6	1		12/21/13 18:29	104-51-8	
sec-Butylbenzene	ND ug/kg		4.6	1		12/21/13 18:29	135-98-8	
tert-Butylbenzene	ND ug/kg		4.6	1		12/21/13 18:29	98-06-6	
Carbon tetrachloride	ND ug/kg		4.6	1		12/21/13 18:29	56-23-5	
Chlorobenzene	ND ug/kg		4.6	1		12/21/13 18:29	108-90-7	
Chloroethane	ND ug/kg		9.2	1		12/21/13 18:29	75-00-3	
Chloroform	99.9 ug/kg		4.6	1		12/21/13 18:29	67-66-3	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

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**Sample: S-13-1      Lab ID: 92184006010      Collected: 12/17/13 10:15      Received: 12/19/13 11:15      Matrix: Solid**
*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
Chloromethane	ND ug/kg		9.2	1		12/21/13 18:29	74-87-3	
2-Chlorotoluene	ND ug/kg		4.6	1		12/21/13 18:29	95-49-8	
4-Chlorotoluene	ND ug/kg		4.6	1		12/21/13 18:29	106-43-4	
1,2-Dibromo-3-chloropropane	ND ug/kg		4.6	1		12/21/13 18:29	96-12-8	
Dibromochloromethane	ND ug/kg		4.6	1		12/21/13 18:29	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/kg		4.6	1		12/21/13 18:29	106-93-4	
Dibromomethane	ND ug/kg		4.6	1		12/21/13 18:29	74-95-3	
1,2-Dichlorobenzene	ND ug/kg		4.6	1		12/21/13 18:29	95-50-1	
1,3-Dichlorobenzene	ND ug/kg		4.6	1		12/21/13 18:29	541-73-1	
1,4-Dichlorobenzene	ND ug/kg		4.6	1		12/21/13 18:29	106-46-7	
Dichlorodifluoromethane	ND ug/kg		9.2	1		12/21/13 18:29	75-71-8	
1,1-Dichloroethane	ND ug/kg		4.6	1		12/21/13 18:29	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.6	1		12/21/13 18:29	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.6	1		12/21/13 18:29	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.6	1		12/21/13 18:29	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.6	1		12/21/13 18:29	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.6	1		12/21/13 18:29	78-87-5	
1,3-Dichloropropane	ND ug/kg		4.6	1		12/21/13 18:29	142-28-9	
2,2-Dichloropropane	ND ug/kg		4.6	1		12/21/13 18:29	594-20-7	
1,1-Dichloropropene	ND ug/kg		4.6	1		12/21/13 18:29	563-58-6	
cis-1,3-Dichloropropene	ND ug/kg		4.6	1		12/21/13 18:29	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		4.6	1		12/21/13 18:29	10061-02-6	
Diisopropyl ether	ND ug/kg		4.6	1		12/21/13 18:29	108-20-3	
Ethylbenzene	ND ug/kg		4.6	1		12/21/13 18:29	100-41-4	
Hexachloro-1,3-butadiene	ND ug/kg		4.6	1		12/21/13 18:29	87-68-3	
2-Hexanone	ND ug/kg		46.1	1		12/21/13 18:29	591-78-6	
Isopropylbenzene (Cumene)	ND ug/kg		4.6	1		12/21/13 18:29	98-82-8	
p-Isopropyltoluene	ND ug/kg		4.6	1		12/21/13 18:29	99-87-6	
Methylene Chloride	ND ug/kg		18.4	1		12/21/13 18:29	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		46.1	1		12/21/13 18:29	108-10-1	
Methyl-tert-butyl ether	ND ug/kg		4.6	1		12/21/13 18:29	1634-04-4	
Naphthalene	ND ug/kg		4.6	1		12/21/13 18:29	91-20-3	
n-Propylbenzene	ND ug/kg		4.6	1		12/21/13 18:29	103-65-1	
Styrene	ND ug/kg		4.6	1		12/21/13 18:29	100-42-5	
1,1,1,2-Tetrachloroethane	ND ug/kg		4.6	1		12/21/13 18:29	630-20-6	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.6	1		12/21/13 18:29	79-34-5	
Tetrachloroethene	ND ug/kg		4.6	1		12/21/13 18:29	127-18-4	
Toluene	ND ug/kg		4.6	1		12/21/13 18:29	108-88-3	
1,2,3-Trichlorobenzene	ND ug/kg		4.6	1		12/21/13 18:29	87-61-6	
1,2,4-Trichlorobenzene	ND ug/kg		4.6	1		12/21/13 18:29	120-82-1	
1,1,1-Trichloroethane	ND ug/kg		4.6	1		12/21/13 18:29	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.6	1		12/21/13 18:29	79-00-5	
Trichloroethene	ND ug/kg		4.6	1		12/21/13 18:29	79-01-6	
Trichlorofluoromethane	ND ug/kg		4.6	1		12/21/13 18:29	75-69-4	
1,2,3-Trichloropropane	ND ug/kg		4.6	1		12/21/13 18:29	96-18-4	
1,2,4-Trimethylbenzene	ND ug/kg		4.6	1		12/21/13 18:29	95-63-6	

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

**Sample: S-13-1** Lab ID: **92184006010** Collected: 12/17/13 10:15 Received: 12/19/13 11:15 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
1,3,5-Trimethylbenzene	ND ug/kg		4.6	1		12/21/13 18:29	108-67-8	
Vinyl acetate	ND ug/kg		46.1	1		12/21/13 18:29	108-05-4	
Vinyl chloride	ND ug/kg		9.2	1		12/21/13 18:29	75-01-4	
Xylene (Total)	ND ug/kg		9.2	1		12/21/13 18:29	1330-20-7	
m&p-Xylene	ND ug/kg		9.2	1		12/21/13 18:29	179601-23-1	
o-Xylene	ND ug/kg		4.6	1		12/21/13 18:29	95-47-6	
<b>Surrogates</b>								
Toluene-d8 (S)	107 %		70-130	1		12/21/13 18:29	2037-26-5	
4-Bromofluorobenzene (S)	97 %		70-130	1		12/21/13 18:29	460-00-4	
1,2-Dichloroethane-d4 (S)	82 %		70-132	1		12/21/13 18:29	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	<b>18.4 %</b>		0.10	1		12/20/13 08:44		

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

**Sample: S-13-2**      Lab ID: 92184006011      Collected: 12/17/13 10:45      Received: 12/19/13 11:15      Matrix: Solid

*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV Microwave</b>		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
Acenaphthene	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	83-32-9	
Acenaphthylene	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	208-96-8	
Aniline	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	62-53-3	
Anthracene	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	120-12-7	
Benzo(a)anthracene	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	56-55-3	
Benzo(a)pyrene	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	50-32-8	
Benzo(b)fluoranthene	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	205-99-2	
Benzo(g,h,i)perylene	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	191-24-2	
Benzo(k)fluoranthene	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	207-08-9	
Benzoic Acid	ND ug/kg		2190	1	12/19/13 13:00	12/20/13 20:30	65-85-0	
Benzyl alcohol	ND ug/kg		877	1	12/19/13 13:00	12/20/13 20:30	100-51-6	
4-Bromophenylphenyl ether	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	101-55-3	
Butylbenzylphthalate	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	85-68-7	
4-Chloro-3-methylphenol	ND ug/kg		877	1	12/19/13 13:00	12/20/13 20:30	59-50-7	
4-Chloroaniline	ND ug/kg		2190	1	12/19/13 13:00	12/20/13 20:30	106-47-8	
bis(2-Chloroethoxy)methane	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	111-91-1	
bis(2-Chloroethyl) ether	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	108-60-1	
2-Chloronaphthalene	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	91-58-7	
2-Chlorophenol	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	95-57-8	
4-Chlorophenylphenyl ether	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	7005-72-3	
Chrysene	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	218-01-9	
Dibenz(a,h)anthracene	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	53-70-3	
Dibenzofuran	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	132-64-9	
1,2-Dichlorobenzene	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	95-50-1	
1,3-Dichlorobenzene	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	541-73-1	
1,4-Dichlorobenzene	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	106-46-7	
3,3'-Dichlorobenzidine	ND ug/kg		2190	1	12/19/13 13:00	12/20/13 20:30	91-94-1	
2,4-Dichlorophenol	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	120-83-2	
Diethylphthalate	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	84-66-2	
2,4-Dimethylphenol	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	105-67-9	
Dimethylphthalate	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	131-11-3	
Di-n-butylphthalate	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	84-74-2	
4,6-Dinitro-2-methylphenol	ND ug/kg		877	1	12/19/13 13:00	12/20/13 20:30	534-52-1	
2,4-Dinitrophenol	ND ug/kg		2190	1	12/19/13 13:00	12/20/13 20:30	51-28-5	
2,4-Dinitrotoluene	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	121-14-2	
2,6-Dinitrotoluene	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	606-20-2	
Di-n-octylphthalate	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	117-84-0	
bis(2-Ethylhexyl)phthalate	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	117-81-7	
Fluoranthene	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	206-44-0	
Fluorene	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	86-73-7	
Hexachloro-1,3-butadiene	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	87-68-3	
Hexachlorobenzene	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	118-74-1	
Hexachlorocyclopentadiene	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	77-47-4	
Hexachloroethane	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	67-72-1	
Indeno(1,2,3-cd)pyrene	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	193-39-5	

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

**Sample: S-13-2** Lab ID: 92184006011 Collected: 12/17/13 10:45 Received: 12/19/13 11:15 Matrix: Solid

*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV Microwave</b>		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
Isophorone	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	78-59-1	
1-Methylnaphthalene	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	90-12-0	
2-Methylnaphthalene	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	91-57-6	
2-Methylphenol(o-Cresol)	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30		
Naphthalene	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	91-20-3	
2-Nitroaniline	ND ug/kg		2190	1	12/19/13 13:00	12/20/13 20:30	88-74-4	
3-Nitroaniline	ND ug/kg		2190	1	12/19/13 13:00	12/20/13 20:30	99-09-2	
4-Nitroaniline	ND ug/kg		877	1	12/19/13 13:00	12/20/13 20:30	100-01-6	
Nitrobenzene	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	98-95-3	
2-Nitrophenol	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	88-75-5	
4-Nitrophenol	ND ug/kg		2190	1	12/19/13 13:00	12/20/13 20:30	100-02-7	
N-Nitrosodimethylamine	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	62-75-9	
N-Nitroso-di-n-propylamine	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	621-64-7	
N-Nitrosodiphenylamine	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	86-30-6	
Pentachlorophenol	ND ug/kg		2190	1	12/19/13 13:00	12/20/13 20:30	87-86-5	
Phenanthrrene	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	85-01-8	
Phenol	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	108-95-2	
Pyrene	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	129-00-0	
1,2,4-Trichlorobenzene	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	120-82-1	
2,4,5-Trichlorophenol	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	95-95-4	
2,4,6-Trichlorophenol	ND ug/kg		439	1	12/19/13 13:00	12/20/13 20:30	88-06-2	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	72 %		23-110	1	12/19/13 13:00	12/20/13 20:30	4165-60-0	
2-Fluorobiphenyl (S)	70 %		30-110	1	12/19/13 13:00	12/20/13 20:30	321-60-8	
Terphenyl-d14 (S)	75 %		28-110	1	12/19/13 13:00	12/20/13 20:30	1718-51-0	
Phenol-d6 (S)	58 %		22-110	1	12/19/13 13:00	12/20/13 20:30	13127-88-3	
2-Fluorophenol (S)	54 %		13-110	1	12/19/13 13:00	12/20/13 20:30	367-12-4	
2,4,6-Tribromophenol (S)	61 %		27-110	1	12/19/13 13:00	12/20/13 20:30	118-79-6	
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
Acetone	ND ug/kg		96.7	1		12/21/13 18:49	67-64-1	
Benzene	ND ug/kg		4.8	1		12/21/13 18:49	71-43-2	
Bromobenzene	ND ug/kg		4.8	1		12/21/13 18:49	108-86-1	
Bromochloromethane	ND ug/kg		4.8	1		12/21/13 18:49	74-97-5	
Bromodichloromethane	ND ug/kg		4.8	1		12/21/13 18:49	75-27-4	
Bromoform	ND ug/kg		4.8	1		12/21/13 18:49	75-25-2	
Bromomethane	ND ug/kg		9.7	1		12/21/13 18:49	74-83-9	
2-Butanone (MEK)	ND ug/kg		96.7	1		12/21/13 18:49	78-93-3	
n-Butylbenzene	ND ug/kg		4.8	1		12/21/13 18:49	104-51-8	
sec-Butylbenzene	ND ug/kg		4.8	1		12/21/13 18:49	135-98-8	
tert-Butylbenzene	ND ug/kg		4.8	1		12/21/13 18:49	98-06-6	
Carbon tetrachloride	ND ug/kg		4.8	1		12/21/13 18:49	56-23-5	
Chlorobenzene	ND ug/kg		4.8	1		12/21/13 18:49	108-90-7	
Chloroethane	ND ug/kg		9.7	1		12/21/13 18:49	75-00-3	
Chloroform	8.2 ug/kg		4.8	1		12/21/13 18:49	67-66-3	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

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**Sample: S-13-2**      Lab ID: 92184006011      Collected: 12/17/13 10:45      Received: 12/19/13 11:15      Matrix: Solid

*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
Chloromethane	ND ug/kg		9.7	1		12/21/13 18:49	74-87-3	
2-Chlorotoluene	ND ug/kg		4.8	1		12/21/13 18:49	95-49-8	
4-Chlorotoluene	ND ug/kg		4.8	1		12/21/13 18:49	106-43-4	
1,2-Dibromo-3-chloropropane	ND ug/kg		4.8	1		12/21/13 18:49	96-12-8	
Dibromochloromethane	ND ug/kg		4.8	1		12/21/13 18:49	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/kg		4.8	1		12/21/13 18:49	106-93-4	
Dibromomethane	ND ug/kg		4.8	1		12/21/13 18:49	74-95-3	
1,2-Dichlorobenzene	ND ug/kg		4.8	1		12/21/13 18:49	95-50-1	
1,3-Dichlorobenzene	ND ug/kg		4.8	1		12/21/13 18:49	541-73-1	
1,4-Dichlorobenzene	ND ug/kg		4.8	1		12/21/13 18:49	106-46-7	
Dichlorodifluoromethane	ND ug/kg		9.7	1		12/21/13 18:49	75-71-8	
1,1-Dichloroethane	ND ug/kg		4.8	1		12/21/13 18:49	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.8	1		12/21/13 18:49	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.8	1		12/21/13 18:49	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.8	1		12/21/13 18:49	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.8	1		12/21/13 18:49	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.8	1		12/21/13 18:49	78-87-5	
1,3-Dichloropropane	ND ug/kg		4.8	1		12/21/13 18:49	142-28-9	
2,2-Dichloropropane	ND ug/kg		4.8	1		12/21/13 18:49	594-20-7	
1,1-Dichloropropene	ND ug/kg		4.8	1		12/21/13 18:49	563-58-6	
cis-1,3-Dichloropropene	ND ug/kg		4.8	1		12/21/13 18:49	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		4.8	1		12/21/13 18:49	10061-02-6	
Diisopropyl ether	ND ug/kg		4.8	1		12/21/13 18:49	108-20-3	
Ethylbenzene	ND ug/kg		4.8	1		12/21/13 18:49	100-41-4	
Hexachloro-1,3-butadiene	ND ug/kg		4.8	1		12/21/13 18:49	87-68-3	
2-Hexanone	ND ug/kg		48.4	1		12/21/13 18:49	591-78-6	
Isopropylbenzene (Cumene)	ND ug/kg		4.8	1		12/21/13 18:49	98-82-8	
p-Isopropyltoluene	ND ug/kg		4.8	1		12/21/13 18:49	99-87-6	
Methylene Chloride	ND ug/kg		19.3	1		12/21/13 18:49	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		48.4	1		12/21/13 18:49	108-10-1	
Methyl-tert-butyl ether	ND ug/kg		4.8	1		12/21/13 18:49	1634-04-4	
Naphthalene	ND ug/kg		4.8	1		12/21/13 18:49	91-20-3	
n-Propylbenzene	ND ug/kg		4.8	1		12/21/13 18:49	103-65-1	
Styrene	ND ug/kg		4.8	1		12/21/13 18:49	100-42-5	
1,1,1,2-Tetrachloroethane	ND ug/kg		4.8	1		12/21/13 18:49	630-20-6	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.8	1		12/21/13 18:49	79-34-5	
Tetrachloroethene	ND ug/kg		4.8	1		12/21/13 18:49	127-18-4	
Toluene	ND ug/kg		4.8	1		12/21/13 18:49	108-88-3	
1,2,3-Trichlorobenzene	ND ug/kg		4.8	1		12/21/13 18:49	87-61-6	
1,2,4-Trichlorobenzene	ND ug/kg		4.8	1		12/21/13 18:49	120-82-1	
1,1,1-Trichloroethane	ND ug/kg		4.8	1		12/21/13 18:49	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.8	1		12/21/13 18:49	79-00-5	
Trichloroethene	ND ug/kg		4.8	1		12/21/13 18:49	79-01-6	
Trichlorofluoromethane	ND ug/kg		4.8	1		12/21/13 18:49	75-69-4	
1,2,3-Trichloropropane	ND ug/kg		4.8	1		12/21/13 18:49	96-18-4	
1,2,4-Trimethylbenzene	ND ug/kg		4.8	1		12/21/13 18:49	95-63-6	

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

Sample: S-13-2 Lab ID: 92184006011 Collected: 12/17/13 10:45 Received: 12/19/13 11:15 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
1,3,5-Trimethylbenzene	ND ug/kg		4.8	1		12/21/13 18:49	108-67-8	
Vinyl acetate	ND ug/kg		48.4	1		12/21/13 18:49	108-05-4	
Vinyl chloride	ND ug/kg		9.7	1		12/21/13 18:49	75-01-4	
Xylene (Total)	ND ug/kg		9.7	1		12/21/13 18:49	1330-20-7	
m&p-Xylene	ND ug/kg		9.7	1		12/21/13 18:49	179601-23-1	
o-Xylene	ND ug/kg		4.8	1		12/21/13 18:49	95-47-6	
<b>Surrogates</b>								
Toluene-d8 (S)	105 %		70-130	1		12/21/13 18:49	2037-26-5	
4-Bromofluorobenzene (S)	103 %		70-130	1		12/21/13 18:49	460-00-4	
1,2-Dichloroethane-d4 (S)	76 %		70-132	1		12/21/13 18:49	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	24.7 %		0.10	1		12/20/13 08:44		

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

**Sample: S-15-1      Lab ID: 92184006012      Collected: 12/17/13 11:10      Received: 12/19/13 11:15      Matrix: Solid**
*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV Microwave</b>		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
Acenaphthene	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	83-32-9	
Acenaphthylene	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	208-96-8	
Aniline	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	62-53-3	
Anthracene	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	120-12-7	
Benzo(a)anthracene	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	56-55-3	
Benzo(a)pyrene	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	50-32-8	
Benzo(b)fluoranthene	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	205-99-2	
Benzo(g,h,i)perylene	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	191-24-2	
Benzo(k)fluoranthene	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	207-08-9	
Benzoic Acid	ND ug/kg		2040	1	12/19/13 13:00	12/20/13 20:57	65-85-0	
Benzyl alcohol	ND ug/kg		818	1	12/19/13 13:00	12/20/13 20:57	100-51-6	
4-Bromophenylphenyl ether	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	101-55-3	
Butylbenzylphthalate	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	85-68-7	
4-Chloro-3-methylphenol	ND ug/kg		818	1	12/19/13 13:00	12/20/13 20:57	59-50-7	
4-Chloroaniline	ND ug/kg		2040	1	12/19/13 13:00	12/20/13 20:57	106-47-8	
bis(2-Chloroethoxy)methane	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	111-91-1	
bis(2-Chloroethyl) ether	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	108-60-1	
2-Chloronaphthalene	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	91-58-7	
2-Chlorophenol	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	95-57-8	
4-Chlorophenylphenyl ether	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	7005-72-3	
Chrysene	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	218-01-9	
Dibenz(a,h)anthracene	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	53-70-3	
Dibenzofuran	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	132-64-9	
1,2-Dichlorobenzene	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	95-50-1	
1,3-Dichlorobenzene	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	541-73-1	
1,4-Dichlorobenzene	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	106-46-7	
3,3'-Dichlorobenzidine	ND ug/kg		2040	1	12/19/13 13:00	12/20/13 20:57	91-94-1	
2,4-Dichlorophenol	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	120-83-2	
Diethylphthalate	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	84-66-2	
2,4-Dimethylphenol	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	105-67-9	
Dimethylphthalate	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	131-11-3	
Di-n-butylphthalate	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	84-74-2	
4,6-Dinitro-2-methylphenol	ND ug/kg		818	1	12/19/13 13:00	12/20/13 20:57	534-52-1	
2,4-Dinitrophenol	ND ug/kg		2040	1	12/19/13 13:00	12/20/13 20:57	51-28-5	
2,4-Dinitrotoluene	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	121-14-2	
2,6-Dinitrotoluene	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	606-20-2	
Di-n-octylphthalate	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	117-84-0	
bis(2-Ethylhexyl)phthalate	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	117-81-7	
Fluoranthene	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	206-44-0	
Fluorene	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	86-73-7	
Hexachloro-1,3-butadiene	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	87-68-3	
Hexachlorobenzene	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	118-74-1	
Hexachlorocyclopentadiene	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	77-47-4	
Hexachloroethane	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	67-72-1	
Indeno(1,2,3-cd)pyrene	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	193-39-5	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

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**Sample: S-15-1**      Lab ID: **92184006012**      Collected: 12/17/13 11:10      Received: 12/19/13 11:15      Matrix: Solid

*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV Microwave</b>		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
Isophorone	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	78-59-1	
1-Methylnaphthalene	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	90-12-0	
2-Methylnaphthalene	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	91-57-6	
2-Methylphenol(o-Cresol)	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57		
Naphthalene	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	91-20-3	
2-Nitroaniline	ND ug/kg		2040	1	12/19/13 13:00	12/20/13 20:57	88-74-4	
3-Nitroaniline	ND ug/kg		2040	1	12/19/13 13:00	12/20/13 20:57	99-09-2	
4-Nitroaniline	ND ug/kg		818	1	12/19/13 13:00	12/20/13 20:57	100-01-6	
Nitrobenzene	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	98-95-3	
2-Nitrophenol	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	88-75-5	
4-Nitrophenol	ND ug/kg		2040	1	12/19/13 13:00	12/20/13 20:57	100-02-7	
N-Nitrosodimethylamine	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	62-75-9	
N-Nitroso-di-n-propylamine	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	621-64-7	
N-Nitrosodiphenylamine	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	86-30-6	
Pentachlorophenol	ND ug/kg		2040	1	12/19/13 13:00	12/20/13 20:57	87-86-5	
Phenanthrene	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	85-01-8	
Phenol	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	108-95-2	
Pyrene	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	129-00-0	
1,2,4-Trichlorobenzene	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	120-82-1	
2,4,5-Trichlorophenol	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	95-95-4	
2,4,6-Trichlorophenol	ND ug/kg		409	1	12/19/13 13:00	12/20/13 20:57	88-06-2	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	60 %		23-110	1	12/19/13 13:00	12/20/13 20:57	4165-60-0	
2-Fluorobiphenyl (S)	62 %		30-110	1	12/19/13 13:00	12/20/13 20:57	321-60-8	
Terphenyl-d14 (S)	71 %		28-110	1	12/19/13 13:00	12/20/13 20:57	1718-51-0	
Phenol-d6 (S)	64 %		22-110	1	12/19/13 13:00	12/20/13 20:57	13127-88-3	
2-Fluorophenol (S)	59 %		13-110	1	12/19/13 13:00	12/20/13 20:57	367-12-4	
2,4,6-Tribromophenol (S)	68 %		27-110	1	12/19/13 13:00	12/20/13 20:57	118-79-6	
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
Acetone	ND ug/kg		89.4	1		12/21/13 17:54	67-64-1	
Benzene	ND ug/kg		4.5	1		12/21/13 17:54	71-43-2	
Bromobenzene	ND ug/kg		4.5	1		12/21/13 17:54	108-86-1	
Bromochloromethane	ND ug/kg		4.5	1		12/21/13 17:54	74-97-5	
Bromodichloromethane	ND ug/kg		4.5	1		12/21/13 17:54	75-27-4	
Bromoform	ND ug/kg		4.5	1		12/21/13 17:54	75-25-2	
Bromomethane	ND ug/kg		8.9	1		12/21/13 17:54	74-83-9	
2-Butanone (MEK)	ND ug/kg		89.4	1		12/21/13 17:54	78-93-3	
n-Butylbenzene	ND ug/kg		4.5	1		12/21/13 17:54	104-51-8	
sec-Butylbenzene	ND ug/kg		4.5	1		12/21/13 17:54	135-98-8	
tert-Butylbenzene	ND ug/kg		4.5	1		12/21/13 17:54	98-06-6	
Carbon tetrachloride	ND ug/kg		4.5	1		12/21/13 17:54	56-23-5	
Chlorobenzene	ND ug/kg		4.5	1		12/21/13 17:54	108-90-7	
Chloroethane	ND ug/kg		8.9	1		12/21/13 17:54	75-00-3	
Chloroform	ND ug/kg		4.5	1		12/21/13 17:54	67-66-3	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

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**Sample: S-15-1                          Lab ID: 92184006012                  Collected: 12/17/13 11:10                  Received: 12/19/13 11:15                  Matrix: Solid**
*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
Chloromethane	ND ug/kg		8.9	1		12/21/13 17:54	74-87-3	
2-Chlorotoluene	ND ug/kg		4.5	1		12/21/13 17:54	95-49-8	
4-Chlorotoluene	ND ug/kg		4.5	1		12/21/13 17:54	106-43-4	
1,2-Dibromo-3-chloropropane	ND ug/kg		4.5	1		12/21/13 17:54	96-12-8	
Dibromochloromethane	ND ug/kg		4.5	1		12/21/13 17:54	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/kg		4.5	1		12/21/13 17:54	106-93-4	
Dibromomethane	ND ug/kg		4.5	1		12/21/13 17:54	74-95-3	
1,2-Dichlorobenzene	ND ug/kg		4.5	1		12/21/13 17:54	95-50-1	
1,3-Dichlorobenzene	ND ug/kg		4.5	1		12/21/13 17:54	541-73-1	
1,4-Dichlorobenzene	ND ug/kg		4.5	1		12/21/13 17:54	106-46-7	
Dichlorodifluoromethane	ND ug/kg		8.9	1		12/21/13 17:54	75-71-8	
1,1-Dichloroethane	ND ug/kg		4.5	1		12/21/13 17:54	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.5	1		12/21/13 17:54	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.5	1		12/21/13 17:54	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.5	1		12/21/13 17:54	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.5	1		12/21/13 17:54	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.5	1		12/21/13 17:54	78-87-5	
1,3-Dichloropropane	ND ug/kg		4.5	1		12/21/13 17:54	142-28-9	
2,2-Dichloropropane	ND ug/kg		4.5	1		12/21/13 17:54	594-20-7	
1,1-Dichloropropene	ND ug/kg		4.5	1		12/21/13 17:54	563-58-6	
cis-1,3-Dichloropropene	ND ug/kg		4.5	1		12/21/13 17:54	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		4.5	1		12/21/13 17:54	10061-02-6	
Diisopropyl ether	ND ug/kg		4.5	1		12/21/13 17:54	108-20-3	
Ethylbenzene	ND ug/kg		4.5	1		12/21/13 17:54	100-41-4	
Hexachloro-1,3-butadiene	ND ug/kg		4.5	1		12/21/13 17:54	87-68-3	
2-Hexanone	ND ug/kg		44.7	1		12/21/13 17:54	591-78-6	
Isopropylbenzene (Cumene)	ND ug/kg		4.5	1		12/21/13 17:54	98-82-8	
p-Isopropyltoluene	ND ug/kg		4.5	1		12/21/13 17:54	99-87-6	
Methylene Chloride	ND ug/kg		17.9	1		12/21/13 17:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		44.7	1		12/21/13 17:54	108-10-1	
Methyl-tert-butyl ether	ND ug/kg		4.5	1		12/21/13 17:54	1634-04-4	
Naphthalene	ND ug/kg		4.5	1		12/21/13 17:54	91-20-3	
n-Propylbenzene	ND ug/kg		4.5	1		12/21/13 17:54	103-65-1	
Styrene	ND ug/kg		4.5	1		12/21/13 17:54	100-42-5	
1,1,1,2-Tetrachloroethane	ND ug/kg		4.5	1		12/21/13 17:54	630-20-6	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.5	1		12/21/13 17:54	79-34-5	
Tetrachloroethene	ND ug/kg		4.5	1		12/21/13 17:54	127-18-4	
Toluene	ND ug/kg		4.5	1		12/21/13 17:54	108-88-3	
1,2,3-Trichlorobenzene	ND ug/kg		4.5	1		12/21/13 17:54	87-61-6	
1,2,4-Trichlorobenzene	ND ug/kg		4.5	1		12/21/13 17:54	120-82-1	
1,1,1-Trichloroethane	ND ug/kg		4.5	1		12/21/13 17:54	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.5	1		12/21/13 17:54	79-00-5	
Trichloroethene	ND ug/kg		4.5	1		12/21/13 17:54	79-01-6	
Trichlorofluoromethane	ND ug/kg		4.5	1		12/21/13 17:54	75-69-4	
1,2,3-Trichloropropane	ND ug/kg		4.5	1		12/21/13 17:54	96-18-4	
1,2,4-Trimethylbenzene	ND ug/kg		4.5	1		12/21/13 17:54	95-63-6	

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

**Sample: S-15-1** Lab ID: **92184006012** Collected: 12/17/13 11:10 Received: 12/19/13 11:15 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
1,3,5-Trimethylbenzene	ND ug/kg		4.5	1		12/21/13 17:54	108-67-8	
Vinyl acetate	ND ug/kg		44.7	1		12/21/13 17:54	108-05-4	
Vinyl chloride	ND ug/kg		8.9	1		12/21/13 17:54	75-01-4	
Xylene (Total)	ND ug/kg		8.9	1		12/21/13 17:54	1330-20-7	
m&p-Xylene	ND ug/kg		8.9	1		12/21/13 17:54	179601-23-1	
o-Xylene	ND ug/kg		4.5	1		12/21/13 17:54	95-47-6	
<b>Surrogates</b>								
Toluene-d8 (S)	99 %		70-130	1		12/21/13 17:54	2037-26-5	
4-Bromofluorobenzene (S)	97 %		70-130	1		12/21/13 17:54	460-00-4	
1,2-Dichloroethane-d4 (S)	118 %		70-132	1		12/21/13 17:54	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	19.3 %		0.10	1		12/20/13 08:44		

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

**Sample: S-12-1** Lab ID: **92184006013** Collected: 12/17/13 11:55 Received: 12/19/13 11:15 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015 GCS THC-Diesel</b>		Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546						
Diesel Components	ND mg/kg		6.8	1	12/19/13 12:58	12/21/13 02:13	68334-30-5	
<b>Surrogates</b>								
n-Pentacosane (S)	83 %		41-119	1	12/19/13 12:58	12/21/13 02:13	629-99-2	
<b>Gasoline Range Organics</b>		Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B						
Gasoline Range Organics	ND mg/kg		7.2	1	12/28/13 09:55	12/28/13 19:54	8006-61-9	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102 %		70-167	1	12/28/13 09:55	12/28/13 19:54	460-00-4	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	<b>26.3 %</b>		0.10	1			12/20/13 08:45	

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

**Sample: S-12-2** Lab ID: **92184006014** Collected: 12/17/13 12:30 Received: 12/19/13 11:15 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015 GCS THC-Diesel</b>		Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546						
Diesel Components	ND mg/kg		5.7	1	12/19/13 12:58	12/21/13 02:13	68334-30-5	
<b>Surrogates</b>								
n-Pentacosane (S)	68 %		41-119	1	12/19/13 12:58	12/21/13 02:13	629-99-2	
<b>Gasoline Range Organics</b>		Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B						
Gasoline Range Organics	ND mg/kg		5.5	1	12/30/13 11:17	12/31/13 08:17	8006-61-9	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	100 %		70-167	1	12/30/13 11:17	12/31/13 08:17	460-00-4	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	<b>12.6 %</b>		0.10	1			12/20/13 08:45	

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

**Sample: S-12-4** Lab ID: **92184006015** Collected: 12/17/13 12:45 Received: 12/19/13 11:15 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015 GCS THC-Diesel</b>		Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546						
Diesel Components	ND mg/kg		5.5	1	12/19/13 12:58	12/21/13 02:36	68334-30-5	
<b>Surrogates</b>								
n-Pentacosane (S)	62 %		41-119	1	12/19/13 12:58	12/21/13 02:36	629-99-2	
<b>Gasoline Range Organics</b>		Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B						
Gasoline Range Organics	ND mg/kg		5.7	1	12/30/13 11:17	12/31/13 09:26	8006-61-9	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	108 %		70-167	1	12/30/13 11:17	12/31/13 09:26	460-00-4	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	9.6 %		0.10	1		12/20/13 08:45		

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

**Sample: S-12-3** Lab ID: **92184006016** Collected: 12/17/13 13:10 Received: 12/19/13 11:15 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015 GCS THC-Diesel</b>		Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546						
Diesel Components	<b>7.5</b> mg/kg		6.1	1	12/19/13 12:58	12/21/13 02:36	68334-30-5	
<b>Surrogates</b>								
n-Pentacosane (S)	64 %		41-119	1	12/19/13 12:58	12/21/13 02:36	629-99-2	
<b>Gasoline Range Organics</b>		Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B						
Gasoline Range Organics	ND	mg/kg	5.6	1	12/30/13 11:17	12/31/13 10:34	8006-61-9	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	104 %		70-167	1	12/30/13 11:17	12/31/13 10:34	460-00-4	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	<b>17.8</b> %		0.10	1			12/20/13 08:45	

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

**Sample: S-12-5      Lab ID: 92184006017      Collected: 12/17/13 15:09      Received: 12/19/13 11:15      Matrix: Solid**
*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV Microwave</b>		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
Acenaphthene	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	83-32-9	
Acenaphthylene	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	208-96-8	
Aniline	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	62-53-3	
Anthracene	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	120-12-7	
Benzo(a)anthracene	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	56-55-3	
Benzo(a)pyrene	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	50-32-8	
Benzo(b)fluoranthene	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	205-99-2	
Benzo(g,h,i)perylene	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	191-24-2	
Benzo(k)fluoranthene	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	207-08-9	
Benzoic Acid	ND ug/kg		1870	1	12/19/13 13:00	12/20/13 21:24	65-85-0	
Benzyl alcohol	ND ug/kg		750	1	12/19/13 13:00	12/20/13 21:24	100-51-6	
4-Bromophenylphenyl ether	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	101-55-3	
Butylbenzylphthalate	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	85-68-7	
4-Chloro-3-methylphenol	ND ug/kg		750	1	12/19/13 13:00	12/20/13 21:24	59-50-7	
4-Chloroaniline	ND ug/kg		1870	1	12/19/13 13:00	12/20/13 21:24	106-47-8	
bis(2-Chloroethoxy)methane	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	111-91-1	
bis(2-Chloroethyl) ether	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	108-60-1	
2-Chloronaphthalene	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	91-58-7	
2-Chlorophenol	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	95-57-8	
4-Chlorophenylphenyl ether	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	7005-72-3	
Chrysene	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	218-01-9	
Dibenz(a,h)anthracene	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	53-70-3	
Dibenzofuran	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	132-64-9	
1,2-Dichlorobenzene	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	95-50-1	
1,3-Dichlorobenzene	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	541-73-1	
1,4-Dichlorobenzene	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	106-46-7	
3,3'-Dichlorobenzidine	ND ug/kg		1870	1	12/19/13 13:00	12/20/13 21:24	91-94-1	
2,4-Dichlorophenol	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	120-83-2	
Diethylphthalate	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	84-66-2	
2,4-Dimethylphenol	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	105-67-9	
Dimethylphthalate	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	131-11-3	
Di-n-butylphthalate	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	84-74-2	
4,6-Dinitro-2-methylphenol	ND ug/kg		750	1	12/19/13 13:00	12/20/13 21:24	534-52-1	
2,4-Dinitrophenol	ND ug/kg		1870	1	12/19/13 13:00	12/20/13 21:24	51-28-5	
2,4-Dinitrotoluene	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	121-14-2	
2,6-Dinitrotoluene	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	606-20-2	
Di-n-octylphthalate	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	117-84-0	
bis(2-Ethylhexyl)phthalate	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	117-81-7	
Fluoranthene	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	206-44-0	
Fluorene	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	86-73-7	
Hexachloro-1,3-butadiene	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	87-68-3	
Hexachlorobenzene	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	118-74-1	
Hexachlorocyclopentadiene	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	77-47-4	
Hexachloroethane	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	67-72-1	
Indeno(1,2,3-cd)pyrene	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	193-39-5	

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

**Sample: S-12-5** Lab ID: 92184006017 Collected: 12/17/13 15:09 Received: 12/19/13 11:15 Matrix: Solid

*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV Microwave</b>		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
Isophorone	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	78-59-1	
1-Methylnaphthalene	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	90-12-0	
2-Methylnaphthalene	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	91-57-6	
2-Methylphenol(o-Cresol)	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24		
Naphthalene	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	91-20-3	
2-Nitroaniline	ND ug/kg		1870	1	12/19/13 13:00	12/20/13 21:24	88-74-4	
3-Nitroaniline	ND ug/kg		1870	1	12/19/13 13:00	12/20/13 21:24	99-09-2	
4-Nitroaniline	ND ug/kg		750	1	12/19/13 13:00	12/20/13 21:24	100-01-6	
Nitrobenzene	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	98-95-3	
2-Nitrophenol	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	88-75-5	
4-Nitrophenol	ND ug/kg		1870	1	12/19/13 13:00	12/20/13 21:24	100-02-7	
N-Nitrosodimethylamine	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	62-75-9	
N-Nitroso-di-n-propylamine	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	621-64-7	
N-Nitrosodiphenylamine	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	86-30-6	
Pentachlorophenol	ND ug/kg		1870	1	12/19/13 13:00	12/20/13 21:24	87-86-5	
Phenanthrene	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	85-01-8	
Phenol	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	108-95-2	
Pyrene	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	129-00-0	
1,2,4-Trichlorobenzene	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	120-82-1	
2,4,5-Trichlorophenol	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	95-95-4	
2,4,6-Trichlorophenol	ND ug/kg		375	1	12/19/13 13:00	12/20/13 21:24	88-06-2	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	64 %		23-110	1	12/19/13 13:00	12/20/13 21:24	4165-60-0	
2-Fluorobiphenyl (S)	70 %		30-110	1	12/19/13 13:00	12/20/13 21:24	321-60-8	
Terphenyl-d14 (S)	74 %		28-110	1	12/19/13 13:00	12/20/13 21:24	1718-51-0	
Phenol-d6 (S)	73 %		22-110	1	12/19/13 13:00	12/20/13 21:24	13127-88-3	
2-Fluorophenol (S)	62 %		13-110	1	12/19/13 13:00	12/20/13 21:24	367-12-4	
2,4,6-Tribromophenol (S)	67 %		27-110	1	12/19/13 13:00	12/20/13 21:24	118-79-6	
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
Acetone	ND ug/kg		86.3	1		12/21/13 18:13	67-64-1	
Benzene	ND ug/kg		4.3	1		12/21/13 18:13	71-43-2	
Bromobenzene	ND ug/kg		4.3	1		12/21/13 18:13	108-86-1	
Bromochloromethane	ND ug/kg		4.3	1		12/21/13 18:13	74-97-5	
Bromodichloromethane	ND ug/kg		4.3	1		12/21/13 18:13	75-27-4	
Bromoform	ND ug/kg		4.3	1		12/21/13 18:13	75-25-2	
Bromomethane	ND ug/kg		8.6	1		12/21/13 18:13	74-83-9	
2-Butanone (MEK)	ND ug/kg		86.3	1		12/21/13 18:13	78-93-3	
n-Butylbenzene	ND ug/kg		4.3	1		12/21/13 18:13	104-51-8	
sec-Butylbenzene	ND ug/kg		4.3	1		12/21/13 18:13	135-98-8	
tert-Butylbenzene	ND ug/kg		4.3	1		12/21/13 18:13	98-06-6	
Carbon tetrachloride	ND ug/kg		4.3	1		12/21/13 18:13	56-23-5	
Chlorobenzene	ND ug/kg		4.3	1		12/21/13 18:13	108-90-7	
Chloroethane	ND ug/kg		8.6	1		12/21/13 18:13	75-00-3	
Chloroform	ND ug/kg		4.3	1		12/21/13 18:13	67-66-3	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

**Sample: S-12-5      Lab ID: 92184006017      Collected: 12/17/13 15:09      Received: 12/19/13 11:15      Matrix: Solid**
*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
Chloromethane	ND ug/kg		8.6	1		12/21/13 18:13	74-87-3	
2-Chlorotoluene	ND ug/kg		4.3	1		12/21/13 18:13	95-49-8	
4-Chlorotoluene	ND ug/kg		4.3	1		12/21/13 18:13	106-43-4	
1,2-Dibromo-3-chloropropane	ND ug/kg		4.3	1		12/21/13 18:13	96-12-8	
Dibromochloromethane	ND ug/kg		4.3	1		12/21/13 18:13	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/kg		4.3	1		12/21/13 18:13	106-93-4	
Dibromomethane	ND ug/kg		4.3	1		12/21/13 18:13	74-95-3	
1,2-Dichlorobenzene	ND ug/kg		4.3	1		12/21/13 18:13	95-50-1	
1,3-Dichlorobenzene	ND ug/kg		4.3	1		12/21/13 18:13	541-73-1	
1,4-Dichlorobenzene	ND ug/kg		4.3	1		12/21/13 18:13	106-46-7	
Dichlorodifluoromethane	ND ug/kg		8.6	1		12/21/13 18:13	75-71-8	
1,1-Dichloroethane	ND ug/kg		4.3	1		12/21/13 18:13	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.3	1		12/21/13 18:13	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.3	1		12/21/13 18:13	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.3	1		12/21/13 18:13	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.3	1		12/21/13 18:13	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.3	1		12/21/13 18:13	78-87-5	
1,3-Dichloropropane	ND ug/kg		4.3	1		12/21/13 18:13	142-28-9	
2,2-Dichloropropane	ND ug/kg		4.3	1		12/21/13 18:13	594-20-7	
1,1-Dichloropropene	ND ug/kg		4.3	1		12/21/13 18:13	563-58-6	
cis-1,3-Dichloropropene	ND ug/kg		4.3	1		12/21/13 18:13	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		4.3	1		12/21/13 18:13	10061-02-6	
Diisopropyl ether	ND ug/kg		4.3	1		12/21/13 18:13	108-20-3	
Ethylbenzene	ND ug/kg		4.3	1		12/21/13 18:13	100-41-4	
Hexachloro-1,3-butadiene	ND ug/kg		4.3	1		12/21/13 18:13	87-68-3	
2-Hexanone	ND ug/kg		43.2	1		12/21/13 18:13	591-78-6	
Isopropylbenzene (Cumene)	ND ug/kg		4.3	1		12/21/13 18:13	98-82-8	
p-Isopropyltoluene	ND ug/kg		4.3	1		12/21/13 18:13	99-87-6	
Methylene Chloride	ND ug/kg		17.3	1		12/21/13 18:13	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		43.2	1		12/21/13 18:13	108-10-1	
Methyl-tert-butyl ether	ND ug/kg		4.3	1		12/21/13 18:13	1634-04-4	
Naphthalene	ND ug/kg		4.3	1		12/21/13 18:13	91-20-3	
n-Propylbenzene	ND ug/kg		4.3	1		12/21/13 18:13	103-65-1	
Styrene	ND ug/kg		4.3	1		12/21/13 18:13	100-42-5	
1,1,1,2-Tetrachloroethane	ND ug/kg		4.3	1		12/21/13 18:13	630-20-6	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.3	1		12/21/13 18:13	79-34-5	
Tetrachloroethene	ND ug/kg		4.3	1		12/21/13 18:13	127-18-4	
Toluene	ND ug/kg		4.3	1		12/21/13 18:13	108-88-3	
1,2,3-Trichlorobenzene	ND ug/kg		4.3	1		12/21/13 18:13	87-61-6	
1,2,4-Trichlorobenzene	ND ug/kg		4.3	1		12/21/13 18:13	120-82-1	
1,1,1-Trichloroethane	ND ug/kg		4.3	1		12/21/13 18:13	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.3	1		12/21/13 18:13	79-00-5	
Trichloroethene	ND ug/kg		4.3	1		12/21/13 18:13	79-01-6	
Trichlorofluoromethane	ND ug/kg		4.3	1		12/21/13 18:13	75-69-4	
1,2,3-Trichloropropane	ND ug/kg		4.3	1		12/21/13 18:13	96-18-4	
1,2,4-Trimethylbenzene	ND ug/kg		4.3	1		12/21/13 18:13	95-63-6	

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

**Sample: S-12-5** Lab ID: **92184006017** Collected: 12/17/13 15:09 Received: 12/19/13 11:15 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260/5035A Volatile Organics</b>	Analytical Method: EPA 8260							
1,3,5-Trimethylbenzene	ND ug/kg		4.3	1		12/21/13 18:13	108-67-8	
Vinyl acetate	ND ug/kg		43.2	1		12/21/13 18:13	108-05-4	
Vinyl chloride	ND ug/kg		8.6	1		12/21/13 18:13	75-01-4	
Xylene (Total)	ND ug/kg		8.6	1		12/21/13 18:13	1330-20-7	
m&p-Xylene	ND ug/kg		8.6	1		12/21/13 18:13	179601-23-1	
o-Xylene	ND ug/kg		4.3	1		12/21/13 18:13	95-47-6	
<b>Surrogates</b>								
Toluene-d8 (S)	99 %		70-130	1		12/21/13 18:13	2037-26-5	
4-Bromofluorobenzene (S)	95 %		70-130	1		12/21/13 18:13	460-00-4	
1,2-Dichloroethane-d4 (S)	115 %		70-132	1		12/21/13 18:13	17060-07-0	
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87							
Percent Moisture	<b>12.0 %</b>		0.10	1		12/20/13 08:45		

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

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**Sample: S-12-6**      Lab ID: **92184006018**      Collected: 12/17/13 15:40      Received: 12/19/13 11:15      Matrix: Solid

*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
Chloromethane	ND ug/kg		9.6	1		12/21/13 18:33	74-87-3	
2-Chlorotoluene	ND ug/kg		4.8	1		12/21/13 18:33	95-49-8	
4-Chlorotoluene	ND ug/kg		4.8	1		12/21/13 18:33	106-43-4	
1,2-Dibromo-3-chloropropane	ND ug/kg		4.8	1		12/21/13 18:33	96-12-8	
Dibromochloromethane	ND ug/kg		4.8	1		12/21/13 18:33	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/kg		4.8	1		12/21/13 18:33	106-93-4	
Dibromomethane	ND ug/kg		4.8	1		12/21/13 18:33	74-95-3	
1,2-Dichlorobenzene	ND ug/kg		4.8	1		12/21/13 18:33	95-50-1	
1,3-Dichlorobenzene	ND ug/kg		4.8	1		12/21/13 18:33	541-73-1	
1,4-Dichlorobenzene	ND ug/kg		4.8	1		12/21/13 18:33	106-46-7	
Dichlorodifluoromethane	ND ug/kg		9.6	1		12/21/13 18:33	75-71-8	
1,1-Dichloroethane	ND ug/kg		4.8	1		12/21/13 18:33	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.8	1		12/21/13 18:33	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.8	1		12/21/13 18:33	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.8	1		12/21/13 18:33	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.8	1		12/21/13 18:33	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.8	1		12/21/13 18:33	78-87-5	
1,3-Dichloropropane	ND ug/kg		4.8	1		12/21/13 18:33	142-28-9	
2,2-Dichloropropane	ND ug/kg		4.8	1		12/21/13 18:33	594-20-7	
1,1-Dichloropropene	ND ug/kg		4.8	1		12/21/13 18:33	563-58-6	
cis-1,3-Dichloropropene	ND ug/kg		4.8	1		12/21/13 18:33	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		4.8	1		12/21/13 18:33	10061-02-6	
Diisopropyl ether	ND ug/kg		4.8	1		12/21/13 18:33	108-20-3	
Ethylbenzene	ND ug/kg		4.8	1		12/21/13 18:33	100-41-4	
Hexachloro-1,3-butadiene	ND ug/kg		4.8	1		12/21/13 18:33	87-68-3	
2-Hexanone	ND ug/kg		48.0	1		12/21/13 18:33	591-78-6	
Isopropylbenzene (Cumene)	ND ug/kg		4.8	1		12/21/13 18:33	98-82-8	
p-Isopropyltoluene	ND ug/kg		4.8	1		12/21/13 18:33	99-87-6	
Methylene Chloride	ND ug/kg		19.2	1		12/21/13 18:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		48.0	1		12/21/13 18:33	108-10-1	
Methyl-tert-butyl ether	ND ug/kg		4.8	1		12/21/13 18:33	1634-04-4	
Naphthalene	ND ug/kg		4.8	1		12/21/13 18:33	91-20-3	
n-Propylbenzene	ND ug/kg		4.8	1		12/21/13 18:33	103-65-1	
Styrene	ND ug/kg		4.8	1		12/21/13 18:33	100-42-5	
1,1,1,2-Tetrachloroethane	ND ug/kg		4.8	1		12/21/13 18:33	630-20-6	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.8	1		12/21/13 18:33	79-34-5	
Tetrachloroethene	ND ug/kg		4.8	1		12/21/13 18:33	127-18-4	
Toluene	ND ug/kg		4.8	1		12/21/13 18:33	108-88-3	
1,2,3-Trichlorobenzene	ND ug/kg		4.8	1		12/21/13 18:33	87-61-6	
1,2,4-Trichlorobenzene	ND ug/kg		4.8	1		12/21/13 18:33	120-82-1	
1,1,1-Trichloroethane	ND ug/kg		4.8	1		12/21/13 18:33	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.8	1		12/21/13 18:33	79-00-5	
Trichloroethene	ND ug/kg		4.8	1		12/21/13 18:33	79-01-6	
Trichlorofluoromethane	ND ug/kg		4.8	1		12/21/13 18:33	75-69-4	
1,2,3-Trichloropropane	ND ug/kg		4.8	1		12/21/13 18:33	96-18-4	
1,2,4-Trimethylbenzene	ND ug/kg		4.8	1		12/21/13 18:33	95-63-6	

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

Sample: S-12-6 Lab ID: 92184006018 Collected: 12/17/13 15:40 Received: 12/19/13 11:15 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260/5035A Volatile Organics</b>	Analytical Method: EPA 8260							
1,3,5-Trimethylbenzene	ND ug/kg		4.8	1		12/21/13 18:33	108-67-8	
Vinyl acetate	ND ug/kg		48.0	1		12/21/13 18:33	108-05-4	
Vinyl chloride	ND ug/kg		9.6	1		12/21/13 18:33	75-01-4	
Xylene (Total)	ND ug/kg		9.6	1		12/21/13 18:33	1330-20-7	
m&p-Xylene	ND ug/kg		9.6	1		12/21/13 18:33	179601-23-1	
o-Xylene	ND ug/kg		4.8	1		12/21/13 18:33	95-47-6	
<b>Surrogates</b>								
Toluene-d8 (S)	96 %		70-130	1		12/21/13 18:33	2037-26-5	
4-Bromofluorobenzene (S)	89 %		70-130	1		12/21/13 18:33	460-00-4	
1,2-Dichloroethane-d4 (S)	146 %		70-132	1		12/21/13 18:33	17060-07-0	S0
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87							
Percent Moisture	11.6 %		0.10	1		12/20/13 08:45		

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

**Sample: S-12-7** Lab ID: **92184006019** Collected: 12/17/13 15:55 Received: 12/19/13 11:15 Matrix: Solid

*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV Microwave</b>		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
Acenaphthene	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	83-32-9	
Acenaphthylene	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	208-96-8	
Aniline	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	62-53-3	
Anthracene	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	120-12-7	
Benzo(a)anthracene	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	56-55-3	
Benzo(a)pyrene	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	50-32-8	
Benzo(b)fluoranthene	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	205-99-2	
Benzo(g,h,i)perylene	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	191-24-2	
Benzo(k)fluoranthene	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	207-08-9	
Benzoic Acid	ND ug/kg		1950	1	12/19/13 13:00	12/20/13 22:17	65-85-0	
Benzyl alcohol	ND ug/kg		782	1	12/19/13 13:00	12/20/13 22:17	100-51-6	
4-Bromophenylphenyl ether	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	101-55-3	
Butylbenzylphthalate	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	85-68-7	
4-Chloro-3-methylphenol	ND ug/kg		782	1	12/19/13 13:00	12/20/13 22:17	59-50-7	
4-Chloroaniline	ND ug/kg		1950	1	12/19/13 13:00	12/20/13 22:17	106-47-8	
bis(2-Chloroethoxy)methane	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	111-91-1	
bis(2-Chloroethyl) ether	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	108-60-1	
2-Chloronaphthalene	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	91-58-7	
2-Chlorophenol	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	95-57-8	
4-Chlorophenylphenyl ether	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	7005-72-3	
Chrysene	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	218-01-9	
Dibenz(a,h)anthracene	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	53-70-3	
Dibenzofuran	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	132-64-9	
1,2-Dichlorobenzene	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	95-50-1	
1,3-Dichlorobenzene	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	541-73-1	
1,4-Dichlorobenzene	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	106-46-7	
3,3'-Dichlorobenzidine	ND ug/kg		1950	1	12/19/13 13:00	12/20/13 22:17	91-94-1	
2,4-Dichlorophenol	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	120-83-2	
Diethylphthalate	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	84-66-2	
2,4-Dimethylphenol	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	105-67-9	
Dimethylphthalate	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	131-11-3	
Di-n-butylphthalate	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	84-74-2	
4,6-Dinitro-2-methylphenol	ND ug/kg		782	1	12/19/13 13:00	12/20/13 22:17	534-52-1	
2,4-Dinitrophenol	ND ug/kg		1950	1	12/19/13 13:00	12/20/13 22:17	51-28-5	
2,4-Dinitrotoluene	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	121-14-2	
2,6-Dinitrotoluene	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	606-20-2	
Di-n-octylphthalate	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	117-84-0	
bis(2-Ethylhexyl)phthalate	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	117-81-7	
Fluoranthene	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	206-44-0	
Fluorene	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	86-73-7	
Hexachloro-1,3-butadiene	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	87-68-3	
Hexachlorobenzene	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	118-74-1	
Hexachlorocyclopentadiene	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	77-47-4	
Hexachloroethane	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	67-72-1	
Indeno(1,2,3-cd)pyrene	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	193-39-5	

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

**Sample: S-12-7** Lab ID: **92184006019** Collected: 12/17/13 15:55 Received: 12/19/13 11:15 Matrix: Solid

*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV Microwave</b>		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
Isophorone	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	78-59-1	
1-Methylnaphthalene	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	90-12-0	
2-Methylnaphthalene	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	91-57-6	
2-Methylphenol(o-Cresol)	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17		
Naphthalene	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	91-20-3	
2-Nitroaniline	ND ug/kg		1950	1	12/19/13 13:00	12/20/13 22:17	88-74-4	
3-Nitroaniline	ND ug/kg		1950	1	12/19/13 13:00	12/20/13 22:17	99-09-2	
4-Nitroaniline	ND ug/kg		782	1	12/19/13 13:00	12/20/13 22:17	100-01-6	
Nitrobenzene	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	98-95-3	
2-Nitrophenol	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	88-75-5	
4-Nitrophenol	ND ug/kg		1950	1	12/19/13 13:00	12/20/13 22:17	100-02-7	
N-Nitrosodimethylamine	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	62-75-9	
N-Nitroso-di-n-propylamine	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	621-64-7	
N-Nitrosodiphenylamine	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	86-30-6	
Pentachlorophenol	ND ug/kg		1950	1	12/19/13 13:00	12/20/13 22:17	87-86-5	
Phenanthrene	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	85-01-8	
Phenol	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	108-95-2	
Pyrene	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	129-00-0	
1,2,4-Trichlorobenzene	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	120-82-1	
2,4,5-Trichlorophenol	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	95-95-4	
2,4,6-Trichlorophenol	ND ug/kg		391	1	12/19/13 13:00	12/20/13 22:17	88-06-2	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	61 %		23-110	1	12/19/13 13:00	12/20/13 22:17	4165-60-0	
2-Fluorobiphenyl (S)	66 %		30-110	1	12/19/13 13:00	12/20/13 22:17	321-60-8	
Terphenyl-d14 (S)	64 %		28-110	1	12/19/13 13:00	12/20/13 22:17	1718-51-0	
Phenol-d6 (S)	47 %		22-110	1	12/19/13 13:00	12/20/13 22:17	13127-88-3	
2-Fluorophenol (S)	43 %		13-110	1	12/19/13 13:00	12/20/13 22:17	367-12-4	
2,4,6-Tribromophenol (S)	42 %		27-110	1	12/19/13 13:00	12/20/13 22:17	118-79-6	
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
Acetone	ND ug/kg		94.0	1		12/21/13 18:53	67-64-1	
Benzene	ND ug/kg		4.7	1		12/21/13 18:53	71-43-2	
Bromobenzene	ND ug/kg		4.7	1		12/21/13 18:53	108-86-1	
Bromochloromethane	ND ug/kg		4.7	1		12/21/13 18:53	74-97-5	
Bromodichloromethane	ND ug/kg		4.7	1		12/21/13 18:53	75-27-4	
Bromoform	ND ug/kg		4.7	1		12/21/13 18:53	75-25-2	
Bromomethane	ND ug/kg		9.4	1		12/21/13 18:53	74-83-9	
2-Butanone (MEK)	ND ug/kg		94.0	1		12/21/13 18:53	78-93-3	
n-Butylbenzene	ND ug/kg		4.7	1		12/21/13 18:53	104-51-8	
sec-Butylbenzene	ND ug/kg		4.7	1		12/21/13 18:53	135-98-8	
tert-Butylbenzene	ND ug/kg		4.7	1		12/21/13 18:53	98-06-6	
Carbon tetrachloride	ND ug/kg		4.7	1		12/21/13 18:53	56-23-5	
Chlorobenzene	ND ug/kg		4.7	1		12/21/13 18:53	108-90-7	
Chloroethane	ND ug/kg		9.4	1		12/21/13 18:53	75-00-3	
Chloroform	ND ug/kg		4.7	1		12/21/13 18:53	67-66-3	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

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**Sample: S-12-7**      Lab ID: **92184006019**      Collected: 12/17/13 15:55      Received: 12/19/13 11:15      Matrix: Solid

*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
Chloromethane	ND ug/kg		9.4	1		12/21/13 18:53	74-87-3	
2-Chlorotoluene	ND ug/kg		4.7	1		12/21/13 18:53	95-49-8	
4-Chlorotoluene	ND ug/kg		4.7	1		12/21/13 18:53	106-43-4	
1,2-Dibromo-3-chloropropane	ND ug/kg		4.7	1		12/21/13 18:53	96-12-8	
Dibromochloromethane	ND ug/kg		4.7	1		12/21/13 18:53	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/kg		4.7	1		12/21/13 18:53	106-93-4	
Dibromomethane	ND ug/kg		4.7	1		12/21/13 18:53	74-95-3	
1,2-Dichlorobenzene	ND ug/kg		4.7	1		12/21/13 18:53	95-50-1	
1,3-Dichlorobenzene	ND ug/kg		4.7	1		12/21/13 18:53	541-73-1	
1,4-Dichlorobenzene	ND ug/kg		4.7	1		12/21/13 18:53	106-46-7	
Dichlorodifluoromethane	ND ug/kg		9.4	1		12/21/13 18:53	75-71-8	
1,1-Dichloroethane	ND ug/kg		4.7	1		12/21/13 18:53	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.7	1		12/21/13 18:53	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.7	1		12/21/13 18:53	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.7	1		12/21/13 18:53	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.7	1		12/21/13 18:53	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.7	1		12/21/13 18:53	78-87-5	
1,3-Dichloropropane	ND ug/kg		4.7	1		12/21/13 18:53	142-28-9	
2,2-Dichloropropane	ND ug/kg		4.7	1		12/21/13 18:53	594-20-7	
1,1-Dichloropropene	ND ug/kg		4.7	1		12/21/13 18:53	563-58-6	
cis-1,3-Dichloropropene	ND ug/kg		4.7	1		12/21/13 18:53	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		4.7	1		12/21/13 18:53	10061-02-6	
Diisopropyl ether	ND ug/kg		4.7	1		12/21/13 18:53	108-20-3	
Ethylbenzene	ND ug/kg		4.7	1		12/21/13 18:53	100-41-4	
Hexachloro-1,3-butadiene	ND ug/kg		4.7	1		12/21/13 18:53	87-68-3	
2-Hexanone	ND ug/kg		47.0	1		12/21/13 18:53	591-78-6	
Isopropylbenzene (Cumene)	ND ug/kg		4.7	1		12/21/13 18:53	98-82-8	
p-Isopropyltoluene	ND ug/kg		4.7	1		12/21/13 18:53	99-87-6	
Methylene Chloride	ND ug/kg		18.8	1		12/21/13 18:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		47.0	1		12/21/13 18:53	108-10-1	
Methyl-tert-butyl ether	ND ug/kg		4.7	1		12/21/13 18:53	1634-04-4	
Naphthalene	ND ug/kg		4.7	1		12/21/13 18:53	91-20-3	
n-Propylbenzene	ND ug/kg		4.7	1		12/21/13 18:53	103-65-1	
Styrene	ND ug/kg		4.7	1		12/21/13 18:53	100-42-5	
1,1,1,2-Tetrachloroethane	ND ug/kg		4.7	1		12/21/13 18:53	630-20-6	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.7	1		12/21/13 18:53	79-34-5	
Tetrachloroethene	ND ug/kg		4.7	1		12/21/13 18:53	127-18-4	
Toluene	ND ug/kg		4.7	1		12/21/13 18:53	108-88-3	
1,2,3-Trichlorobenzene	ND ug/kg		4.7	1		12/21/13 18:53	87-61-6	
1,2,4-Trichlorobenzene	ND ug/kg		4.7	1		12/21/13 18:53	120-82-1	
1,1,1-Trichloroethane	ND ug/kg		4.7	1		12/21/13 18:53	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.7	1		12/21/13 18:53	79-00-5	
Trichloroethene	ND ug/kg		4.7	1		12/21/13 18:53	79-01-6	
Trichlorofluoromethane	ND ug/kg		4.7	1		12/21/13 18:53	75-69-4	
1,2,3-Trichloropropane	ND ug/kg		4.7	1		12/21/13 18:53	96-18-4	
1,2,4-Trimethylbenzene	ND ug/kg		4.7	1		12/21/13 18:53	95-63-6	

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

Sample: S-12-7 Lab ID: 92184006019 Collected: 12/17/13 15:55 Received: 12/19/13 11:15 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
1,3,5-Trimethylbenzene	ND ug/kg		4.7	1		12/21/13 18:53	108-67-8	
Vinyl acetate	ND ug/kg		47.0	1		12/21/13 18:53	108-05-4	
Vinyl chloride	ND ug/kg		9.4	1		12/21/13 18:53	75-01-4	
Xylene (Total)	ND ug/kg		9.4	1		12/21/13 18:53	1330-20-7	
m&p-Xylene	ND ug/kg		9.4	1		12/21/13 18:53	179601-23-1	
o-Xylene	ND ug/kg		4.7	1		12/21/13 18:53	95-47-6	
<b>Surrogates</b>								
Toluene-d8 (S)	98 %		70-130	1		12/21/13 18:53	2037-26-5	
4-Bromofluorobenzene (S)	97 %		70-130	1		12/21/13 18:53	460-00-4	
1,2-Dichloroethane-d4 (S)	122 %		70-132	1		12/21/13 18:53	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	15.6 %		0.10	1		12/20/13 17:06		

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

**Sample: S-12-8** Lab ID: **92184006020** Collected: 12/17/13 16:10 Received: 12/19/13 11:15 Matrix: Solid

*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV Microwave</b>		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
Isophorone	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	78-59-1	
1-Methylnaphthalene	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	90-12-0	
2-Methylnaphthalene	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	91-57-6	
2-Methylphenol(o-Cresol)	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44		
Naphthalene	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	91-20-3	
2-Nitroaniline	ND ug/kg		1930	1	12/19/13 13:00	12/20/13 22:44	88-74-4	
3-Nitroaniline	ND ug/kg		1930	1	12/19/13 13:00	12/20/13 22:44	99-09-2	
4-Nitroaniline	ND ug/kg		773	1	12/19/13 13:00	12/20/13 22:44	100-01-6	
Nitrobenzene	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	98-95-3	
2-Nitrophenol	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	88-75-5	
4-Nitrophenol	ND ug/kg		1930	1	12/19/13 13:00	12/20/13 22:44	100-02-7	
N-Nitrosodimethylamine	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	62-75-9	
N-Nitroso-di-n-propylamine	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	621-64-7	
N-Nitrosodiphenylamine	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	86-30-6	
Pentachlorophenol	ND ug/kg		1930	1	12/19/13 13:00	12/20/13 22:44	87-86-5	
Phenanthrrene	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	85-01-8	
Phenol	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	108-95-2	
Pyrene	511 ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	129-00-0	
1,2,4-Trichlorobenzene	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	120-82-1	
2,4,5-Trichlorophenol	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	95-95-4	
2,4,6-Trichlorophenol	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	88-06-2	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	63 %		23-110	1	12/19/13 13:00	12/20/13 22:44	4165-60-0	
2-Fluorobiphenyl (S)	67 %		30-110	1	12/19/13 13:00	12/20/13 22:44	321-60-8	
Terphenyl-d14 (S)	57 %		28-110	1	12/19/13 13:00	12/20/13 22:44	1718-51-0	
Phenol-d6 (S)	77 %		22-110	1	12/19/13 13:00	12/20/13 22:44	13127-88-3	
2-Fluorophenol (S)	68 %		13-110	1	12/19/13 13:00	12/20/13 22:44	367-12-4	
2,4,6-Tribromophenol (S)	68 %		27-110	1	12/19/13 13:00	12/20/13 22:44	118-79-6	
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
Acetone	136 ug/kg		87.1	1				A+
Benzene	ND ug/kg		4.4	1	12/21/13 19:12	67-64-1		
Bromobenzene	ND ug/kg		4.4	1	12/21/13 19:12	71-43-2		
Bromochloromethane	ND ug/kg		4.4	1	12/21/13 19:12	108-86-1		
Bromodichloromethane	ND ug/kg		4.4	1	12/21/13 19:12	74-97-5		
Bromoform	ND ug/kg		4.4	1	12/21/13 19:12	75-27-4		
Bromomethane	ND ug/kg		8.7	1	12/21/13 19:12	75-25-2		
2-Butanone (MEK)	ND ug/kg		87.1	1	12/21/13 19:12	74-83-9		
n-Butylbenzene	ND ug/kg		4.4	1	12/21/13 19:12	104-51-8		
sec-Butylbenzene	ND ug/kg		4.4	1	12/21/13 19:12	135-98-8		
tert-Butylbenzene	ND ug/kg		4.4	1	12/21/13 19:12	98-06-6		
Carbon tetrachloride	ND ug/kg		4.4	1	12/21/13 19:12	56-23-5		
Chlorobenzene	ND ug/kg		4.4	1	12/21/13 19:12	108-90-7		
Chloroethane	ND ug/kg		8.7	1	12/21/13 19:12	75-00-3		
Chloroform	ND ug/kg		4.4	1	12/21/13 19:12	67-66-3		

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

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**Sample: S-12-8**      Lab ID: **92184006020**      Collected: 12/17/13 16:10      Received: 12/19/13 11:15      Matrix: Solid

*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
Chloromethane	ND ug/kg		8.7	1		12/21/13 19:12	74-87-3	
2-Chlorotoluene	ND ug/kg		4.4	1		12/21/13 19:12	95-49-8	
4-Chlorotoluene	ND ug/kg		4.4	1		12/21/13 19:12	106-43-4	
1,2-Dibromo-3-chloropropane	ND ug/kg		4.4	1		12/21/13 19:12	96-12-8	
Dibromochloromethane	ND ug/kg		4.4	1		12/21/13 19:12	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/kg		4.4	1		12/21/13 19:12	106-93-4	
Dibromomethane	ND ug/kg		4.4	1		12/21/13 19:12	74-95-3	
1,2-Dichlorobenzene	ND ug/kg		4.4	1		12/21/13 19:12	95-50-1	
1,3-Dichlorobenzene	ND ug/kg		4.4	1		12/21/13 19:12	541-73-1	
1,4-Dichlorobenzene	ND ug/kg		4.4	1		12/21/13 19:12	106-46-7	
Dichlorodifluoromethane	ND ug/kg		8.7	1		12/21/13 19:12	75-71-8	1g
1,1-Dichloroethane	ND ug/kg		4.4	1		12/21/13 19:12	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.4	1		12/21/13 19:12	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.4	1		12/21/13 19:12	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.4	1		12/21/13 19:12	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.4	1		12/21/13 19:12	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.4	1		12/21/13 19:12	78-87-5	
1,3-Dichloropropane	ND ug/kg		4.4	1		12/21/13 19:12	142-28-9	
2,2-Dichloropropane	ND ug/kg		4.4	1		12/21/13 19:12	594-20-7	
1,1-Dichloropropene	ND ug/kg		4.4	1		12/21/13 19:12	563-58-6	
cis-1,3-Dichloropropene	ND ug/kg		4.4	1		12/21/13 19:12	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		4.4	1		12/21/13 19:12	10061-02-6	
Diisopropyl ether	ND ug/kg		4.4	1		12/21/13 19:12	108-20-3	
Ethylbenzene	ND ug/kg		4.4	1		12/21/13 19:12	100-41-4	
Hexachloro-1,3-butadiene	ND ug/kg		4.4	1		12/21/13 19:12	87-68-3	
2-Hexanone	ND ug/kg		43.5	1		12/21/13 19:12	591-78-6	
Isopropylbenzene (Cumene)	ND ug/kg		4.4	1		12/21/13 19:12	98-82-8	
p-Isopropyltoluene	ND ug/kg		4.4	1		12/21/13 19:12	99-87-6	
Methylene Chloride	ND ug/kg		17.4	1		12/21/13 19:12	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		43.5	1		12/21/13 19:12	108-10-1	
Methyl-tert-butyl ether	ND ug/kg		4.4	1		12/21/13 19:12	1634-04-4	
Naphthalene	ND ug/kg		4.4	1		12/21/13 19:12	91-20-3	
n-Propylbenzene	ND ug/kg		4.4	1		12/21/13 19:12	103-65-1	
Styrene	ND ug/kg		4.4	1		12/21/13 19:12	100-42-5	
1,1,1,2-Tetrachloroethane	ND ug/kg		4.4	1		12/21/13 19:12	630-20-6	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.4	1		12/21/13 19:12	79-34-5	
Tetrachloroethene	ND ug/kg		4.4	1		12/21/13 19:12	127-18-4	
Toluene	ND ug/kg		4.4	1		12/21/13 19:12	108-88-3	
1,2,3-Trichlorobenzene	ND ug/kg		4.4	1		12/21/13 19:12	87-61-6	
1,2,4-Trichlorobenzene	ND ug/kg		4.4	1		12/21/13 19:12	120-82-1	
1,1,1-Trichloroethane	ND ug/kg		4.4	1		12/21/13 19:12	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.4	1		12/21/13 19:12	79-00-5	
Trichloroethene	ND ug/kg		4.4	1		12/21/13 19:12	79-01-6	
Trichlorofluoromethane	ND ug/kg		4.4	1		12/21/13 19:12	75-69-4	
1,2,3-Trichloropropane	ND ug/kg		4.4	1		12/21/13 19:12	96-18-4	
1,2,4-Trimethylbenzene	ND ug/kg		4.4	1		12/21/13 19:12	95-63-6	

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

Sample: S-12-8 Lab ID: 92184006020 Collected: 12/17/13 16:10 Received: 12/19/13 11:15 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
1,3,5-Trimethylbenzene	ND ug/kg		4.4	1		12/21/13 19:12	108-67-8	
Vinyl acetate	ND ug/kg		43.5	1		12/21/13 19:12	108-05-4	
Vinyl chloride	ND ug/kg		8.7	1		12/21/13 19:12	75-01-4	
Xylene (Total)	ND ug/kg		8.7	1		12/21/13 19:12	1330-20-7	
m&p-Xylene	ND ug/kg		8.7	1		12/21/13 19:12	179601-23-1	
o-Xylene	ND ug/kg		4.4	1		12/21/13 19:12	95-47-6	
<b>Surrogates</b>								
Toluene-d8 (S)	95 %		70-130	1		12/21/13 19:12	2037-26-5	
4-Bromofluorobenzene (S)	91 %		70-130	1		12/21/13 19:12	460-00-4	
1,2-Dichloroethane-d4 (S)	129 %		70-132	1		12/21/13 19:12	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	14.6 %		0.10	1		12/20/13 17:06		

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

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**Sample: S-12-9**      Lab ID: **92184006021**      Collected: 12/17/13 16:25      Received: 12/19/13 11:15      Matrix: Solid

*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV Microwave</b>		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
Acenaphthene	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	83-32-9	
Acenaphthylene	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	208-96-8	
Aniline	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	62-53-3	
Anthracene	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	120-12-7	
Benzo(a)anthracene	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	56-55-3	
Benzo(a)pyrene	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	50-32-8	
Benzo(b)fluoranthene	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	205-99-2	
Benzo(g,h,i)perylene	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	191-24-2	
Benzo(k)fluoranthene	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	207-08-9	
Benzoic Acid	ND ug/kg		2000	1	12/19/13 13:00	12/20/13 23:11	65-85-0	
Benzyl alcohol	ND ug/kg		801	1	12/19/13 13:00	12/20/13 23:11	100-51-6	
4-Bromophenylphenyl ether	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	101-55-3	
Butylbenzylphthalate	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	85-68-7	
4-Chloro-3-methylphenol	ND ug/kg		801	1	12/19/13 13:00	12/20/13 23:11	59-50-7	
4-Chloroaniline	ND ug/kg		2000	1	12/19/13 13:00	12/20/13 23:11	106-47-8	
bis(2-Chloroethoxy)methane	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	111-91-1	
bis(2-Chloroethyl) ether	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	108-60-1	
2-Chloronaphthalene	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	91-58-7	
2-Chlorophenol	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	95-57-8	
4-Chlorophenylphenyl ether	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	7005-72-3	
Chrysene	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	218-01-9	
Dibenz(a,h)anthracene	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	53-70-3	
Dibenzofuran	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	132-64-9	
1,2-Dichlorobenzene	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	95-50-1	
1,3-Dichlorobenzene	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	541-73-1	
1,4-Dichlorobenzene	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	106-46-7	
3,3'-Dichlorobenzidine	ND ug/kg		2000	1	12/19/13 13:00	12/20/13 23:11	91-94-1	
2,4-Dichlorophenol	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	120-83-2	
Diethylphthalate	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	84-66-2	
2,4-Dimethylphenol	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	105-67-9	
Dimethylphthalate	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	131-11-3	
Di-n-butylphthalate	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	84-74-2	
4,6-Dinitro-2-methylphenol	ND ug/kg		801	1	12/19/13 13:00	12/20/13 23:11	534-52-1	
2,4-Dinitrophenol	ND ug/kg		2000	1	12/19/13 13:00	12/20/13 23:11	51-28-5	
2,4-Dinitrotoluene	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	121-14-2	
2,6-Dinitrotoluene	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	606-20-2	
Di-n-octylphthalate	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	117-84-0	
bis(2-Ethylhexyl)phthalate	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	117-81-7	
Fluoranthene	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	206-44-0	
Fluorene	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	86-73-7	
Hexachloro-1,3-butadiene	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	87-68-3	
Hexachlorobenzene	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	118-74-1	
Hexachlorocyclopentadiene	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	77-47-4	
Hexachloroethane	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	67-72-1	
Indeno(1,2,3-cd)pyrene	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	193-39-5	

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

**Sample: S-12-9** Lab ID: 92184006021 Collected: 12/17/13 16:25 Received: 12/19/13 11:15 Matrix: Solid

*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV Microwave</b>		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
Isophorone	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	78-59-1	
1-Methylnaphthalene	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	90-12-0	
2-Methylnaphthalene	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	91-57-6	
2-Methylphenol(o-Cresol)	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11		
Naphthalene	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	91-20-3	
2-Nitroaniline	ND ug/kg		2000	1	12/19/13 13:00	12/20/13 23:11	88-74-4	
3-Nitroaniline	ND ug/kg		2000	1	12/19/13 13:00	12/20/13 23:11	99-09-2	
4-Nitroaniline	ND ug/kg		801	1	12/19/13 13:00	12/20/13 23:11	100-01-6	
Nitrobenzene	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	98-95-3	
2-Nitrophenol	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	88-75-5	
4-Nitrophenol	ND ug/kg		2000	1	12/19/13 13:00	12/20/13 23:11	100-02-7	
N-Nitrosodimethylamine	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	62-75-9	
N-Nitroso-di-n-propylamine	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	621-64-7	
N-Nitrosodiphenylamine	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	86-30-6	
Pentachlorophenol	ND ug/kg		2000	1	12/19/13 13:00	12/20/13 23:11	87-86-5	
Phenanthrrene	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	85-01-8	
Phenol	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	108-95-2	
Pyrene	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	129-00-0	
1,2,4-Trichlorobenzene	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	120-82-1	
2,4,5-Trichlorophenol	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	95-95-4	
2,4,6-Trichlorophenol	ND ug/kg		401	1	12/19/13 13:00	12/20/13 23:11	88-06-2	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	64 %		23-110	1	12/19/13 13:00	12/20/13 23:11	4165-60-0	
2-Fluorobiphenyl (S)	71 %		30-110	1	12/19/13 13:00	12/20/13 23:11	321-60-8	
Terphenyl-d14 (S)	75 %		28-110	1	12/19/13 13:00	12/20/13 23:11	1718-51-0	
Phenol-d6 (S)	65 %		22-110	1	12/19/13 13:00	12/20/13 23:11	13127-88-3	
2-Fluorophenol (S)	59 %		13-110	1	12/19/13 13:00	12/20/13 23:11	367-12-4	
2,4,6-Tribromophenol (S)	78 %		27-110	1	12/19/13 13:00	12/20/13 23:11	118-79-6	
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
Acetone	272 ug/kg		104	1				A+
Benzene	ND ug/kg		5.2	1	12/21/13 19:32	71-43-2		
Bromobenzene	ND ug/kg		5.2	1	12/21/13 19:32	108-86-1		
Bromochloromethane	ND ug/kg		5.2	1	12/21/13 19:32	74-97-5		
Bromodichloromethane	ND ug/kg		5.2	1	12/21/13 19:32	75-27-4		
Bromoform	ND ug/kg		5.2	1	12/21/13 19:32	75-25-2		
Bromomethane	ND ug/kg		10.4	1	12/21/13 19:32	74-83-9		
2-Butanone (MEK)	ND ug/kg		104	1	12/21/13 19:32	78-93-3		
n-Butylbenzene	ND ug/kg		5.2	1	12/21/13 19:32	104-51-8		
sec-Butylbenzene	ND ug/kg		5.2	1	12/21/13 19:32	135-98-8		
tert-Butylbenzene	ND ug/kg		5.2	1	12/21/13 19:32	98-06-6		
Carbon tetrachloride	ND ug/kg		5.2	1	12/21/13 19:32	56-23-5		
Chlorobenzene	ND ug/kg		5.2	1	12/21/13 19:32	108-90-7		
Chloroethane	ND ug/kg		10.4	1	12/21/13 19:32	75-00-3		
Chloroform	ND ug/kg		5.2	1	12/21/13 19:32	67-66-3		

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

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**Sample: S-12-9**      Lab ID: **92184006021**      Collected: 12/17/13 16:25      Received: 12/19/13 11:15      Matrix: Solid

*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
Chloromethane	ND ug/kg		10.4	1		12/21/13 19:32	74-87-3	
2-Chlorotoluene	ND ug/kg		5.2	1		12/21/13 19:32	95-49-8	
4-Chlorotoluene	ND ug/kg		5.2	1		12/21/13 19:32	106-43-4	
1,2-Dibromo-3-chloropropane	ND ug/kg		5.2	1		12/21/13 19:32	96-12-8	
Dibromochloromethane	ND ug/kg		5.2	1		12/21/13 19:32	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/kg		5.2	1		12/21/13 19:32	106-93-4	
Dibromomethane	ND ug/kg		5.2	1		12/21/13 19:32	74-95-3	
1,2-Dichlorobenzene	ND ug/kg		5.2	1		12/21/13 19:32	95-50-1	
1,3-Dichlorobenzene	ND ug/kg		5.2	1		12/21/13 19:32	541-73-1	
1,4-Dichlorobenzene	ND ug/kg		5.2	1		12/21/13 19:32	106-46-7	
Dichlorodifluoromethane	ND ug/kg		10.4	1		12/21/13 19:32	75-71-8	1g
1,1-Dichloroethane	ND ug/kg		5.2	1		12/21/13 19:32	75-34-3	
1,2-Dichloroethane	ND ug/kg		5.2	1		12/21/13 19:32	107-06-2	
1,1-Dichloroethene	ND ug/kg		5.2	1		12/21/13 19:32	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		5.2	1		12/21/13 19:32	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		5.2	1		12/21/13 19:32	156-60-5	
1,2-Dichloropropane	ND ug/kg		5.2	1		12/21/13 19:32	78-87-5	
1,3-Dichloropropane	ND ug/kg		5.2	1		12/21/13 19:32	142-28-9	
2,2-Dichloropropane	ND ug/kg		5.2	1		12/21/13 19:32	594-20-7	
1,1-Dichloropropene	ND ug/kg		5.2	1		12/21/13 19:32	563-58-6	
cis-1,3-Dichloropropene	ND ug/kg		5.2	1		12/21/13 19:32	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		5.2	1		12/21/13 19:32	10061-02-6	
Diisopropyl ether	ND ug/kg		5.2	1		12/21/13 19:32	108-20-3	
Ethylbenzene	ND ug/kg		5.2	1		12/21/13 19:32	100-41-4	
Hexachloro-1,3-butadiene	ND ug/kg		5.2	1		12/21/13 19:32	87-68-3	
2-Hexanone	ND ug/kg		51.8	1		12/21/13 19:32	591-78-6	
Isopropylbenzene (Cumene)	ND ug/kg		5.2	1		12/21/13 19:32	98-82-8	
p-Isopropyltoluene	ND ug/kg		5.2	1		12/21/13 19:32	99-87-6	
Methylene Chloride	ND ug/kg		20.7	1		12/21/13 19:32	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		51.8	1		12/21/13 19:32	108-10-1	
Methyl-tert-butyl ether	ND ug/kg		5.2	1		12/21/13 19:32	1634-04-4	
Naphthalene	ND ug/kg		5.2	1		12/21/13 19:32	91-20-3	
n-Propylbenzene	ND ug/kg		5.2	1		12/21/13 19:32	103-65-1	
Styrene	ND ug/kg		5.2	1		12/21/13 19:32	100-42-5	
1,1,1,2-Tetrachloroethane	ND ug/kg		5.2	1		12/21/13 19:32	630-20-6	
1,1,2,2-Tetrachloroethane	ND ug/kg		5.2	1		12/21/13 19:32	79-34-5	
Tetrachloroethene	ND ug/kg		5.2	1		12/21/13 19:32	127-18-4	
Toluene	ND ug/kg		5.2	1		12/21/13 19:32	108-88-3	
1,2,3-Trichlorobenzene	ND ug/kg		5.2	1		12/21/13 19:32	87-61-6	
1,2,4-Trichlorobenzene	ND ug/kg		5.2	1		12/21/13 19:32	120-82-1	
1,1,1-Trichloroethane	ND ug/kg		5.2	1		12/21/13 19:32	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		5.2	1		12/21/13 19:32	79-00-5	
Trichloroethene	ND ug/kg		5.2	1		12/21/13 19:32	79-01-6	
Trichlorofluoromethane	ND ug/kg		5.2	1		12/21/13 19:32	75-69-4	
1,2,3-Trichloropropane	ND ug/kg		5.2	1		12/21/13 19:32	96-18-4	
1,2,4-Trimethylbenzene	ND ug/kg		5.2	1		12/21/13 19:32	95-63-6	

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

Sample: S-12-9 Lab ID: 92184006021 Collected: 12/17/13 16:25 Received: 12/19/13 11:15 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
1,3,5-Trimethylbenzene	ND ug/kg		5.2	1		12/21/13 19:32	108-67-8	
Vinyl acetate	ND ug/kg		51.8	1		12/21/13 19:32	108-05-4	
Vinyl chloride	ND ug/kg		10.4	1		12/21/13 19:32	75-01-4	
Xylene (Total)	ND ug/kg		10.4	1		12/21/13 19:32	1330-20-7	
m&p-Xylene	ND ug/kg		10.4	1		12/21/13 19:32	179601-23-1	
o-Xylene	ND ug/kg		5.2	1		12/21/13 19:32	95-47-6	
<b>Surrogates</b>								
Toluene-d8 (S)	95 %		70-130	1		12/21/13 19:32	2037-26-5	
4-Bromofluorobenzene (S)	90 %		70-130	1		12/21/13 19:32	460-00-4	
1,2-Dichloroethane-d4 (S)	120 %		70-132	1		12/21/13 19:32	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	17.6 %		0.10	1		12/20/13 17:06		

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

**Sample: S-8-1**      Lab ID: **92184006022**      Collected: 12/17/13 16:35      Received: 12/19/13 11:15      Matrix: Solid

*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV Microwave</b>		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
Acenaphthene	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	83-32-9	
Acenaphthylene	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	208-96-8	
Aniline	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	62-53-3	
Anthracene	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	120-12-7	
Benzo(a)anthracene	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	56-55-3	
Benzo(a)pyrene	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	50-32-8	
Benzo(b)fluoranthene	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	205-99-2	
Benzo(g,h,i)perylene	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	191-24-2	
Benzo(k)fluoranthene	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	207-08-9	
Benzoic Acid	ND ug/kg		1830	1	12/19/13 13:00	12/20/13 23:37	65-85-0	
Benzyl alcohol	ND ug/kg		732	1	12/19/13 13:00	12/20/13 23:37	100-51-6	
4-Bromophenylphenyl ether	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	101-55-3	
Butylbenzylphthalate	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	85-68-7	
4-Chloro-3-methylphenol	ND ug/kg		732	1	12/19/13 13:00	12/20/13 23:37	59-50-7	
4-Chloroaniline	ND ug/kg		1830	1	12/19/13 13:00	12/20/13 23:37	106-47-8	
bis(2-Chloroethoxy)methane	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	111-91-1	
bis(2-Chloroethyl) ether	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	108-60-1	
2-Chloronaphthalene	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	91-58-7	
2-Chlorophenol	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	95-57-8	
4-Chlorophenylphenyl ether	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	7005-72-3	
Chrysene	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	218-01-9	
Dibenz(a,h)anthracene	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	53-70-3	
Dibenzofuran	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	132-64-9	
1,2-Dichlorobenzene	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	95-50-1	
1,3-Dichlorobenzene	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	541-73-1	
1,4-Dichlorobenzene	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	106-46-7	
3,3'-Dichlorobenzidine	ND ug/kg		1830	1	12/19/13 13:00	12/20/13 23:37	91-94-1	
2,4-Dichlorophenol	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	120-83-2	
Diethylphthalate	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	84-66-2	
2,4-Dimethylphenol	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	105-67-9	
Dimethylphthalate	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	131-11-3	
Di-n-butylphthalate	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	84-74-2	
4,6-Dinitro-2-methylphenol	ND ug/kg		732	1	12/19/13 13:00	12/20/13 23:37	534-52-1	
2,4-Dinitrophenol	ND ug/kg		1830	1	12/19/13 13:00	12/20/13 23:37	51-28-5	
2,4-Dinitrotoluene	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	121-14-2	
2,6-Dinitrotoluene	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	606-20-2	
Di-n-octylphthalate	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	117-84-0	
bis(2-Ethylhexyl)phthalate	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	117-81-7	
Fluoranthene	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	206-44-0	
Fluorene	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	86-73-7	
Hexachloro-1,3-butadiene	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	87-68-3	
Hexachlorobenzene	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	118-74-1	
Hexachlorocyclopentadiene	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	77-47-4	
Hexachloroethane	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	67-72-1	
Indeno(1,2,3-cd)pyrene	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	193-39-5	

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

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**Sample: S-8-1**      Lab ID: **92184006022**      Collected: 12/17/13 16:35      Received: 12/19/13 11:15      Matrix: Solid

*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
Chloromethane	ND ug/kg		8.7	1		12/21/13 19:51	74-87-3	
2-Chlorotoluene	ND ug/kg		4.4	1		12/21/13 19:51	95-49-8	
4-Chlorotoluene	ND ug/kg		4.4	1		12/21/13 19:51	106-43-4	
1,2-Dibromo-3-chloropropane	ND ug/kg		4.4	1		12/21/13 19:51	96-12-8	
Dibromochloromethane	ND ug/kg		4.4	1		12/21/13 19:51	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/kg		4.4	1		12/21/13 19:51	106-93-4	
Dibromomethane	ND ug/kg		4.4	1		12/21/13 19:51	74-95-3	
1,2-Dichlorobenzene	ND ug/kg		4.4	1		12/21/13 19:51	95-50-1	
1,3-Dichlorobenzene	ND ug/kg		4.4	1		12/21/13 19:51	541-73-1	
1,4-Dichlorobenzene	ND ug/kg		4.4	1		12/21/13 19:51	106-46-7	
Dichlorodifluoromethane	ND ug/kg		8.7	1		12/21/13 19:51	75-71-8	
1,1-Dichloroethane	ND ug/kg		4.4	1		12/21/13 19:51	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.4	1		12/21/13 19:51	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.4	1		12/21/13 19:51	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.4	1		12/21/13 19:51	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.4	1		12/21/13 19:51	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.4	1		12/21/13 19:51	78-87-5	
1,3-Dichloropropane	ND ug/kg		4.4	1		12/21/13 19:51	142-28-9	
2,2-Dichloropropane	ND ug/kg		4.4	1		12/21/13 19:51	594-20-7	
1,1-Dichloropropene	ND ug/kg		4.4	1		12/21/13 19:51	563-58-6	
cis-1,3-Dichloropropene	ND ug/kg		4.4	1		12/21/13 19:51	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		4.4	1		12/21/13 19:51	10061-02-6	
Diisopropyl ether	ND ug/kg		4.4	1		12/21/13 19:51	108-20-3	
Ethylbenzene	ND ug/kg		4.4	1		12/21/13 19:51	100-41-4	
Hexachloro-1,3-butadiene	ND ug/kg		4.4	1		12/21/13 19:51	87-68-3	
2-Hexanone	ND ug/kg		43.7	1		12/21/13 19:51	591-78-6	
Isopropylbenzene (Cumene)	ND ug/kg		4.4	1		12/21/13 19:51	98-82-8	
p-Isopropyltoluene	ND ug/kg		4.4	1		12/21/13 19:51	99-87-6	
Methylene Chloride	ND ug/kg		17.5	1		12/21/13 19:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		43.7	1		12/21/13 19:51	108-10-1	
Methyl-tert-butyl ether	ND ug/kg		4.4	1		12/21/13 19:51	1634-04-4	
Naphthalene	ND ug/kg		4.4	1		12/21/13 19:51	91-20-3	
n-Propylbenzene	ND ug/kg		4.4	1		12/21/13 19:51	103-65-1	
Styrene	ND ug/kg		4.4	1		12/21/13 19:51	100-42-5	
1,1,1,2-Tetrachloroethane	ND ug/kg		4.4	1		12/21/13 19:51	630-20-6	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.4	1		12/21/13 19:51	79-34-5	
Tetrachloroethene	ND ug/kg		4.4	1		12/21/13 19:51	127-18-4	
Toluene	ND ug/kg		4.4	1		12/21/13 19:51	108-88-3	
1,2,3-Trichlorobenzene	ND ug/kg		4.4	1		12/21/13 19:51	87-61-6	
1,2,4-Trichlorobenzene	ND ug/kg		4.4	1		12/21/13 19:51	120-82-1	
1,1,1-Trichloroethane	ND ug/kg		4.4	1		12/21/13 19:51	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.4	1		12/21/13 19:51	79-00-5	
Trichloroethene	ND ug/kg		4.4	1		12/21/13 19:51	79-01-6	
Trichlorofluoromethane	ND ug/kg		4.4	1		12/21/13 19:51	75-69-4	
1,2,3-Trichloropropane	ND ug/kg		4.4	1		12/21/13 19:51	96-18-4	
1,2,4-Trimethylbenzene	ND ug/kg		4.4	1		12/21/13 19:51	95-63-6	

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

Sample: S-8-1 Lab ID: 92184006022 Collected: 12/17/13 16:35 Received: 12/19/13 11:15 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
1,3,5-Trimethylbenzene	ND ug/kg		4.4	1		12/21/13 19:51	108-67-8	
Vinyl acetate	ND ug/kg		43.7	1		12/21/13 19:51	108-05-4	
Vinyl chloride	ND ug/kg		8.7	1		12/21/13 19:51	75-01-4	
Xylene (Total)	ND ug/kg		8.7	1		12/21/13 19:51	1330-20-7	
m&p-Xylene	ND ug/kg		8.7	1		12/21/13 19:51	179601-23-1	
o-Xylene	ND ug/kg		4.4	1		12/21/13 19:51	95-47-6	
<b>Surrogates</b>								
Toluene-d8 (S)	101 %		70-130	1		12/21/13 19:51	2037-26-5	
4-Bromofluorobenzene (S)	96 %		70-130	1		12/21/13 19:51	460-00-4	
1,2-Dichloroethane-d4 (S)	125 %		70-132	1		12/21/13 19:51	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	9.8 %		0.10	1		12/20/13 17:06		

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

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**Sample: S-8-2**      Lab ID: **92184006023**      Collected: 12/18/13 08:55      Received: 12/19/13 11:15      Matrix: Solid

*Results reported on a "dry-weight" basis*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
Chloromethane	ND ug/kg		9.7	1		12/24/13 15:58	74-87-3	
2-Chlorotoluene	ND ug/kg		4.9	1		12/24/13 15:58	95-49-8	
4-Chlorotoluene	ND ug/kg		4.9	1		12/24/13 15:58	106-43-4	
1,2-Dibromo-3-chloropropane	ND ug/kg		4.9	1		12/24/13 15:58	96-12-8	
Dibromochloromethane	ND ug/kg		4.9	1		12/24/13 15:58	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/kg		4.9	1		12/24/13 15:58	106-93-4	
Dibromomethane	ND ug/kg		4.9	1		12/24/13 15:58	74-95-3	
1,2-Dichlorobenzene	ND ug/kg		4.9	1		12/24/13 15:58	95-50-1	
1,3-Dichlorobenzene	ND ug/kg		4.9	1		12/24/13 15:58	541-73-1	
1,4-Dichlorobenzene	ND ug/kg		4.9	1		12/24/13 15:58	106-46-7	
Dichlorodifluoromethane	ND ug/kg		9.7	1		12/24/13 15:58	75-71-8	
1,1-Dichloroethane	ND ug/kg		4.9	1		12/24/13 15:58	75-34-3	
1,2-Dichloroethane	ND ug/kg		4.9	1		12/24/13 15:58	107-06-2	
1,1-Dichloroethene	ND ug/kg		4.9	1		12/24/13 15:58	75-35-4	
cis-1,2-Dichloroethene	ND ug/kg		4.9	1		12/24/13 15:58	156-59-2	
trans-1,2-Dichloroethene	ND ug/kg		4.9	1		12/24/13 15:58	156-60-5	
1,2-Dichloropropane	ND ug/kg		4.9	1		12/24/13 15:58	78-87-5	
1,3-Dichloropropane	ND ug/kg		4.9	1		12/24/13 15:58	142-28-9	
2,2-Dichloropropane	ND ug/kg		4.9	1		12/24/13 15:58	594-20-7	
1,1-Dichloropropene	ND ug/kg		4.9	1		12/24/13 15:58	563-58-6	
cis-1,3-Dichloropropene	ND ug/kg		4.9	1		12/24/13 15:58	10061-01-5	
trans-1,3-Dichloropropene	ND ug/kg		4.9	1		12/24/13 15:58	10061-02-6	
Diisopropyl ether	ND ug/kg		4.9	1		12/24/13 15:58	108-20-3	
Ethylbenzene	ND ug/kg		4.9	1		12/24/13 15:58	100-41-4	
Hexachloro-1,3-butadiene	ND ug/kg		4.9	1		12/24/13 15:58	87-68-3	
2-Hexanone	ND ug/kg		48.6	1		12/24/13 15:58	591-78-6	
Isopropylbenzene (Cumene)	ND ug/kg		4.9	1		12/24/13 15:58	98-82-8	
p-Isopropyltoluene	ND ug/kg		4.9	1		12/24/13 15:58	99-87-6	
Methylene Chloride	ND ug/kg		19.5	1		12/24/13 15:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/kg		48.6	1		12/24/13 15:58	108-10-1	
Methyl-tert-butyl ether	ND ug/kg		4.9	1		12/24/13 15:58	1634-04-4	
Naphthalene	ND ug/kg		4.9	1		12/24/13 15:58	91-20-3	
n-Propylbenzene	ND ug/kg		4.9	1		12/24/13 15:58	103-65-1	
Styrene	ND ug/kg		4.9	1		12/24/13 15:58	100-42-5	
1,1,1,2-Tetrachloroethane	ND ug/kg		4.9	1		12/24/13 15:58	630-20-6	
1,1,2,2-Tetrachloroethane	ND ug/kg		4.9	1		12/24/13 15:58	79-34-5	
Tetrachloroethene	ND ug/kg		4.9	1		12/24/13 15:58	127-18-4	
Toluene	ND ug/kg		4.9	1		12/24/13 15:58	108-88-3	
1,2,3-Trichlorobenzene	ND ug/kg		4.9	1		12/24/13 15:58	87-61-6	
1,2,4-Trichlorobenzene	ND ug/kg		4.9	1		12/24/13 15:58	120-82-1	
1,1,1-Trichloroethane	ND ug/kg		4.9	1		12/24/13 15:58	71-55-6	
1,1,2-Trichloroethane	ND ug/kg		4.9	1		12/24/13 15:58	79-00-5	
Trichloroethene	ND ug/kg		4.9	1		12/24/13 15:58	79-01-6	
Trichlorofluoromethane	ND ug/kg		4.9	1		12/24/13 15:58	75-69-4	
1,2,3-Trichloropropane	ND ug/kg		4.9	1		12/24/13 15:58	96-18-4	
1,2,4-Trimethylbenzene	ND ug/kg		4.9	1		12/24/13 15:58	95-63-6	

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

Sample: S-8-2 Lab ID: 92184006023 Collected: 12/18/13 08:55 Received: 12/19/13 11:15 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
1,3,5-Trimethylbenzene	ND ug/kg		4.9	1		12/24/13 15:58	108-67-8	
Vinyl acetate	ND ug/kg		48.6	1		12/24/13 15:58	108-05-4	
Vinyl chloride	ND ug/kg		9.7	1		12/24/13 15:58	75-01-4	
Xylene (Total)	ND ug/kg		9.7	1		12/24/13 15:58	1330-20-7	
m&p-Xylene	ND ug/kg		9.7	1		12/24/13 15:58	179601-23-1	
o-Xylene	ND ug/kg		4.9	1		12/24/13 15:58	95-47-6	
<b>Surrogates</b>								
Toluene-d8 (S)	99 %		70-130	1		12/24/13 15:58	2037-26-5	
4-Bromofluorobenzene (S)	93 %		70-130	1		12/24/13 15:58	460-00-4	
1,2-Dichloroethane-d4 (S)	106 %		70-132	1		12/24/13 15:58	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	21.3 %		0.10	1		12/20/13 17:06		

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

---

**Sample: S-8-5**      Lab ID: **92184006024**      Collected: 12/18/13 09:25      Received: 12/19/13 11:15      Matrix: Solid

*Results reported on a "dry-weight" basis*

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

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

Sample: S-8-5 Lab ID: 92184006024 Collected: 12/18/13 09:25 Received: 12/19/13 11:15 Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260/5035A Volatile Organics</b>	Analytical Method: EPA 8260							
1,3,5-Trimethylbenzene	ND ug/kg		5.4	1		12/24/13 02:10	108-67-8	
Vinyl acetate	ND ug/kg		53.7	1		12/24/13 02:10	108-05-4	
Vinyl chloride	ND ug/kg		10.7	1		12/24/13 02:10	75-01-4	
Xylene (Total)	ND ug/kg		10.7	1		12/24/13 02:10	1330-20-7	
m&p-Xylene	ND ug/kg		10.7	1		12/24/13 02:10	179601-23-1	
o-Xylene	ND ug/kg		5.4	1		12/24/13 02:10	95-47-6	
<b>Surrogates</b>								
Toluene-d8 (S)	98 %		70-130	1		12/24/13 02:10	2037-26-5	
4-Bromofluorobenzene (S)	87 %		70-130	1		12/24/13 02:10	460-00-4	
1,2-Dichloroethane-d4 (S)	110 %		70-132	1		12/24/13 02:10	17060-07-0	
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87							
Percent Moisture	<b>22.6 %</b>		0.10	1		12/20/13 17:07		

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## QUALITY CONTROL DATA

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

QC Batch: GCV/7649 Analysis Method: EPA 8015 Modified

QC Batch Method: EPA 5035A/5030B Analysis Description: Gasoline Range Organics

Associated Lab Samples: 92184006001, 92184006002, 92184006003, 92184006004, 92184006005, 92184006006, 92184006007,  
92184006008, 92184006009, 92184006013

METHOD BLANK: 1113921 Matrix: Solid

Associated Lab Samples: 92184006001, 92184006002, 92184006003, 92184006004, 92184006005, 92184006006, 92184006007,  
92184006008, 92184006009, 92184006013

Parameter	Units	Blank Result	Reporting Limit		Analyzed	Qualifiers
			Limit	Analyzed		
Gasoline Range Organics	mg/kg	ND	6.0	12/28/13 11:32		
4-Bromofluorobenzene (S)	%	100	70-167	12/28/13 11:32		

LABORATORY CONTROL SAMPLE: 1113922

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits		Qualifiers
					Limit	Analyzed	
Gasoline Range Organics	mg/kg	49.8	47.9	96	70-165		
4-Bromofluorobenzene (S)	%			98	70-167		

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 1113923 1113924

Parameter	Units	92183967004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
			Result	Conc.	Result	Result	Rec	RPD	Qual		
Gasoline Range Organics	mg/kg	ND	56.5	56.5	55.5	55.5	97	97	47-187	0	
4-Bromofluorobenzene (S)	%						102	95	70-167		

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## QUALITY CONTROL DATA

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

QC Batch: GCV/7653 Analysis Method: EPA 8015 Modified

QC Batch Method: EPA 5035A/5030B Analysis Description: Gasoline Range Organics

Associated Lab Samples: 92184006014, 92184006015, 92184006016

METHOD BLANK: 1114163 Matrix: Solid

Associated Lab Samples: 92184006014, 92184006015, 92184006016

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	mg/kg	ND	6.0	12/31/13 04:06	
4-Bromofluorobenzene (S)	%	103	70-167	12/31/13 04:06	

LABORATORY CONTROL SAMPLE: 1114164

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	mg/kg	49.7	46.9	94	70-165	
4-Bromofluorobenzene (S)	%			102	70-167	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 1114165 1114166

Parameter	Units	92184006014 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	46	46	44.5	39.5	97	86	47-187	12	
4-Bromofluorobenzene (S)	%						102	101	70-167		

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## QUALITY CONTROL DATA

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

QC Batch:	MSV/25308	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV 5035A Volatile Organics
Associated Lab Samples:	92184006010, 92184006011		

METHOD BLANK: 1110867                                   Matrix: Solid

Associated Lab Samples: 92184006010, 92184006011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	5.4	12/21/13 10:52	
1,1,1-Trichloroethane	ug/kg	ND	5.4	12/21/13 10:52	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.4	12/21/13 10:52	
1,1,2-Trichloroethane	ug/kg	ND	5.4	12/21/13 10:52	
1,1-Dichloroethane	ug/kg	ND	5.4	12/21/13 10:52	
1,1-Dichloroethene	ug/kg	ND	5.4	12/21/13 10:52	
1,1-Dichloropropene	ug/kg	ND	5.4	12/21/13 10:52	
1,2,3-Trichlorobenzene	ug/kg	ND	5.4	12/21/13 10:52	
1,2,3-Trichloropropane	ug/kg	ND	5.4	12/21/13 10:52	
1,2,4-Trichlorobenzene	ug/kg	ND	5.4	12/21/13 10:52	
1,2,4-Trimethylbenzene	ug/kg	ND	5.4	12/21/13 10:52	
1,2-Dibromo-3-chloropropane	ug/kg	ND	5.4	12/21/13 10:52	
1,2-Dibromoethane (EDB)	ug/kg	ND	5.4	12/21/13 10:52	
1,2-Dichlorobenzene	ug/kg	ND	5.4	12/21/13 10:52	
1,2-Dichloroethane	ug/kg	ND	5.4	12/21/13 10:52	
1,2-Dichloropropane	ug/kg	ND	5.4	12/21/13 10:52	
1,3,5-Trimethylbenzene	ug/kg	ND	5.4	12/21/13 10:52	
1,3-Dichlorobenzene	ug/kg	ND	5.4	12/21/13 10:52	
1,3-Dichloropropane	ug/kg	ND	5.4	12/21/13 10:52	
1,4-Dichlorobenzene	ug/kg	ND	5.4	12/21/13 10:52	
2,2-Dichloropropane	ug/kg	ND	5.4	12/21/13 10:52	
2-Butanone (MEK)	ug/kg	ND	108	12/21/13 10:52	
2-Chlorotoluene	ug/kg	ND	5.4	12/21/13 10:52	
2-Hexanone	ug/kg	ND	54.1	12/21/13 10:52	
4-Chlorotoluene	ug/kg	ND	5.4	12/21/13 10:52	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	54.1	12/21/13 10:52	
Acetone	ug/kg	ND	108	12/21/13 10:52	
Benzene	ug/kg	ND	5.4	12/21/13 10:52	
Bromobenzene	ug/kg	ND	5.4	12/21/13 10:52	
Bromochloromethane	ug/kg	ND	5.4	12/21/13 10:52	
Bromodichloromethane	ug/kg	ND	5.4	12/21/13 10:52	
Bromoform	ug/kg	ND	5.4	12/21/13 10:52	
Bromomethane	ug/kg	ND	10.8	12/21/13 10:52	
Carbon tetrachloride	ug/kg	ND	5.4	12/21/13 10:52	
Chlorobenzene	ug/kg	ND	5.4	12/21/13 10:52	
Chloroethane	ug/kg	ND	10.8	12/21/13 10:52	
Chloroform	ug/kg	ND	5.4	12/21/13 10:52	
Chloromethane	ug/kg	ND	10.8	12/21/13 10:52	
cis-1,2-Dichloroethene	ug/kg	ND	5.4	12/21/13 10:52	
cis-1,3-Dichloropropene	ug/kg	ND	5.4	12/21/13 10:52	
Dibromochloromethane	ug/kg	ND	5.4	12/21/13 10:52	
Dibromomethane	ug/kg	ND	5.4	12/21/13 10:52	
Dichlorodifluoromethane	ug/kg	ND	10.8	12/21/13 10:52	

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## QUALITY CONTROL DATA

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

METHOD BLANK: 1110867

Matrix: Solid

Associated Lab Samples: 92184006010, 92184006011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diisopropyl ether	ug/kg	ND	5.4	12/21/13 10:52	
Ethylbenzene	ug/kg	ND	5.4	12/21/13 10:52	
Hexachloro-1,3-butadiene	ug/kg	ND	5.4	12/21/13 10:52	
Isopropylbenzene (Cumene)	ug/kg	ND	5.4	12/21/13 10:52	
m&p-Xylene	ug/kg	ND	10.8	12/21/13 10:52	
Methyl-tert-butyl ether	ug/kg	ND	5.4	12/21/13 10:52	
Methylene Chloride	ug/kg	ND	21.6	12/21/13 10:52	
n-Butylbenzene	ug/kg	ND	5.4	12/21/13 10:52	
n-Propylbenzene	ug/kg	ND	5.4	12/21/13 10:52	
Naphthalene	ug/kg	ND	5.4	12/21/13 10:52	
o-Xylene	ug/kg	ND	5.4	12/21/13 10:52	
p-Isopropyltoluene	ug/kg	ND	5.4	12/21/13 10:52	
sec-Butylbenzene	ug/kg	ND	5.4	12/21/13 10:52	
Styrene	ug/kg	ND	5.4	12/21/13 10:52	
tert-Butylbenzene	ug/kg	ND	5.4	12/21/13 10:52	
Tetrachloroethene	ug/kg	ND	5.4	12/21/13 10:52	
Toluene	ug/kg	ND	5.4	12/21/13 10:52	
trans-1,2-Dichloroethene	ug/kg	ND	5.4	12/21/13 10:52	
trans-1,3-Dichloropropene	ug/kg	ND	5.4	12/21/13 10:52	
Trichloroethene	ug/kg	ND	5.4	12/21/13 10:52	
Trichlorofluoromethane	ug/kg	ND	5.4	12/21/13 10:52	
Vinyl acetate	ug/kg	ND	54.1	12/21/13 10:52	
Vinyl chloride	ug/kg	ND	10.8	12/21/13 10:52	
Xylene (Total)	ug/kg	ND	10.8	12/21/13 10:52	
1,2-Dichloroethane-d4 (S)	%	89	70-132	12/21/13 10:52	
4-Bromofluorobenzene (S)	%	105	70-130	12/21/13 10:52	
Toluene-d8 (S)	%	107	70-130	12/21/13 10:52	

LABORATORY CONTROL SAMPLE: 1110868

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	52	54.2	104	70-131	
1,1,1-Trichloroethane	ug/kg	52	51.2	99	70-141	
1,1,2,2-Tetrachloroethane	ug/kg	52	55.9	107	70-130	
1,1,2-Trichloroethane	ug/kg	52	55.0	106	70-132	
1,1-Dichloroethane	ug/kg	52	50.0	96	70-143	
1,1-Dichloroethene	ug/kg	52	49.7	96	70-137	
1,1-Dichloropropene	ug/kg	52	54.2	104	70-135	
1,2,3-Trichlorobenzene	ug/kg	52	55.0	106	69-153	
1,2,3-Trichloropropane	ug/kg	52	55.3	106	70-130	
1,2,4-Trichlorobenzene	ug/kg	52	55.9	108	55-171	
1,2,4-Trimethylbenzene	ug/kg	52	54.0	104	70-149	
1,2-Dibromo-3-chloropropane	ug/kg	52	54.4	105	68-141	
1,2-Dibromoethane (EDB)	ug/kg	52	58.3	112	70-130	
1,2-Dichlorobenzene	ug/kg	52	53.2	102	70-140	

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## QUALITY CONTROL DATA

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

LABORATORY CONTROL SAMPLE: 1110868

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/kg	52	49.9	96	70-137	
1,2-Dichloropropane	ug/kg	52	53.9	104	70-133	
1,3,5-Trimethylbenzene	ug/kg	52	53.5	103	70-143	
1,3-Dichlorobenzene	ug/kg	52	51.8	100	70-144	
1,3-Dichloropropane	ug/kg	52	58.2	112	70-132	
1,4-Dichlorobenzene	ug/kg	52	53.3	103	70-142	
2,2-Dichloropropane	ug/kg	52	51.4	99	68-152	
2-Butanone (MEK)	ug/kg	104	100J	97	70-149	
2-Chlorotoluene	ug/kg	52	51.4	99	70-141	
2-Hexanone	ug/kg	104	115	111	70-149	
4-Chlorotoluene	ug/kg	52	53.5	103	70-149	
4-Methyl-2-pentanone (MIBK)	ug/kg	104	106	102	70-153	
Acetone	ug/kg	104	98.5J	95	70-157	
Benzene	ug/kg	52	54.9	106	70-130	
Bromobenzene	ug/kg	52	50.5	97	70-141	
Bromo(chloromethane	ug/kg	52	52.8	102	70-149	
Bromodichloromethane	ug/kg	52	51.0	98	70-130	
Bromoform	ug/kg	52	58.9	113	70-131	
Bromomethane	ug/kg	52	56.8	109	64-136	
Carbon tetrachloride	ug/kg	52	47.4	91	70-154	
Chlorobenzene	ug/kg	52	52.8	102	70-135	
Chloroethane	ug/kg	52	52.4	101	68-151	
Chloroform	ug/kg	52	52.0	100	70-130	
Chloromethane	ug/kg	52	46.7	90	70-132	
cis-1,2-Dichloroethene	ug/kg	52	50.0	96	70-140	
cis-1,3-Dichloropropene	ug/kg	52	52.6	101	70-137	
Dibromochloromethane	ug/kg	52	58.0	112	70-130	
Dibromomethane	ug/kg	52	51.7	99	70-136	
Dichlorodifluoromethane	ug/kg	52	55.0	106	36-148	
Diisopropyl ether	ug/kg	52	50.5	97	70-139	
Ethylbenzene	ug/kg	52	52.5	101	70-137	
Hexachloro-1,3-butadiene	ug/kg	52	53.2	102	70-145	
Isopropylbenzene (Cumene)	ug/kg	52	55.7	107	70-141	
m&p-Xylene	ug/kg	104	109	105	70-140	
Methyl-tert-butyl ether	ug/kg	52	51.9	100	45-150	
Methylene Chloride	ug/kg	52	48.7	94	70-133	
n-Butylbenzene	ug/kg	52	56.4	109	65-155	
n-Propylbenzene	ug/kg	52	54.7	105	70-148	
Naphthalene	ug/kg	52	54.9	106	70-148	
o-Xylene	ug/kg	52	55.2	106	70-141	
p-Isopropyltoluene	ug/kg	52	54.5	105	70-148	
sec-Butylbenzene	ug/kg	52	54.8	106	70-145	
Styrene	ug/kg	52	56.4	109	70-138	
tert-Butylbenzene	ug/kg	52	54.1	104	70-143	
Tetrachloroethene	ug/kg	52	56.1	108	70-140	
Toluene	ug/kg	52	49.2	95	70-130	
trans-1,2-Dichloroethene	ug/kg	52	49.1	94	70-136	
trans-1,3-Dichloropropene	ug/kg	52	53.0	102	70-138	

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## QUALITY CONTROL DATA

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

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LABORATORY CONTROL SAMPLE: 1110868

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Trichloroethene	ug/kg	52	50.3	97	70-132	
Trichlorofluoromethane	ug/kg	52	53.7	103	69-134	
Vinyl acetate	ug/kg	104	146	141	24-161	
Vinyl chloride	ug/kg	52	53.1	102	55-140	
Xylene (Total)	ug/kg	156	164	105	70-141	
1,2-Dichloroethane-d4 (S)	%			95	70-132	
4-Bromofluorobenzene (S)	%			102	70-130	
Toluene-d8 (S)	%			93	70-130	

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## QUALITY CONTROL DATA

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

QC Batch: MSV/25319 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5035A Volatile Organics  
Associated Lab Samples: 92184006012, 92184006017, 92184006018, 92184006019, 92184006020, 92184006021, 92184006022

METHOD BLANK: 1111204 Matrix: Solid  
Associated Lab Samples: 92184006012, 92184006017, 92184006018, 92184006019, 92184006020, 92184006021, 92184006022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	5.1	12/21/13 13:19	
1,1,1-Trichloroethane	ug/kg	ND	5.1	12/21/13 13:19	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.1	12/21/13 13:19	
1,1,2-Trichloroethane	ug/kg	ND	5.1	12/21/13 13:19	
1,1-Dichloroethane	ug/kg	ND	5.1	12/21/13 13:19	
1,1-Dichloroethene	ug/kg	ND	5.1	12/21/13 13:19	
1,1-Dichloropropene	ug/kg	ND	5.1	12/21/13 13:19	
1,2,3-Trichlorobenzene	ug/kg	ND	5.1	12/21/13 13:19	
1,2,3-Trichloropropane	ug/kg	ND	5.1	12/21/13 13:19	
1,2,4-Trichlorobenzene	ug/kg	ND	5.1	12/21/13 13:19	
1,2,4-Trimethylbenzene	ug/kg	ND	5.1	12/21/13 13:19	
1,2-Dibromo-3-chloropropane	ug/kg	ND	5.1	12/21/13 13:19	
1,2-Dibromoethane (EDB)	ug/kg	ND	5.1	12/21/13 13:19	
1,2-Dichlorobenzene	ug/kg	ND	5.1	12/21/13 13:19	
1,2-Dichloroethane	ug/kg	ND	5.1	12/21/13 13:19	
1,2-Dichloropropane	ug/kg	ND	5.1	12/21/13 13:19	
1,3,5-Trimethylbenzene	ug/kg	ND	5.1	12/21/13 13:19	
1,3-Dichlorobenzene	ug/kg	ND	5.1	12/21/13 13:19	
1,3-Dichloropropane	ug/kg	ND	5.1	12/21/13 13:19	
1,4-Dichlorobenzene	ug/kg	ND	5.1	12/21/13 13:19	
2,2-Dichloropropane	ug/kg	ND	5.1	12/21/13 13:19	
2-Butanone (MEK)	ug/kg	ND	102	12/21/13 13:19	
2-Chlorotoluene	ug/kg	ND	5.1	12/21/13 13:19	
2-Hexanone	ug/kg	ND	50.9	12/21/13 13:19	
4-Chlorotoluene	ug/kg	ND	5.1	12/21/13 13:19	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	50.9	12/21/13 13:19	
Acetone	ug/kg	ND	102	12/21/13 13:19	
Benzene	ug/kg	ND	5.1	12/21/13 13:19	
Bromobenzene	ug/kg	ND	5.1	12/21/13 13:19	
Bromochloromethane	ug/kg	ND	5.1	12/21/13 13:19	
Bromodichloromethane	ug/kg	ND	5.1	12/21/13 13:19	
Bromoform	ug/kg	ND	5.1	12/21/13 13:19	
Bromomethane	ug/kg	ND	10.2	12/21/13 13:19	
Carbon tetrachloride	ug/kg	ND	5.1	12/21/13 13:19	
Chlorobenzene	ug/kg	ND	5.1	12/21/13 13:19	
Chloroethane	ug/kg	ND	10.2	12/21/13 13:19	
Chloroform	ug/kg	ND	5.1	12/21/13 13:19	
Chloromethane	ug/kg	ND	10.2	12/21/13 13:19	
cis-1,2-Dichloroethene	ug/kg	ND	5.1	12/21/13 13:19	
cis-1,3-Dichloropropene	ug/kg	ND	5.1	12/21/13 13:19	
Dibromochloromethane	ug/kg	ND	5.1	12/21/13 13:19	
Dibromomethane	ug/kg	ND	5.1	12/21/13 13:19	
Dichlorodifluoromethane	ug/kg	ND	10.2	12/21/13 13:19	

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## QUALITY CONTROL DATA

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

METHOD BLANK: 1111204

Matrix: Solid

Associated Lab Samples: 92184006012, 92184006017, 92184006018, 92184006019, 92184006020, 92184006021, 92184006022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diisopropyl ether	ug/kg	ND	5.1	12/21/13 13:19	
Ethylbenzene	ug/kg	ND	5.1	12/21/13 13:19	
Hexachloro-1,3-butadiene	ug/kg	ND	5.1	12/21/13 13:19	
Isopropylbenzene (Cumene)	ug/kg	ND	5.1	12/21/13 13:19	
m&p-Xylene	ug/kg	ND	10.2	12/21/13 13:19	
Methyl-tert-butyl ether	ug/kg	ND	5.1	12/21/13 13:19	
Methylene Chloride	ug/kg	ND	20.4	12/21/13 13:19	
n-Butylbenzene	ug/kg	ND	5.1	12/21/13 13:19	
n-Propylbenzene	ug/kg	ND	5.1	12/21/13 13:19	
Naphthalene	ug/kg	ND	5.1	12/21/13 13:19	
o-Xylene	ug/kg	ND	5.1	12/21/13 13:19	
p-Isopropyltoluene	ug/kg	ND	5.1	12/21/13 13:19	
sec-Butylbenzene	ug/kg	ND	5.1	12/21/13 13:19	
Styrene	ug/kg	ND	5.1	12/21/13 13:19	
tert-Butylbenzene	ug/kg	ND	5.1	12/21/13 13:19	
Tetrachloroethene	ug/kg	ND	5.1	12/21/13 13:19	
Toluene	ug/kg	ND	5.1	12/21/13 13:19	
trans-1,2-Dichloroethene	ug/kg	ND	5.1	12/21/13 13:19	
trans-1,3-Dichloropropene	ug/kg	ND	5.1	12/21/13 13:19	
Trichloroethene	ug/kg	ND	5.1	12/21/13 13:19	
Trichlorofluoromethane	ug/kg	ND	5.1	12/21/13 13:19	
Vinyl acetate	ug/kg	ND	50.9	12/21/13 13:19	
Vinyl chloride	ug/kg	ND	10.2	12/21/13 13:19	
Xylene (Total)	ug/kg	ND	10.2	12/21/13 13:19	
1,2-Dichloroethane-d4 (S)	%	122	70-132	12/21/13 13:19	
4-Bromofluorobenzene (S)	%	100	70-130	12/21/13 13:19	
Toluene-d8 (S)	%	97	70-130	12/21/13 13:19	

LABORATORY CONTROL SAMPLE: 1111205

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	53.9	53.6	99	70-131	
1,1,1-Trichloroethane	ug/kg	53.9	59.5	110	70-141	
1,1,2,2-Tetrachloroethane	ug/kg	53.9	55.9	104	70-130	
1,1,2-Trichloroethane	ug/kg	53.9	55.0	102	70-132	
1,1-Dichloroethane	ug/kg	53.9	58.9	109	70-143	
1,1-Dichloroethene	ug/kg	53.9	57.4	107	70-137	
1,1-Dichloropropene	ug/kg	53.9	61.4	114	70-135	
1,2,3-Trichlorobenzene	ug/kg	53.9	56.8	105	69-153	
1,2,3-Trichloropropane	ug/kg	53.9	55.6	103	70-130	
1,2,4-Trichlorobenzene	ug/kg	53.9	54.2	101	55-171	
1,2,4-Trimethylbenzene	ug/kg	53.9	59.6	111	70-149	
1,2-Dibromo-3-chloropropane	ug/kg	53.9	55.5	103	68-141	
1,2-Dibromoethane (EDB)	ug/kg	53.9	55.8	104	70-130	
1,2-Dichlorobenzene	ug/kg	53.9	53.6	99	70-140	

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## QUALITY CONTROL DATA

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

LABORATORY CONTROL SAMPLE: 1111205

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/kg	53.9	59.0	110	70-137	
1,2-Dichloropropane	ug/kg	53.9	55.8	104	70-133	
1,3,5-Trimethylbenzene	ug/kg	53.9	58.8	109	70-143	
1,3-Dichlorobenzene	ug/kg	53.9	53.6	99	70-144	
1,3-Dichloropropane	ug/kg	53.9	59.1	110	70-132	
1,4-Dichlorobenzene	ug/kg	53.9	54.3	101	70-142	
2,2-Dichloropropane	ug/kg	53.9	60.9	113	68-152	
2-Butanone (MEK)	ug/kg	108	114	106	70-149	
2-Chlorotoluene	ug/kg	53.9	55.3	103	70-141	
2-Hexanone	ug/kg	108	102	95	70-149	
4-Chlorotoluene	ug/kg	53.9	58.7	109	70-149	
4-Methyl-2-pentanone (MIBK)	ug/kg	108	103	96	70-153	
Acetone	ug/kg	108	98.4J	91	70-157	
Benzene	ug/kg	53.9	57.3	106	70-130	
Bromobenzene	ug/kg	53.9	58.0	108	70-141	
Bromochloromethane	ug/kg	53.9	52.0	96	70-149	
Bromodichloromethane	ug/kg	53.9	55.6	103	70-130	
Bromoform	ug/kg	53.9	51.3	95	70-131	
Bromomethane	ug/kg	53.9	65.2	121	64-136	
Carbon tetrachloride	ug/kg	53.9	53.2	99	70-154	
Chlorobenzene	ug/kg	53.9	56.0	104	70-135	
Chloroethane	ug/kg	53.9	62.7	116	68-151	
Chloroform	ug/kg	53.9	59.8	111	70-130	
Chloromethane	ug/kg	53.9	64.3	119	70-132	
cis-1,2-Dichloroethene	ug/kg	53.9	56.3	104	70-140	
cis-1,3-Dichloropropene	ug/kg	53.9	56.1	104	70-137	
Dibromochloromethane	ug/kg	53.9	53.8	100	70-130	
Dibromomethane	ug/kg	53.9	54.4	101	70-136	
Dichlorodifluoromethane	ug/kg	53.9	59.7	111	36-148	
Diisopropyl ether	ug/kg	53.9	55.9	104	70-139	
Ethylbenzene	ug/kg	53.9	55.3	103	70-137	
Hexachloro-1,3-butadiene	ug/kg	53.9	58.5	109	70-145	
Isopropylbenzene (Cumene)	ug/kg	53.9	57.3	106	70-141	
m&p-Xylene	ug/kg	108	112	104	70-140	
Methyl-tert-butyl ether	ug/kg	53.9	61.3	114	45-150	
Methylene Chloride	ug/kg	53.9	54.1	100	70-133	
n-Butylbenzene	ug/kg	53.9	58.9	109	65-155	
n-Propylbenzene	ug/kg	53.9	58.9	109	70-148	
Naphthalene	ug/kg	53.9	53.2	99	70-148	
o-Xylene	ug/kg	53.9	55.9	104	70-141	
p-Isopropyltoluene	ug/kg	53.9	56.2	104	70-148	
sec-Butylbenzene	ug/kg	53.9	59.0	110	70-145	
Styrene	ug/kg	53.9	56.7	105	70-138	
tert-Butylbenzene	ug/kg	53.9	56.3	104	70-143	
Tetrachloroethene	ug/kg	53.9	51.8	96	70-140	
Toluene	ug/kg	53.9	52.5	97	70-130	
trans-1,2-Dichloroethene	ug/kg	53.9	58.4	108	70-136	
trans-1,3-Dichloropropene	ug/kg	53.9	57.0	106	70-138	

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## QUALITY CONTROL DATA

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

**LABORATORY CONTROL SAMPLE:** 1111205

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Trichloroethene	ug/kg	53.9	51.8	96	70-132	
Trichlorofluoromethane	ug/kg	53.9	64.3	119	69-134	
Vinyl acetate	ug/kg	108	132	123	24-161	
Vinyl chloride	ug/kg	53.9	59.1	110	55-140	
Xylene (Total)	ug/kg	162	168	104	70-141	
1,2-Dichloroethane-d4 (S)	%			110	70-132	
4-Bromofluorobenzene (S)	%			96	70-130	
Toluene-d8 (S)	%			99	70-130	

**MATRIX SPIKE SAMPLE:** 1111382

Parameter	Units	92184231005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/kg		ND	30.1	24.2	81	49-180
Benzene	ug/kg		ND	30.1	27.7	92	50-166
Chlorobenzene	ug/kg		ND	30.1	30.8	103	43-169
Toluene	ug/kg		ND	30.1	26.9	90	52-163
Trichloroethene	ug/kg		ND	30.1	27.4	91	49-167
1,2-Dichloroethane-d4 (S)	%				129	70-132	
4-Bromofluorobenzene (S)	%				101	70-130	
Toluene-d8 (S)	%				97	70-130	

**SAMPLE DUPLICATE:** 1111381

Parameter	Units	92184006019 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: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

SAMPLE DUPLICATE: 1111381

Parameter	Units	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	ND	77.1J		
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)	%	122	123	10	
4-Bromofluorobenzene (S)	%	97	100	12	

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## QUALITY CONTROL DATA

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

SAMPLE DUPLICATE: 1111381

Parameter	Units	Result	Dup Result	RPD	Qualifiers
Toluene-d8 (S)	%	98	97	8	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

QC Batch:	MSV/25343	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV 5035A Volatile Organics
Associated Lab Samples:	92184006024		

METHOD BLANK: 1111846 Matrix: Solid

Associated Lab Samples: 92184006024

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	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: NCDT01413 WBS33507.1.1  
Pace Project No.: 92184006

METHOD BLANK: 1111846 Matrix: Solid

Associated Lab Samples: 92184006024

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	

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## QUALITY CONTROL DATA

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

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	
Bromo(chloromethane	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: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

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	

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## QUALITY CONTROL DATA

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

SAMPLE DUPLICATE: 1112265

Parameter	Units	92184006024	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	

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## QUALITY CONTROL DATA

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

SAMPLE DUPLICATE: 1112265

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

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## QUALITY CONTROL DATA

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

QC Batch:	MSV/25355	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV 5035A Volatile Organics
Associated Lab Samples: 92184006023			

METHOD BLANK: 1112341                          Matrix: Solid

Associated Lab Samples: 92184006023

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: NCDT01413 WBS33507.1.1  
Pace Project No.: 92184006

METHOD BLANK: 1112341 Matrix: Solid  
Associated Lab Samples: 92184006023

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	

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## QUALITY CONTROL DATA

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

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	
Bromo(chloromethane	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: NCDT01413 WBS33507.1.1  
Pace Project No.: 92184006

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: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

SAMPLE DUPLICATE: 1112884

Parameter	Units	92184127002	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: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

SAMPLE DUPLICATE: 1112884

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

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## QUALITY CONTROL DATA

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

QC Batch:	OEXT/25264	Analysis Method:	EPA 8015 Modified
QC Batch Method:	EPA 3546	Analysis Description:	8015 Solid GCSV
Associated Lab Samples: 92184006001, 92184006002, 92184006003, 92184006004, 92184006005, 92184006006, 92184006007, 92184006008, 92184006009, 92184006013, 92184006014, 92184006015, 92184006016			

METHOD BLANK: 1109337		Matrix: Solid			
Associated Lab Samples:		92184006001, 92184006002, 92184006003, 92184006004, 92184006005, 92184006006, 92184006007, 92184006008, 92184006009, 92184006013, 92184006014, 92184006015, 92184006016			
Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Components	mg/kg	ND	5.0	12/20/13 23:31	
n-Pentacosane (S)	%	75	41-119	12/20/13 23:31	

LABORATORY CONTROL SAMPLE: 1109338		1109339					
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers	
Diesel Components	mg/kg	66.7	51.1	77	49-113		
n-Pentacosane (S)	%			89	41-119		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1109339			1109340								
Parameter	Units	92184006001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Diesel Components	mg/kg	24.2	82.3	82.3	52.6	47.9	35	29	10-146	9	
n-Pentacosane (S)	%						68	60	41-119		

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## QUALITY CONTROL DATA

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

QC Batch:	OEXT/25257	Analysis Method:	EPA 8270
QC Batch Method:	EPA 3546	Analysis Description:	8270 Solid MSSV Microwave
Associated Lab Samples:	92184006010, 92184006011, 92184006012, 92184006017, 92184006018, 92184006019, 92184006020, 92184006021, 92184006022, 92184006023, 92184006024		

METHOD BLANK: 1109029

Matrix: Solid

Associated Lab Samples: 92184006010, 92184006011, 92184006012, 92184006017, 92184006018, 92184006019, 92184006020,  
92184006021, 92184006022, 92184006023, 92184006024

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	ND	330	12/20/13 14:41	
1,2-Dichlorobenzene	ug/kg	ND	330	12/20/13 14:41	
1,3-Dichlorobenzene	ug/kg	ND	330	12/20/13 14:41	
1,4-Dichlorobenzene	ug/kg	ND	330	12/20/13 14:41	
1-Methylnaphthalene	ug/kg	ND	330	12/20/13 14:41	
2,4,5-Trichlorophenol	ug/kg	ND	330	12/20/13 14:41	
2,4,6-Trichlorophenol	ug/kg	ND	330	12/20/13 14:41	
2,4-Dichlorophenol	ug/kg	ND	330	12/20/13 14:41	
2,4-Dimethylphenol	ug/kg	ND	330	12/20/13 14:41	
2,4-Dinitrophenol	ug/kg	ND	1650	12/20/13 14:41	
2,4-Dinitrotoluene	ug/kg	ND	330	12/20/13 14:41	
2,6-Dinitrotoluene	ug/kg	ND	330	12/20/13 14:41	
2-Chloronaphthalene	ug/kg	ND	330	12/20/13 14:41	
2-Chlorophenol	ug/kg	ND	330	12/20/13 14:41	
2-Methylnaphthalene	ug/kg	ND	330	12/20/13 14:41	
2-Methylphenol(o-Cresol)	ug/kg	ND	330	12/20/13 14:41	
2-Nitroaniline	ug/kg	ND	1650	12/20/13 14:41	
2-Nitrophenol	ug/kg	ND	330	12/20/13 14:41	
3&4-Methylphenol(m&p Cresol)	ug/kg	ND	330	12/20/13 14:41	
3,3'-Dichlorobenzidine	ug/kg	ND	1650	12/20/13 14:41	
3-Nitroaniline	ug/kg	ND	1650	12/20/13 14:41	
4,6-Dinitro-2-methylphenol	ug/kg	ND	660	12/20/13 14:41	
4-Bromophenylphenyl ether	ug/kg	ND	330	12/20/13 14:41	
4-Chloro-3-methylphenol	ug/kg	ND	660	12/20/13 14:41	
4-Chloroaniline	ug/kg	ND	1650	12/20/13 14:41	
4-Chlorophenylphenyl ether	ug/kg	ND	330	12/20/13 14:41	
4-Nitroaniline	ug/kg	ND	660	12/20/13 14:41	
4-Nitrophenol	ug/kg	ND	1650	12/20/13 14:41	
Acenaphthene	ug/kg	ND	330	12/20/13 14:41	
Acenaphthylene	ug/kg	ND	330	12/20/13 14:41	
Aniline	ug/kg	ND	330	12/20/13 14:41	
Anthracene	ug/kg	ND	330	12/20/13 14:41	
Benzo(a)anthracene	ug/kg	ND	330	12/20/13 14:41	
Benzo(a)pyrene	ug/kg	ND	330	12/20/13 14:41	
Benzo(b)fluoranthene	ug/kg	ND	330	12/20/13 14:41	
Benzo(g,h,i)perylene	ug/kg	ND	330	12/20/13 14:41	
Benzo(k)fluoranthene	ug/kg	ND	330	12/20/13 14:41	
Benzoin Acid	ug/kg	ND	1650	12/20/13 14:41	
Benzyl alcohol	ug/kg	ND	660	12/20/13 14:41	
bis(2-Chloroethoxy)methane	ug/kg	ND	330	12/20/13 14:41	
bis(2-Chloroethyl) ether	ug/kg	ND	330	12/20/13 14:41	

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### QUALITY CONTROL DATA

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

METHOD BLANK: 1109029

Matrix: Solid

Associated Lab Samples: 92184006010, 92184006011, 92184006012, 92184006017, 92184006018, 92184006019, 92184006020, 92184006021, 92184006022, 92184006023, 92184006024

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
bis(2-Chloroisopropyl) ether	ug/kg	ND	330	12/20/13 14:41	
bis(2-Ethylhexyl)phthalate	ug/kg	ND	330	12/20/13 14:41	
Butylbenzylphthalate	ug/kg	ND	330	12/20/13 14:41	
Chrysene	ug/kg	ND	330	12/20/13 14:41	
Di-n-butylphthalate	ug/kg	ND	330	12/20/13 14:41	
Di-n-octylphthalate	ug/kg	ND	330	12/20/13 14:41	
Dibenz(a,h)anthracene	ug/kg	ND	330	12/20/13 14:41	
Dibenzofuran	ug/kg	ND	330	12/20/13 14:41	
Diethylphthalate	ug/kg	ND	330	12/20/13 14:41	
Dimethylphthalate	ug/kg	ND	330	12/20/13 14:41	
Fluoranthene	ug/kg	ND	330	12/20/13 14:41	
Fluorene	ug/kg	ND	330	12/20/13 14:41	
Hexachloro-1,3-butadiene	ug/kg	ND	330	12/20/13 14:41	
Hexachlorobenzene	ug/kg	ND	330	12/20/13 14:41	
Hexachlorocyclopentadiene	ug/kg	ND	330	12/20/13 14:41	
Hexachloroethane	ug/kg	ND	330	12/20/13 14:41	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	330	12/20/13 14:41	
Isophorone	ug/kg	ND	330	12/20/13 14:41	
N-Nitroso-di-n-propylamine	ug/kg	ND	330	12/20/13 14:41	
N-Nitrosodimethylamine	ug/kg	ND	330	12/20/13 14:41	
N-Nitrosodiphenylamine	ug/kg	ND	330	12/20/13 14:41	
Naphthalene	ug/kg	ND	330	12/20/13 14:41	
Nitrobenzene	ug/kg	ND	330	12/20/13 14:41	
Pentachlorophenol	ug/kg	ND	1650	12/20/13 14:41	
Phenanthrene	ug/kg	ND	330	12/20/13 14:41	
Phenol	ug/kg	ND	330	12/20/13 14:41	
Pyrene	ug/kg	ND	330	12/20/13 14:41	
2,4,6-Tribromophenol (S)	%	39	27-110	12/20/13 14:41	
2-Fluorobiphenyl (S)	%	43	30-110	12/20/13 14:41	
2-Fluorophenol (S)	%	46	13-110	12/20/13 14:41	
Nitrobenzene-d5 (S)	%	41	23-110	12/20/13 14:41	
Phenol-d6 (S)	%	48	22-110	12/20/13 14:41	
Terphenyl-d14 (S)	%	68	28-110	12/20/13 14:41	

LABORATORY CONTROL SAMPLE: 1109030

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	1670	682	41	39-101	
1,2-Dichlorobenzene	ug/kg	1670	720	43	36-110	
1,3-Dichlorobenzene	ug/kg	1670	684	41	35-110	
1,4-Dichlorobenzene	ug/kg	1670	711	43	35-110	
1-Methylnaphthalene	ug/kg	1670	797	48	45-105	
2,4,5-Trichlorophenol	ug/kg	1670	937	56	48-109	
2,4,6-Trichlorophenol	ug/kg	1670	782	47	45-111	

### REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

LABORATORY CONTROL SAMPLE: 1109030

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4-Dichlorophenol	ug/kg	1670	744	45	51-116	L2
2,4-Dimethylphenol	ug/kg	1670	819	49	42-103	
2,4-Dinitrophenol	ug/kg	8330	4990	60	28-103	
2,4-Dinitrotoluene	ug/kg	1670	1200	72	46-114	
2,6-Dinitrotoluene	ug/kg	1670	1070	64	48-112	
2-Chloronaphthalene	ug/kg	1670	699	42	44-105	L2
2-Chlorophenol	ug/kg	1670	812	49	36-110	
2-Methylnaphthalene	ug/kg	1670	834	50	39-112	
2-Methylphenol(o-Cresol)	ug/kg	1670	842	51	39-101	
2-Nitroaniline	ug/kg	3330	2140	64	44-111	
2-Nitrophenol	ug/kg	1670	732	44	41-100	
3&4-Methylphenol(m&p Cresol)	ug/kg	1670	856	51	43-103	
3,3'-Dichlorobenzidine	ug/kg	3330	2090	63	10-150	
3-Nitroaniline	ug/kg	3330	2240	67	35-110	
4,6-Dinitro-2-methylphenol	ug/kg	3330	2080	62	38-118	
4-Bromophenylphenyl ether	ug/kg	1670	972	58	47-115	
4-Chloro-3-methylphenol	ug/kg	3330	1750	53	43-127	
4-Chloroaniline	ug/kg	3330	1690	51	34-109	
4-Chlorophenylphenyl ether	ug/kg	1670	936	56	44-115	
4-Nitroaniline	ug/kg	3330	2430	73	37-111	
4-Nitrophenol	ug/kg	8330	5780	69	21-152	
Acenaphthene	ug/kg	1670	829	50	38-117	
Acenaphthylene	ug/kg	1670	836	50	46-107	
Aniline	ug/kg	1670	775	47	29-110	
Anthracene	ug/kg	1670	1100	66	50-110	
Benzo(a)anthracene	ug/kg	1670	1100	66	47-116	
Benzo(a)pyrene	ug/kg	1670	1180	71	47-106	
Benzo(b)fluoranthene	ug/kg	1670	1090	65	47-109	
Benzo(g,h,i)perylene	ug/kg	1670	1120	67	39-115	
Benzo(k)fluoranthene	ug/kg	1670	1080	65	45-117	
Benzoic Acid	ug/kg	8330	3130	38	16-110	
Benzyl alcohol	ug/kg	3330	1440	43	38-105	
bis(2-Chloroethoxy)methane	ug/kg	1670	778	47	39-110	
bis(2-Chloroethyl) ether	ug/kg	1670	817	49	19-119	
bis(2-Chloroisopropyl) ether	ug/kg	1670	792	48	21-110	
bis(2-Ethylhexyl)phthalate	ug/kg	1670	1010	61	35-116	
Butylbenzylphthalate	ug/kg	1670	1030	62	38-110	
Chrysene	ug/kg	1670	1150	69	49-110	
Di-n-butylphthalate	ug/kg	1670	1030	62	43-109	
Di-n-octylphthalate	ug/kg	1670	1040	62	37-109	
Dibenz(a,h)anthracene	ug/kg	1670	1170	70	43-116	
Dibenzofuran	ug/kg	1670	793	48	45-106	
Diethylphthalate	ug/kg	1670	1000	60	41-114	
Dimethylphthalate	ug/kg	1670	958	57	43-110	
Fluoranthene	ug/kg	1670	1170	70	50-114	
Fluorene	ug/kg	1670	943	57	46-114	
Hexachloro-1,3-butadiene	ug/kg	1670	681	41	28-111	
Hexachlorobenzene	ug/kg	1670	928	56	46-120	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: NCDT01413 WBS33507.1.1  
Pace Project No.: 92184006

LABORATORY CONTROL SAMPLE: 1109030

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hexachlorocyclopentadiene	ug/kg	1670	746	45	18-119	
Hexachloroethane	ug/kg	1670	690	41	33-110	
Indeno(1,2,3-cd)pyrene	ug/kg	1670	1190	72	42-115	
Isophorone	ug/kg	1670	872	52	44-109	
N-Nitroso-di-n-propylamine	ug/kg	1670	738	44	43-104	
N-Nitrosodimethylamine	ug/kg	1670	695	42	29-110	
N-Nitrosodiphenylamine	ug/kg	1670	880	53	48-113	
Naphthalene	ug/kg	1670	799	48	41-110	
Nitrobenzene	ug/kg	1670	821	49	38-110	
Pentachlorophenol	ug/kg	3330	1920	58	32-128	
Phenanthrone	ug/kg	1670	1070	64	50-110	
Phenol	ug/kg	1670	840	50	28-106	
Pyrene	ug/kg	1670	1080	65	45-114	
2,4,6-Tribromophenol (S)	%			68	27-110	
2-Fluorobiphenyl (S)	%			48	30-110	
2-Fluorophenol (S)	%			49	13-110	
Nitrobenzene-d5 (S)	%			46	23-110	
Phenol-d6 (S)	%			51	22-110	
Terphenyl-d14 (S)	%			64	28-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1109031          1109032

Parameter	Units	92183618003 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
			Spike Conc.	Spike Conc.							
1,2,4-Trichlorobenzene	ug/kg	ND	2240	2240	994	955	44	43	18-119	4	
1,2-Dichlorobenzene	ug/kg	ND	2240	2240	1100	1070	49	48	50-110	3	M1
1,3-Dichlorobenzene	ug/kg	ND	2240	2240	1030	1040	46	47	27-110		1
1,4-Dichlorobenzene	ug/kg	ND	2240	2240	1060	1080	47	48	28-110		2
1-Methylnaphthalene	ug/kg	ND	2240	2240	1320	1100	59	49	24-116		18
2,4,5-Trichlorophenol	ug/kg	ND	2240	2240	1260	1000	56	45	28-110		23
2,4,6-Trichlorophenol	ug/kg	ND	2240	2240	1030	761	46	34	17-117		30
2,4-Dichlorophenol	ug/kg	ND	2240	2240	1110	810	49	36	21-128		31
2,4-Dimethylphenol	ug/kg	ND	2240	2240	874	560	39	25	10-120		44
2,4-Dinitrophenol	ug/kg	ND	11200	11200	6510	5570	58	50	10-107		16
2,4-Dinitrotoluene	ug/kg	ND	2240	2240	1580	1180	71	53	36-109		29
2,6-Dinitrotoluene	ug/kg	ND	2240	2240	1490	1170	67	52	32-110		24
2-Chloronaphthalene	ug/kg	ND	2240	2240	975	863	44	39	30-107		12
2-Chlorophenol	ug/kg	ND	2240	2240	1150	972	52	43	14-106		17
2-Methylnaphthalene	ug/kg	ND	2240	2240	1360	1160	61	52	10-135		16
2-Methylphenol(o-Cresol)	ug/kg	ND	2240	2240	1110	720	50	32	10-124		43 2g,R1
2-Nitroaniline	ug/kg	ND	4460	4460	3090	2770	69	62	26-116		11
2-Nitrophenol	ug/kg	ND	2240	2240	1170	1080	52	48	28-103		8
3&4-Methylphenol(m&p Cresol)	ug/kg	ND	2240	2240	1200	769	54	34	10-109		44
3,3'-Dichlorobenzidine	ug/kg	ND	4460	4460	1730J	278J	39	6	10-150		M0
3-Nitroaniline	ug/kg	ND	4460	4460	3010	1660J	67	37	22-110		
4,6-Dinitro-2-methylphenol	ug/kg	ND	4460	4460	2650	2040	59	46	13-121		26

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## QUALITY CONTROL DATA

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1109031 1109032

Parameter	Units	92183618003 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD	% Rec	Limits	RPD	Qual
			Spike Conc.	Spike Conc.				% Rec	% Rec			
2-Fluorobiphenyl (S)	%						47	41	30-110			
2-Fluorophenol (S)	%						44	37	13-110			
Nitrobenzene-d5 (S)	%						50	47	23-110			
Phenol-d6 (S)	%						51	38	22-110			
Terphenyl-d14 (S)	%						56	38	28-110			

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## QUALITY CONTROL DATA

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

QC Batch: PMST/6106 Analysis Method: ASTM D2974-87

QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 92184006001, 92184006002, 92184006003, 92184006004, 92184006005, 92184006006, 92184006007,  
92184006008, 92184006009, 92184006010, 92184006011, 92184006012, 92184006013, 92184006014,  
92184006015, 92184006016, 92184006017, 92184006018

SAMPLE DUPLICATE: 1109483

Parameter	Units	92183839001 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	14.9	14.8	1	

SAMPLE DUPLICATE: 1109484

Parameter	Units	92184006018 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	11.6	12.3	6	

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## QUALITY CONTROL DATA

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

QC Batch:	PMST/6109	Analysis Method:	ASTM D2974-87
QC Batch Method:	ASTM D2974-87	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samples:	92184006019, 92184006020, 92184006021, 92184006022, 92184006023, 92184006024		

SAMPLE DUPLICATE: 1110278

Parameter	Units	92184075013 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	14.3	16.2	12	

SAMPLE DUPLICATE: 1110279

Parameter	Units	92184006024 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	22.6	23.2	3	

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## QUALIFIERS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

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### 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.
- 2g This flag applies to all compounds with RPD greater than 30%.
- 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.
- L2 Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
- M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
- M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- R1 RPD value was outside control limits.
- S0 Surrogate recovery outside laboratory 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: NCDT01413 WBS33507.1.1  
Pace Project No.: 92184006

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92184006001	S-18-3	EPA 3546	OEXT/25264	EPA 8015 Modified	GCSV/16299
92184006002	S-18-2	EPA 3546	OEXT/25264	EPA 8015 Modified	GCSV/16299
92184006003	S-18-1	EPA 3546	OEXT/25264	EPA 8015 Modified	GCSV/16299
92184006004	S-19-1	EPA 3546	OEXT/25264	EPA 8015 Modified	GCSV/16299
92184006005	S-20-2	EPA 3546	OEXT/25264	EPA 8015 Modified	GCSV/16299
92184006006	S-20-1	EPA 3546	OEXT/25264	EPA 8015 Modified	GCSV/16299
92184006007	S-11-1	EPA 3546	OEXT/25264	EPA 8015 Modified	GCSV/16299
92184006008	S-11-2	EPA 3546	OEXT/25264	EPA 8015 Modified	GCSV/16299
92184006009	S-11-3	EPA 3546	OEXT/25264	EPA 8015 Modified	GCSV/16299
92184006013	S-12-1	EPA 3546	OEXT/25264	EPA 8015 Modified	GCSV/16299
92184006014	S-12-2	EPA 3546	OEXT/25264	EPA 8015 Modified	GCSV/16299
92184006015	S-12-4	EPA 3546	OEXT/25264	EPA 8015 Modified	GCSV/16299
92184006016	S-12-3	EPA 3546	OEXT/25264	EPA 8015 Modified	GCSV/16299
92184006001	S-18-3	EPA 5035A/5030B	GCV/7649	EPA 8015 Modified	GCV/7655
92184006002	S-18-2	EPA 5035A/5030B	GCV/7649	EPA 8015 Modified	GCV/7655
92184006003	S-18-1	EPA 5035A/5030B	GCV/7649	EPA 8015 Modified	GCV/7655
92184006004	S-19-1	EPA 5035A/5030B	GCV/7649	EPA 8015 Modified	GCV/7655
92184006005	S-20-2	EPA 5035A/5030B	GCV/7649	EPA 8015 Modified	GCV/7655
92184006006	S-20-1	EPA 5035A/5030B	GCV/7649	EPA 8015 Modified	GCV/7655
92184006007	S-11-1	EPA 5035A/5030B	GCV/7649	EPA 8015 Modified	GCV/7655
92184006008	S-11-2	EPA 5035A/5030B	GCV/7649	EPA 8015 Modified	GCV/7655
92184006009	S-11-3	EPA 5035A/5030B	GCV/7649	EPA 8015 Modified	GCV/7655
92184006013	S-12-1	EPA 5035A/5030B	GCV/7649	EPA 8015 Modified	GCV/7655
92184006014	S-12-2	EPA 5035A/5030B	GCV/7653	EPA 8015 Modified	GCV/7657
92184006015	S-12-4	EPA 5035A/5030B	GCV/7653	EPA 8015 Modified	GCV/7657
92184006016	S-12-3	EPA 5035A/5030B	GCV/7653	EPA 8015 Modified	GCV/7657
92184006010	S-13-1	EPA 3546	OEXT/25257	EPA 8270	MSSV/8587
92184006011	S-13-2	EPA 3546	OEXT/25257	EPA 8270	MSSV/8587
92184006012	S-15-1	EPA 3546	OEXT/25257	EPA 8270	MSSV/8587
92184006017	S-12-5	EPA 3546	OEXT/25257	EPA 8270	MSSV/8587
92184006018	S-12-6	EPA 3546	OEXT/25257	EPA 8270	MSSV/8587
92184006019	S-12-7	EPA 3546	OEXT/25257	EPA 8270	MSSV/8587
92184006020	S-12-8	EPA 3546	OEXT/25257	EPA 8270	MSSV/8587
92184006021	S-12-9	EPA 3546	OEXT/25257	EPA 8270	MSSV/8587
92184006022	S-8-1	EPA 3546	OEXT/25257	EPA 8270	MSSV/8587
92184006023	S-8-2	EPA 3546	OEXT/25257	EPA 8270	MSSV/8587
92184006024	S-8-5	EPA 3546	OEXT/25257	EPA 8270	MSSV/8587
92184006010	S-13-1	EPA 8260	MSV/25308		
92184006011	S-13-2	EPA 8260	MSV/25308		
92184006012	S-15-1	EPA 8260	MSV/25319		
92184006017	S-12-5	EPA 8260	MSV/25319		
92184006018	S-12-6	EPA 8260	MSV/25319		
92184006019	S-12-7	EPA 8260	MSV/25319		
92184006020	S-12-8	EPA 8260	MSV/25319		
92184006021	S-12-9	EPA 8260	MSV/25319		
92184006022	S-8-1	EPA 8260	MSV/25319		

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92184006023	S-8-2	EPA 8260	MSV/25355		
92184006024	S-8-5	EPA 8260	MSV/25343		
92184006001	S-18-3	ASTM D2974-87	PMST/6106		
92184006002	S-18-2	ASTM D2974-87	PMST/6106		
92184006003	S-18-1	ASTM D2974-87	PMST/6106		
92184006004	S-19-1	ASTM D2974-87	PMST/6106		
92184006005	S-20-2	ASTM D2974-87	PMST/6106		
92184006006	S-20-1	ASTM D2974-87	PMST/6106		
92184006007	S-11-1	ASTM D2974-87	PMST/6106		
92184006008	S-11-2	ASTM D2974-87	PMST/6106		
92184006009	S-11-3	ASTM D2974-87	PMST/6106		
92184006010	S-13-1	ASTM D2974-87	PMST/6106		
92184006011	S-13-2	ASTM D2974-87	PMST/6106		
92184006012	S-15-1	ASTM D2974-87	PMST/6106		
92184006013	S-12-1	ASTM D2974-87	PMST/6106		
92184006014	S-12-2	ASTM D2974-87	PMST/6106		
92184006015	S-12-4	ASTM D2974-87	PMST/6106		
92184006016	S-12-3	ASTM D2974-87	PMST/6106		
92184006017	S-12-5	ASTM D2974-87	PMST/6106		
92184006018	S-12-6	ASTM D2974-87	PMST/6106		
92184006019	S-12-7	ASTM D2974-87	PMST/6109		
92184006020	S-12-8	ASTM D2974-87	PMST/6109		
92184006021	S-12-9	ASTM D2974-87	PMST/6109		
92184006022	S-8-1	ASTM D2974-87	PMST/6109		
92184006023	S-8-2	ASTM D2974-87	PMST/6109		
92184006024	S-8-5	ASTM D2974-87	PMST/6109		

## REPORT OF LABORATORY ANALYSIS

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Document Name: <b>Sample Condition Upon Receipt (SCUR)</b>	Document Revised: December 10, 2010 Page 1 of 2
Document Number: <b>F-CHR-CS-03-rev.13</b>	Issuing Authority: Pace Huntersville Quality Office

Client Name: General Eng. ConsultantsCourier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Optional

Proj. Due Date:

Proj. Name:

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_Thermometer Used: IR Gun T1102 T1301 Type of Ice: Wet Blue None  Samples on ice, cooling process has begunTemp Correction Factor T1102: No Correction T1301: No CorrectionCorrected Cooler Temp.: 1.4 °C Biological Tissue is Frozen: Yes  No  N/AComments: \_\_\_\_\_ Date and Initials of person examining contents: 2012/14/13

Temp should be above freezing to 6°C

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

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: Jackson Co.

SCURF Review: <u>AMB</u>	Date: <u>12-19-13</u>
SRF Review: <u>AMB</u>	Date: <u>12-19-13</u>

WO# : 92184006



92184006

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)

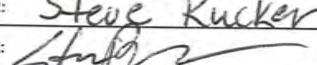
# CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:		Page: 1 of 2
Company: GEL Eng. of N.C.	Report To: A. Eyer	Attention: A. Eyer NCDOT		Company Name: GEL	Address:	1727157
Address: PO Box 14262 RTP N.C. 27709	Copy To:	Project Name: B-4159	Purchase Order No.: WBS No. 33507.1.1	Pace Quote Reference:	REGULATORY AGENCY	<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER
Email To: ADE@gel.com		Pace Project Manager:		Pace Profile #: 5996-2	Site Location	<input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER
Phone: 919-323-8828	Fax:				STATE: NC	
Requested Due Date/TAT: Normal TA	Project Number: NCDT01413					

ITEM #	SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE	Matrix Codes MATRIX / CODE <small>(see valid codes to left)</small>	MATERIAL CODE SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Y/N ↓	Requested Analysis Filtered (Y/N)				Residual Chlorine (Y/N)	Pace Project No./Lab I.D.
				COMPOSITE START		COMPOSITE END/GRAB											
				DATE	TIME	DATE	TIME										
1	S-18-3	SL G	12/16/13 1330					Unpreserved	5	H <sub>2</sub> SO <sub>4</sub>	X X						
2	S-18-2	SL G	1350					HNO <sub>3</sub>	5	HCl	X X						
3	S-18-1	SL G	1420					NaOH	5	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	X X						
4	S-19-1	SL G	1523					Methanol	5	Methanol	X X						
5	S-20-2	SL G	1555					Other	5	Other	X X						
6	S-20-1	SL G	1615								X X						
7	S-11-1	SL G	1650								X X						
8	S-11-2	SL G	12/17/13 0930								X X						
9	S-11-3	SL G	0945								X X						
10	S-13-1	SL G	1015								X X						
11	S-13-2	SL G	1045								X X						
12	S-15-1	SL G	1110								X X						
ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	SAMPLE CONDITIONS							
				12/18/13	1400	Jackie M. Rucker		12/19/13	1115	1.4	Y	N	V				

ORIGINAL

SAMPLER NAME AND SIGNATURE				Temp in °C
PRINT Name of SAMPLER: Steve Rucker				Received on Ice (Y/N)
SIGNATURE of SAMPLER: 				Custody Sealed Cooler (Y/N)
DATE Signed (MM/DD/YY): 12/18/13				Samples Intact (Y/N)

# CHAIN-OF-CUSTODY / Analytical Request Document

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

Page:	2 of 2
1727156	
REGULATORY AGENCY	
<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER _____	
Site Location	STATE: NC

<b>Section A</b> Required Client Information:		<b>Section B</b> Required Project Information:		<b>Section C</b> Invoice Information:	
Company: <b>GEL ENG. of N.C.</b>	Report To: <b>A. Eyer</b>	Attention: <b>NC DOT</b>			
Address: <b>PO Box 14262</b>	Copy To:	Company Name:			
<b>RTP N.C. 27709</b>		Address:			
Email To: <b>ADE@gel.com</b>	Purchase Order No.: <b>WBS No. 33507.1.1</b>	Pace Quote Reference:			
Phone:	Fax:	Pace Project Manager:			
Requested Due Date/TAT: <b>NORMAL TA</b>	Project Number: <b>NCDT01413</b>	Pace Profile #:			

ITEM #	SAMPLE ID (A-Z, 0-9, -) Sample IDs MUST BE UNIQUE	Matrix Codes MATRIX / CODE		(see valid codes to left) (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Y/N	Requested Analysis Filtered (Y/N)			
		Drinking Water	DW		COMPOSITE START		COMPOSITE END/GRAB									
		Water	WT		DATE	TIME	DATE	TIME					Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl
1	S-12-1	SLG	12/17/13	1155											X X	✓ R2O
2	S-12-2	SLG		1230											X X	DRO
3	S-12-4	SLG		1245											X X	✓ DC's
4	S-12-3	SLG		1310											X X	SVDC's
5	S-12-5	SLG		1509											X X	
6	S-12-6	SLG		1540											X X	
7	S-12-7	SLG		1555											X X	
8	S-12-8	SLG		1610											X X	
9	S-12-9	SLG		1625											X X	
10	S-8-1	SLG		1635											X X	
11	S-8-2	SLG	12/18/13	0855											X X	
12	S-8-5	SLG	12/18/13	0925											X X	
ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	SAMPLE CONDITIONS						
				12/18/13	1400	Take in 1Pc		12/19/13	1115	14	Y	10	Y			

**ORIGINAL**

SAMPLER NAME AND SIGNATURE		Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples intact (Y/N)
PRINT Name of SAMPLER: <b>Steve Rucker</b>					
SIGNATURE of SAMPLER: <b>Steve Rucker</b>	DATE Signed (MM/DD/YY): <b>12/18/13</b>				

**Groundwater Sample form Monitoring Well MW11-1**

December 31, 2013

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

RE: Project: B-4159 WBS33507.1.1  
Pace Project No.: 92184131

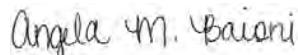
Dear Andrew Eyer:

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.

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

Sincerely,



Angela Baioni

angela.baioni@pacelabs.com  
Project Manager

Enclosures

cc: Chemical Testing Engineer, NCDOT



## REPORT OF LABORATORY ANALYSIS

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**Pace Analytical Services, Inc.**  
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(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.: 92184131

---

### 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

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## SAMPLE ANALYTE COUNT

Project: B-4159 WBS33507.1.1

Pace Project No.: 92184131

Lab ID	Sample ID	Method	Analysts	Analytics Reported	Laboratory
92184131001	MW-11-1	EPA 8270	BPJ	74	PASI-C
		EPA 8260	MCK	71	PASI-C

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1

Pace Project No.: 92184131

Sample: MW-11-1	Lab ID: 92184131001	Collected: 12/19/13 13:50	Received: 12/19/13 15:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV Semivolatile Organic</b>	Analytical Method: EPA 8270 Preparation Method: EPA 3510							
Acenaphthene	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	83-32-9	
Acenaphthylene	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	208-96-8	
Aniline	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	62-53-3	
Anthracene	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	120-12-7	
Benzo(a)anthracene	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	56-55-3	
Benzo(a)pyrene	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	50-32-8	
Benzo(b)fluoranthene	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	191-24-2	
Benzo(k)fluoranthene	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	207-08-9	
Benzoic Acid	ND ug/L		50.0	1	12/20/13 09:20	12/23/13 17:43	65-85-0	
Benzyl alcohol	ND ug/L		20.0	1	12/20/13 09:20	12/23/13 17:43	100-51-6	
4-Bromophenylphenyl ether	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	101-55-3	
Butylbenzylphthalate	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	85-68-7	
4-Chloro-3-methylphenol	ND ug/L		20.0	1	12/20/13 09:20	12/23/13 17:43	59-50-7	
4-Chloroaniline	ND ug/L		20.0	1	12/20/13 09:20	12/23/13 17:43	106-47-8	
bis(2-Chloroethoxy)methane	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	111-91-1	
bis(2-Chloroethyl) ether	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	108-60-1	
2-Chloronaphthalene	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	91-58-7	
2-Chlorophenol	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	95-57-8	
4-Chlorophenylphenyl ether	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	7005-72-3	
Chrysene	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	53-70-3	
Dibenzofuran	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	132-64-9	
1,2-Dichlorobenzene	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	95-50-1	
1,3-Dichlorobenzene	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	541-73-1	
1,4-Dichlorobenzene	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	106-46-7	
3,3'-Dichlorobenzidine	ND ug/L		20.0	1	12/20/13 09:20	12/23/13 17:43	91-94-1	
2,4-Dichlorophenol	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	120-83-2	
Diethylphthalate	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	84-66-2	
2,4-Dimethylphenol	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	105-67-9	
Dimethylphthalate	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	131-11-3	
Di-n-butylphthalate	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	84-74-2	
4,6-Dinitro-2-methylphenol	ND ug/L		20.0	1	12/20/13 09:20	12/23/13 17:43	534-52-1	
2,4-Dinitrophenol	ND ug/L		50.0	1	12/20/13 09:20	12/23/13 17:43	51-28-5	
2,4-Dinitrotoluene	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	121-14-2	
2,6-Dinitrotoluene	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	606-20-2	
Di-n-octylphthalate	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	117-84-0	
bis(2-Ethylhexyl)phthalate	ND ug/L		6.0	1	12/20/13 09:20	12/23/13 17:43	117-81-7	
Fluoranthene	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	206-44-0	
Fluorene	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	86-73-7	
Hexachloro-1,3-butadiene	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	87-68-3	
Hexachlorobenzene	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	118-74-1	
Hexachlorocyclopentadiene	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	77-47-4	
Hexachloroethane	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	67-72-1	
Indeno(1,2,3-cd)pyrene	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	193-39-5	
Isophorone	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	78-59-1	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1

Pace Project No.: 92184131

Sample: MW-11-1	Lab ID: 92184131001	Collected: 12/19/13 13:50	Received: 12/19/13 15:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV Semivolatile Organic</b>	Analytical Method: EPA 8270 Preparation Method: EPA 3510							
1-Methylnaphthalene	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	90-12-0	
2-Methylnaphthalene	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	91-57-6	
2-Methylphenol(o-Cresol)	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43		
Naphthalene	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	91-20-3	
2-Nitroaniline	ND ug/L		50.0	1	12/20/13 09:20	12/23/13 17:43	88-74-4	
3-Nitroaniline	ND ug/L		50.0	1	12/20/13 09:20	12/23/13 17:43	99-09-2	
4-Nitroaniline	ND ug/L		20.0	1	12/20/13 09:20	12/23/13 17:43	100-01-6	
Nitrobenzene	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	98-95-3	
2-Nitrophenol	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	88-75-5	
4-Nitrophenol	ND ug/L		50.0	1	12/20/13 09:20	12/23/13 17:43	100-02-7	
N-Nitrosodimethylamine	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	62-75-9	
N-Nitroso-di-n-propylamine	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	621-64-7	
N-Nitrosodiphenylamine	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	86-30-6	
Pentachlorophenol	ND ug/L		25.0	1	12/20/13 09:20	12/23/13 17:43	87-86-5	
Phenanthrone	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	85-01-8	
Phenol	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	108-95-2	
Pyrene	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	129-00-0	
1,2,4-Trichlorobenzene	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	120-82-1	
2,4,5-Trichlorophenol	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	95-95-4	
2,4,6-Trichlorophenol	ND ug/L		10.0	1	12/20/13 09:20	12/23/13 17:43	88-06-2	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	25 %		21-110	1	12/20/13 09:20	12/23/13 17:43	4165-60-0	
2-Fluorobiphenyl (S)	25 %		27-110	1	12/20/13 09:20	12/23/13 17:43	321-60-8	S0
Terphenyl-d14 (S)	67 %		31-107	1	12/20/13 09:20	12/23/13 17:43	1718-51-0	
Phenol-d6 (S)	8 %		10-110	1	12/20/13 09:20	12/23/13 17:43	13127-88-3	S0
2-Fluorophenol (S)	13 %		12-110	1	12/20/13 09:20	12/23/13 17:43	367-12-4	
2,4,6-Tribromophenol (S)	61 %		27-110	1	12/20/13 09:20	12/23/13 17:43	118-79-6	
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Acetone	ND ug/L		25.0	1			12/30/13 20:22	67-64-1
Benzene	ND ug/L		5.0	1			12/30/13 20:22	71-43-2
Bromobenzene	ND ug/L		5.0	1			12/30/13 20:22	108-86-1
Bromochloromethane	ND ug/L		5.0	1			12/30/13 20:22	74-97-5
Bromodichloromethane	ND ug/L		5.0	1			12/30/13 20:22	75-27-4
Bromoform	ND ug/L		5.0	1			12/30/13 20:22	75-25-2
Bromomethane	ND ug/L		10.0	1			12/30/13 20:22	74-83-9
2-Butanone (MEK)	ND ug/L		10.0	1			12/30/13 20:22	78-93-3
tert-Butyl Alcohol	ND ug/L		100	1			12/30/13 20:22	75-65-0
n-Butylbenzene	ND ug/L		5.0	1			12/30/13 20:22	104-51-8
sec-Butylbenzene	ND ug/L		5.0	1			12/30/13 20:22	135-98-8
tert-Butylbenzene	ND ug/L		5.0	1			12/30/13 20:22	98-06-6
Carbon tetrachloride	ND ug/L		5.0	1			12/30/13 20:22	56-23-5
Chlorobenzene	ND ug/L		5.0	1			12/30/13 20:22	108-90-7
Chloroethane	ND ug/L		10.0	1			12/30/13 20:22	75-00-3
Chloroform	ND ug/L		5.0	1			12/30/13 20:22	67-66-3
Chloromethane	ND ug/L		5.0	1			12/30/13 20:22	74-87-3

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1

Pace Project No.: 92184131

Sample: MW-11-1	Lab ID: 92184131001	Collected: 12/19/13 13:50	Received: 12/19/13 15:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
2-Chlorotoluene	ND ug/L		5.0	1		12/30/13 20:22	95-49-8	
4-Chlorotoluene	ND ug/L		5.0	1		12/30/13 20:22	106-43-4	
1,2-Dibromo-3-chloropropane	ND ug/L		5.0	1		12/30/13 20:22	96-12-8	
Dibromochloromethane	ND ug/L		5.0	1		12/30/13 20:22	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/L		5.0	1		12/30/13 20:22	106-93-4	
Dibromomethane	ND ug/L		5.0	1		12/30/13 20:22	74-95-3	
1,2-Dichlorobenzene	ND ug/L		5.0	1		12/30/13 20:22	95-50-1	
1,3-Dichlorobenzene	ND ug/L		5.0	1		12/30/13 20:22	541-73-1	
1,4-Dichlorobenzene	ND ug/L		5.0	1		12/30/13 20:22	106-46-7	
Dichlorodifluoromethane	ND ug/L		5.0	1		12/30/13 20:22	75-71-8	
1,1-Dichloroethane	ND ug/L		5.0	1		12/30/13 20:22	75-34-3	
1,2-Dichloroethane	ND ug/L		5.0	1		12/30/13 20:22	107-06-2	
1,2-Dichloroethene (Total)	ND ug/L		5.0	1		12/30/13 20:22	540-59-0	
1,1-Dichloroethene	ND ug/L		5.0	1		12/30/13 20:22	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		5.0	1		12/30/13 20:22	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		5.0	1		12/30/13 20:22	156-60-5	
1,2-Dichloropropane	ND ug/L		5.0	1		12/30/13 20:22	78-87-5	
1,3-Dichloropropane	ND ug/L		5.0	1		12/30/13 20:22	142-28-9	
2,2-Dichloropropane	ND ug/L		5.0	1		12/30/13 20:22	594-20-7	
1,1-Dichloropropene	ND ug/L		5.0	1		12/30/13 20:22	563-58-6	
cis-1,3-Dichloropropene	ND ug/L		5.0	1		12/30/13 20:22	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		5.0	1		12/30/13 20:22	10061-02-6	
Diisopropyl ether	ND ug/L		5.0	1		12/30/13 20:22	108-20-3	
Ethylbenzene	ND ug/L		5.0	1		12/30/13 20:22	100-41-4	
Hexachloro-1,3-butadiene	ND ug/L		5.0	1		12/30/13 20:22	87-68-3	
2-Hexanone	ND ug/L		10.0	1		12/30/13 20:22	591-78-6	
Isopropylbenzene (Cumene)	ND ug/L		5.0	1		12/30/13 20:22	98-82-8	
p-Isopropyltoluene	ND ug/L		5.0	1		12/30/13 20:22	99-87-6	
Methylene Chloride	ND ug/L		5.0	1		12/30/13 20:22	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/L		10.0	1		12/30/13 20:22	108-10-1	
Methyl-tert-butyl ether	ND ug/L		5.0	1		12/30/13 20:22	1634-04-4	
Naphthalene	ND ug/L		5.0	1		12/30/13 20:22	91-20-3	
n-Propylbenzene	ND ug/L		5.0	1		12/30/13 20:22	103-65-1	
Styrene	ND ug/L		5.0	1		12/30/13 20:22	100-42-5	
1,1,1,2-Tetrachloroethane	ND ug/L		5.0	1		12/30/13 20:22	630-20-6	
1,1,2,2-Tetrachloroethane	ND ug/L		5.0	1		12/30/13 20:22	79-34-5	
Tetrachloroethene	ND ug/L		5.0	1		12/30/13 20:22	127-18-4	
Toluene	ND ug/L		5.0	1		12/30/13 20:22	108-88-3	
1,2,3-Trichlorobenzene	ND ug/L		5.0	1		12/30/13 20:22	87-61-6	
1,2,4-Trichlorobenzene	ND ug/L		5.0	1		12/30/13 20:22	120-82-1	
1,1,1-Trichloroethane	ND ug/L		5.0	1		12/30/13 20:22	71-55-6	
1,1,2-Trichloroethane	ND ug/L		5.0	1		12/30/13 20:22	79-00-5	
Trichloroethene	ND ug/L		5.0	1		12/30/13 20:22	79-01-6	
Trichlorofluoromethane	ND ug/L		10.0	1		12/30/13 20:22	75-69-4	
1,2,3-Trichloropropane	ND ug/L		5.0	1		12/30/13 20:22	96-18-4	
1,2,4-Trimethylbenzene	ND ug/L		5.0	1		12/30/13 20:22	95-63-6	
1,3,5-Trimethylbenzene	ND ug/L		5.0	1		12/30/13 20:22	108-67-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: B-4159 WBS33507.1.1

Pace Project No.: 92184131

Sample: MW-11-1	Lab ID: 92184131001	Collected: 12/19/13 13:50	Received: 12/19/13 15:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260							
Vinyl acetate	ND	ug/L	10.0	1			108-05-4	
Vinyl chloride	ND	ug/L	5.0	1			75-01-4	
m&p-Xylene	ND	ug/L	10.0	1			179601-23-1	
o-Xylene	ND	ug/L	5.0	1			95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	101 %		70-130	1			460-00-4	
1,2-Dichloroethane-d4 (S)	97 %		70-130	1			17060-07-0	
Toluene-d8 (S)	94 %		70-130	1			2037-26-5	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1

Pace Project No.: 92184131

QC Batch:	MSV/25386	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV
Associated Lab Samples:	92184131001		

METHOD BLANK: 1113874    Matrix: Water

Associated Lab Samples: 92184131001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	12/30/13 12:50	
1,1,1-Trichloroethane	ug/L	ND	5.0	12/30/13 12:50	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	12/30/13 12:50	
1,1,2-Trichloroethane	ug/L	ND	5.0	12/30/13 12:50	
1,1-Dichloroethane	ug/L	ND	5.0	12/30/13 12:50	
1,1-Dichloroethene	ug/L	ND	5.0	12/30/13 12:50	
1,1-Dichloropropene	ug/L	ND	5.0	12/30/13 12:50	
1,2,3-Trichlorobenzene	ug/L	ND	5.0	12/30/13 12:50	
1,2,3-Trichloropropane	ug/L	ND	5.0	12/30/13 12:50	
1,2,4-Trichlorobenzene	ug/L	ND	5.0	12/30/13 12:50	
1,2,4-Trimethylbenzene	ug/L	ND	5.0	12/30/13 12:50	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	12/30/13 12:50	
1,2-Dibromoethane (EDB)	ug/L	ND	5.0	12/30/13 12:50	
1,2-Dichlorobenzene	ug/L	ND	5.0	12/30/13 12:50	
1,2-Dichloroethane	ug/L	ND	5.0	12/30/13 12:50	
1,2-Dichloroethylene (Total)	ug/L	ND	5.0	12/30/13 12:50	
1,2-Dichloropropane	ug/L	ND	5.0	12/30/13 12:50	
1,3,5-Trimethylbenzene	ug/L	ND	5.0	12/30/13 12:50	
1,3-Dichlorobenzene	ug/L	ND	5.0	12/30/13 12:50	
1,3-Dichloropropane	ug/L	ND	5.0	12/30/13 12:50	
1,4-Dichlorobenzene	ug/L	ND	5.0	12/30/13 12:50	
2,2-Dichloropropane	ug/L	ND	5.0	12/30/13 12:50	
2-Butanone (MEK)	ug/L	ND	10.0	12/30/13 12:50	
2-Chlorotoluene	ug/L	ND	5.0	12/30/13 12:50	
2-Hexanone	ug/L	ND	10.0	12/30/13 12:50	
4-Chlorotoluene	ug/L	ND	5.0	12/30/13 12:50	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	12/30/13 12:50	
Acetone	ug/L	ND	25.0	12/30/13 12:50	
Benzene	ug/L	ND	5.0	12/30/13 12:50	
Bromobenzene	ug/L	ND	5.0	12/30/13 12:50	
Bromochloromethane	ug/L	ND	5.0	12/30/13 12:50	
Bromodichloromethane	ug/L	ND	5.0	12/30/13 12:50	
Bromoform	ug/L	ND	5.0	12/30/13 12:50	
Bromomethane	ug/L	ND	10.0	12/30/13 12:50	
Carbon tetrachloride	ug/L	ND	5.0	12/30/13 12:50	
Chlorobenzene	ug/L	ND	5.0	12/30/13 12:50	
Chloroethane	ug/L	ND	10.0	12/30/13 12:50	
Chloroform	ug/L	ND	5.0	12/30/13 12:50	
Chloromethane	ug/L	ND	5.0	12/30/13 12:50	
cis-1,2-Dichloroethene	ug/L	ND	5.0	12/30/13 12:50	
cis-1,3-Dichloropropene	ug/L	ND	5.0	12/30/13 12:50	
Dibromochloromethane	ug/L	ND	5.0	12/30/13 12:50	
Dibromomethane	ug/L	ND	5.0	12/30/13 12:50	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1

Pace Project No.: 92184131

METHOD BLANK: 1113874

Matrix: Water

Associated Lab Samples: 92184131001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dichlorodifluoromethane	ug/L	ND	5.0	12/30/13 12:50	
Diisopropyl ether	ug/L	ND	5.0	12/30/13 12:50	
Ethylbenzene	ug/L	ND	5.0	12/30/13 12:50	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	12/30/13 12:50	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	12/30/13 12:50	
m&p-Xylene	ug/L	ND	10.0	12/30/13 12:50	
Methyl-tert-butyl ether	ug/L	ND	5.0	12/30/13 12:50	
Methylene Chloride	ug/L	ND	5.0	12/30/13 12:50	
n-Butylbenzene	ug/L	ND	5.0	12/30/13 12:50	
n-Propylbenzene	ug/L	ND	5.0	12/30/13 12:50	
Naphthalene	ug/L	ND	5.0	12/30/13 12:50	
o-Xylene	ug/L	ND	5.0	12/30/13 12:50	
p-Isopropyltoluene	ug/L	ND	5.0	12/30/13 12:50	
sec-Butylbenzene	ug/L	ND	5.0	12/30/13 12:50	
Styrene	ug/L	ND	5.0	12/30/13 12:50	
tert-Butyl Alcohol	ug/L	ND	100	12/30/13 12:50	
tert-Butylbenzene	ug/L	ND	5.0	12/30/13 12:50	
Tetrachloroethene	ug/L	ND	5.0	12/30/13 12:50	
Toluene	ug/L	ND	5.0	12/30/13 12:50	
trans-1,2-Dichloroethene	ug/L	ND	5.0	12/30/13 12:50	
trans-1,3-Dichloropropene	ug/L	ND	5.0	12/30/13 12:50	
Trichloroethene	ug/L	ND	5.0	12/30/13 12:50	
Trichlorofluoromethane	ug/L	ND	10.0	12/30/13 12:50	
Vinyl acetate	ug/L	ND	10.0	12/30/13 12:50	
Vinyl chloride	ug/L	ND	5.0	12/30/13 12:50	
1,2-Dichloroethane-d4 (S)	%	110	70-130	12/30/13 12:50	
4-Bromofluorobenzene (S)	%	104	70-130	12/30/13 12:50	
Toluene-d8 (S)	%	99	70-130	12/30/13 12:50	

LABORATORY CONTROL SAMPLE: 1113875

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	51.7	103	70-130	
1,1,1-Trichloroethane	ug/L	50	46.4	93	70-137	
1,1,2,2-Tetrachloroethane	ug/L	50	45.2	90	70-130	
1,1,2-Trichloroethane	ug/L	50	46.8	94	70-130	
1,1-Dichloroethane	ug/L	50	45.3	91	70-137	
1,1-Dichloroethene	ug/L	50	49.6	99	70-138	
1,1-Dichloropropene	ug/L	50	48.3	97	70-130	
1,2,3-Trichlorobenzene	ug/L	50	48.2	96	70-143	
1,2,3-Trichloropropane	ug/L	50	44.1	88	70-130	
1,2,4-Trichlorobenzene	ug/L	50	49.4	99	70-138	
1,2,4-Trimethylbenzene	ug/L	50	48.9	98	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	43.9	88	68-134	
1,2-Dibromoethane (EDB)	ug/L	50	49.9	100	70-130	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1

Pace Project No.: 92184131

LABORATORY CONTROL SAMPLE: 1113875

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichlorobenzene	ug/L	50	48.4	97	70-130	
1,2-Dichloroethane	ug/L	50	44.8	90	70-133	
1,2-Dichloroethene (Total)	ug/L	100	87.3	87	70-130	
1,2-Dichloropropane	ug/L	50	46.1	92	70-130	
1,3,5-Trimethylbenzene	ug/L	50	48.3	97	70-130	
1,3-Dichlorobenzene	ug/L	50	46.3	93	70-130	
1,3-Dichloropropane	ug/L	50	49.6	99	70-130	
1,4-Dichlorobenzene	ug/L	50	47.5	95	70-130	
2,2-Dichloropropane	ug/L	50	47.5	95	61-142	
2-Butanone (MEK)	ug/L	100	83.4	83	63-150	
2-Chlorotoluene	ug/L	50	44.3	89	70-130	
2-Hexanone	ug/L	100	74.3	74	70-137	
4-Chlorotoluene	ug/L	50	46.4	93	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	74.7	75	70-134	
Acetone	ug/L	100	69.5	69	68-160	
Benzene	ug/L	50	47.3	95	70-130	
Bromobenzene	ug/L	50	44.1	88	70-130	
Bromochloromethane	ug/L	50	46.8	94	70-135	
Bromodichloromethane	ug/L	50	47.4	95	70-130	
Bromoform	ug/L	50	53.4	107	70-130	
Bromomethane	ug/L	50	52.4	105	63-130	
Carbon tetrachloride	ug/L	50	46.5	93	70-146	
Chlorobenzene	ug/L	50	47.2	94	70-130	
Chloroethane	ug/L	50	45.6	91	60-151	
Chloroform	ug/L	50	44.2	88	70-130	
Chloromethane	ug/L	50	54.2	108	65-133	
cis-1,2-Dichloroethene	ug/L	50	43.8	88	70-134	
cis-1,3-Dichloropropene	ug/L	50	47.6	95	70-130	
Dibromochloromethane	ug/L	50	52.5	105	70-130	
Dibromomethane	ug/L	50	46.8	94	70-130	
Dichlorodifluoromethane	ug/L	50	64.4	129	66-130	
Diisopropyl ether	ug/L	50	45.2	90	70-133	
Ethylbenzene	ug/L	50	45.0	90	70-130	
Hexachloro-1,3-butadiene	ug/L	50	49.1	98	58-151	
Isopropylbenzene (Cumene)	ug/L	50	47.8	96	70-130	
m&p-Xylene	ug/L	100	94.8	95	70-130	
Methyl-tert-butyl ether	ug/L	50	47.8	96	70-136	
Methylene Chloride	ug/L	50	45.1	90	70-130	
n-Butylbenzene	ug/L	50	49.3	99	70-130	
n-Propylbenzene	ug/L	50	46.5	93	70-130	
Naphthalene	ug/L	50	43.5	87	70-139	
o-Xylene	ug/L	50	48.7	97	70-130	
p-Isopropyltoluene	ug/L	50	48.6	97	70-130	
sec-Butylbenzene	ug/L	50	47.9	96	70-130	
Styrene	ug/L	50	49.3	99	70-130	
tert-Butyl Alcohol	ug/L	500	412	82	69-151	
tert-Butylbenzene	ug/L	50	47.9	96	70-130	
Tetrachloroethene	ug/L	50	51.2	102	70-130	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1

Pace Project No.: 92184131

**LABORATORY CONTROL SAMPLE:** 1113875

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Toluene	ug/L	50	44.3	89	70-130	
trans-1,2-Dichloroethene	ug/L	50	43.5	87	70-130	
trans-1,3-Dichloropropene	ug/L	50	47.6	95	70-130	
Trichloroethene	ug/L	50	47.0	94	70-130	
Trichlorofluoromethane	ug/L	50	46.1	92	70-130	
Vinyl acetate	ug/L	100	101	101	67-148	
Vinyl chloride	ug/L	50	55.9	112	67-133	
1,2-Dichloroethane-d4 (S)	%			101	70-130	
4-Bromofluorobenzene (S)	%			102	70-130	
Toluene-d8 (S)	%			98	70-130	

**MATRIX SPIKE SAMPLE:** 1114789

Parameter	Units	92184117007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	ND	50	56.4	113	65-160	
Benzene	ug/L	ND	50	56.6	113	58-162	
Chlorobenzene	ug/L	ND	50	57.2	114	70-138	
Toluene	ug/L	ND	50	53.5	107	65-152	
Trichloroethene	ug/L	ND	50	54.0	108	70-142	
1,2-Dichloroethane-d4 (S)	%				102	70-130	
4-Bromofluorobenzene (S)	%				93	70-130	
Toluene-d8 (S)	%				99	70-130	

**SAMPLE DUPLICATE:** 1114790

Parameter	Units	92184117008 Result	Dup Result	RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		
1,1,1-Trichloroethane	ug/L	ND	ND		
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		
1,1,2-Trichloroethane	ug/L	ND	ND		
1,1-Dichloroethane	ug/L	ND	ND		
1,1-Dichloroethene	ug/L	ND	ND		
1,1-Dichloropropene	ug/L	ND	ND		
1,2,3-Trichlorobenzene	ug/L	ND	ND		
1,2,3-Trichloropropane	ug/L	ND	ND		
1,2,4-Trichlorobenzene	ug/L	ND	ND		
1,2,4-Trimethylbenzene	ug/L	ND	ND		
1,2-Dibromo-3-chloropropane	ug/L	ND	ND		
1,2-Dibromoethane (EDB)	ug/L	ND	ND		
1,2-Dichlorobenzene	ug/L	ND	ND		
1,2-Dichloroethane	ug/L	ND	ND		
1,2-Dichloroethene (Total)	ug/L	ND	ND		
1,2-Dichloropropane	ug/L	ND	ND		
1,3,5-Trimethylbenzene	ug/L	ND	ND		
1,3-Dichlorobenzene	ug/L	ND	ND		

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1

Pace Project No.: 92184131

SAMPLE DUPLICATE: 1114790

Parameter	Units	92184117008 Result	Dup Result	RPD	Qualifiers
1,3-Dichloropropane	ug/L	ND	ND		
1,4-Dichlorobenzene	ug/L	ND	ND		
2,2-Dichloropropane	ug/L	ND	ND		
2-Butanone (MEK)	ug/L	ND	ND		
2-Chlorotoluene	ug/L	ND	ND		
2-Hexanone	ug/L	ND	ND		
4-Chlorotoluene	ug/L	ND	ND		
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		
Acetone	ug/L	ND	ND		
Benzene	ug/L	ND	ND		
Bromobenzene	ug/L	ND	ND		
Bromochloromethane	ug/L	ND	ND		
Bromodichloromethane	ug/L	ND	ND		
Bromoform	ug/L	ND	ND		
Bromomethane	ug/L	ND	ND		
Carbon tetrachloride	ug/L	ND	ND		
Chlorobenzene	ug/L	ND	ND		
Chloroethane	ug/L	ND	ND		
Chloroform	ug/L	ND	ND		
Chloromethane	ug/L	ND	ND		
cis-1,2-Dichloroethene	ug/L	ND	ND		
cis-1,3-Dichloropropene	ug/L	ND	ND		
Dibromochloromethane	ug/L	ND	ND		
Dibromomethane	ug/L	ND	ND		
Dichlorodifluoromethane	ug/L	ND	ND		
Diisopropyl ether	ug/L	ND	ND		
Ethylbenzene	ug/L	ND	ND		
Hexachloro-1,3-butadiene	ug/L	ND	ND		
Isopropylbenzene (Cumene)	ug/L	ND	ND		
m&p-Xylene	ug/L	ND	ND		
Methyl-tert-butyl ether	ug/L	ND	ND		
Methylene Chloride	ug/L	ND	ND		
n-Butylbenzene	ug/L	ND	ND		
n-Propylbenzene	ug/L	ND	ND		
Naphthalene	ug/L	ND	ND		
o-Xylene	ug/L	ND	ND		
p-Isopropyltoluene	ug/L	ND	ND		
sec-Butylbenzene	ug/L	ND	ND		
Styrene	ug/L	ND	ND		
tert-Butyl Alcohol	ug/L	ND	ND		
tert-Butylbenzene	ug/L	ND	ND		
Tetrachloroethene	ug/L	ND	ND		
Toluene	ug/L	ND	ND		
trans-1,2-Dichloroethene	ug/L	ND	ND		
trans-1,3-Dichloropropene	ug/L	ND	ND		
Trichloroethene	ug/L	ND	ND		
Trichlorofluoromethane	ug/L	ND	ND		
Vinyl acetate	ug/L	ND	ND		

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## QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1

Pace Project No.: 92184131

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SAMPLE DUPLICATE: 1114790

Parameter	Units	92184117008	Dup Result	RPD	Qualifiers
Vinyl chloride	ug/L	ND	ND		
1,2-Dichloroethane-d4 (S)	%	95	110	14	
4-Bromofluorobenzene (S)	%	102	92	11	
Toluene-d8 (S)	%	111	102	9	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1

Pace Project No.: 92184131

QC Batch:	OEXT/25285	Analysis Method:	EPA 8270
QC Batch Method:	EPA 3510	Analysis Description:	8270 Water MSSV
Associated Lab Samples:	92184131001		

METHOD BLANK: 1110272                          Matrix: Water

Associated Lab Samples: 92184131001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	10.0	12/23/13 13:03	
1,2-Dichlorobenzene	ug/L	ND	10.0	12/23/13 13:03	
1,3-Dichlorobenzene	ug/L	ND	10.0	12/23/13 13:03	
1,4-Dichlorobenzene	ug/L	ND	10.0	12/23/13 13:03	
1-Methylnaphthalene	ug/L	ND	10.0	12/23/13 13:03	
2,4,5-Trichlorophenol	ug/L	ND	10.0	12/23/13 13:03	
2,4,6-Trichlorophenol	ug/L	ND	10.0	12/23/13 13:03	
2,4-Dichlorophenol	ug/L	ND	10.0	12/23/13 13:03	
2,4-Dimethylphenol	ug/L	ND	10.0	12/23/13 13:03	
2,4-Dinitrophenol	ug/L	ND	50.0	12/23/13 13:03	
2,4-Dinitrotoluene	ug/L	ND	10.0	12/23/13 13:03	
2,6-Dinitrotoluene	ug/L	ND	10.0	12/23/13 13:03	
2-Chloronaphthalene	ug/L	ND	10.0	12/23/13 13:03	
2-Chlorophenol	ug/L	ND	10.0	12/23/13 13:03	
2-Methylnaphthalene	ug/L	ND	10.0	12/23/13 13:03	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	12/23/13 13:03	
2-Nitroaniline	ug/L	ND	50.0	12/23/13 13:03	
2-Nitrophenol	ug/L	ND	10.0	12/23/13 13:03	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	10.0	12/23/13 13:03	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	12/23/13 13:03	
3-Nitroaniline	ug/L	ND	50.0	12/23/13 13:03	
4,6-Dinitro-2-methylphenol	ug/L	ND	20.0	12/23/13 13:03	
4-Bromophenylphenyl ether	ug/L	ND	10.0	12/23/13 13:03	
4-Chloro-3-methylphenol	ug/L	ND	20.0	12/23/13 13:03	
4-Chloroaniline	ug/L	ND	20.0	12/23/13 13:03	
4-Chlorophenylphenyl ether	ug/L	ND	10.0	12/23/13 13:03	
4-Nitroaniline	ug/L	ND	20.0	12/23/13 13:03	
4-Nitrophenol	ug/L	ND	50.0	12/23/13 13:03	
Acenaphthene	ug/L	ND	10.0	12/23/13 13:03	
Acenaphthylene	ug/L	ND	10.0	12/23/13 13:03	
Aniline	ug/L	ND	10.0	12/23/13 13:03	
Anthracene	ug/L	ND	10.0	12/23/13 13:03	
Benzo(a)anthracene	ug/L	ND	10.0	12/23/13 13:03	
Benzo(a)pyrene	ug/L	ND	10.0	12/23/13 13:03	
Benzo(b)fluoranthene	ug/L	ND	10.0	12/23/13 13:03	
Benzo(g,h,i)perylene	ug/L	ND	10.0	12/23/13 13:03	
Benzo(k)fluoranthene	ug/L	ND	10.0	12/23/13 13:03	
Benzoic Acid	ug/L	ND	50.0	12/23/13 13:03	
Benzyl alcohol	ug/L	ND	20.0	12/23/13 13:03	
bis(2-Chloroethoxy)methane	ug/L	ND	10.0	12/23/13 13:03	
bis(2-Chloroethyl) ether	ug/L	ND	10.0	12/23/13 13:03	
bis(2-Chloroisopropyl) ether	ug/L	ND	10.0	12/23/13 13:03	
bis(2-Ethylhexyl)phthalate	ug/L	ND	6.0	12/23/13 13:03	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1

Pace Project No.: 92184131

METHOD BLANK: 1110272

Matrix: Water

Associated Lab Samples: 92184131001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Butylbenzylphthalate	ug/L	ND	10.0	12/23/13 13:03	
Chrysene	ug/L	ND	10.0	12/23/13 13:03	
Di-n-butylphthalate	ug/L	ND	10.0	12/23/13 13:03	
Di-n-octylphthalate	ug/L	ND	10.0	12/23/13 13:03	
Dibenz(a,h)anthracene	ug/L	ND	10.0	12/23/13 13:03	
Dibenzofuran	ug/L	ND	10.0	12/23/13 13:03	
Diethylphthalate	ug/L	ND	10.0	12/23/13 13:03	
Dimethylphthalate	ug/L	ND	10.0	12/23/13 13:03	
Fluoranthene	ug/L	ND	10.0	12/23/13 13:03	
Fluorene	ug/L	ND	10.0	12/23/13 13:03	
Hexachloro-1,3-butadiene	ug/L	ND	10.0	12/23/13 13:03	
Hexachlorobenzene	ug/L	ND	10.0	12/23/13 13:03	
Hexachlorocyclopentadiene	ug/L	ND	10.0	12/23/13 13:03	
Hexachloroethane	ug/L	ND	10.0	12/23/13 13:03	
Indeno(1,2,3-cd)pyrene	ug/L	ND	10.0	12/23/13 13:03	
Isophorone	ug/L	ND	10.0	12/23/13 13:03	
N-Nitroso-di-n-propylamine	ug/L	ND	10.0	12/23/13 13:03	
N-Nitrosodimethylamine	ug/L	ND	10.0	12/23/13 13:03	
N-Nitrosodiphenylamine	ug/L	ND	10.0	12/23/13 13:03	
Naphthalene	ug/L	ND	10.0	12/23/13 13:03	
Nitrobenzene	ug/L	ND	10.0	12/23/13 13:03	
Pentachlorophenol	ug/L	ND	25.0	12/23/13 13:03	
Phenanthrene	ug/L	ND	10.0	12/23/13 13:03	
Phenol	ug/L	ND	10.0	12/23/13 13:03	
Pyrene	ug/L	ND	10.0	12/23/13 13:03	
2,4,6-Tribromophenol (S)	%	72	27-110	12/23/13 13:03	
2-Fluorobiphenyl (S)	%	74	27-110	12/23/13 13:03	
2-Fluorophenol (S)	%	44	12-110	12/23/13 13:03	
Nitrobenzene-d5 (S)	%	75	21-110	12/23/13 13:03	
Phenol-d6 (S)	%	33	10-110	12/23/13 13:03	
Terphenyl-d14 (S)	%	96	31-107	12/23/13 13:03	

LABORATORY CONTROL SAMPLE: 1110273

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	32.6	65	10-110	
1,2-Dichlorobenzene	ug/L	50	32.4	65	10-110	
1,3-Dichlorobenzene	ug/L	50	30.2	60	10-110	
1,4-Dichlorobenzene	ug/L	50	32.2	64	10-110	
1-Methylnaphthalene	ug/L	50	39.5	79	21-110	
2,4,5-Trichlorophenol	ug/L	50	43.2	86	23-116	
2,4,6-Trichlorophenol	ug/L	50	36.2	72	21-114	
2,4-Dichlorophenol	ug/L	50	38.4	77	22-120	
2,4-Dimethylphenol	ug/L	50	39.1	78	15-109	
2,4-Dinitrophenol	ug/L	250	222	89	10-103	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1

Pace Project No.: 92184131

LABORATORY CONTROL SAMPLE: 1110273

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4-Dinitrotoluene	ug/L	50	53.6	107	24-119	
2,6-Dinitrotoluene	ug/L	50	49.0	98	25-116	
2-Chloronaphthalene	ug/L	50	32.6	65	18-110	
2-Chlorophenol	ug/L	50	36.5	73	10-104	
2-Methylnaphthalene	ug/L	50	41.6	83	16-110	
2-Methylphenol(o-Cresol)	ug/L	50	34.5	69	13-110	
2-Nitroaniline	ug/L	100	105	105	20-117	
2-Nitrophenol	ug/L	50	38.9	78	16-108	
3&4-Methylphenol(m&p Cresol)	ug/L	50	30.2	60	14-110	
3,3'-Dichlorobenzidine	ug/L	100	98.1	98	13-131	
3-Nitroaniline	ug/L	100	96.9	97	15-117	
4,6-Dinitro-2-methylphenol	ug/L	100	97.2	97	13-119	
4-Bromophenylphenyl ether	ug/L	50	41.1	82	23-120	
4-Chloro-3-methylphenol	ug/L	100	85.5	86	21-119	
4-Chloroaniline	ug/L	100	80.2	80	10-122	
4-Chlorophenylphenyl ether	ug/L	50	42.4	85	22-112	
4-Nitroaniline	ug/L	100	109	109	14-118	
4-Nitrophenol	ug/L	250	103	41	10-110	
Acenaphthene	ug/L	50	38.3	77	20-105	
Acenaphthylene	ug/L	50	39.5	79	23-106	
Aniline	ug/L	50	30.3	61	10-110	
Anthracene	ug/L	50	45.9	92	25-120	
Benzo(a)anthracene	ug/L	50	47.2	94	21-128	
Benzo(a)pyrene	ug/L	50	49.9	100	25-116	
Benzo(b)fluoranthene	ug/L	50	49.0	98	23-117	
Benzo(g,h,i)perylene	ug/L	50	50.6	101	17-128	
Benzo(k)fluoranthene	ug/L	50	41.9	84	25-127	
Benzoic Acid	ug/L	250	38.7J	15	10-110	
Benzyl alcohol	ug/L	100	62.3	62	10-101	
bis(2-Chloroethoxy)methane	ug/L	50	41.1	82	19-107	
bis(2-Chloroethyl) ether	ug/L	50	40.7	81	10-108	
bis(2-Chloroisopropyl) ether	ug/L	50	42.9	86	10-108	
bis(2-Ethylhexyl)phthalate	ug/L	50	49.9	100	16-123	
Butylbenzylphthalate	ug/L	50	49.5	99	20-118	
Chrysene	ug/L	50	49.1	98	24-125	
Di-n-butylphthalate	ug/L	50	46.3	93	23-115	
Di-n-octylphthalate	ug/L	50	50.4	101	20-115	
Dibenz(a,h)anthracene	ug/L	50	52.1	104	18-131	
Dibenzofuran	ug/L	50	36.4	73	23-106	
Diethylphthalate	ug/L	50	45.7	91	24-115	
Dimethylphthalate	ug/L	50	43.1	86	22-113	
Fluoranthene	ug/L	50	50.6	101	24-125	
Fluorene	ug/L	50	43.4	87	24-114	
Hexachloro-1,3-butadiene	ug/L	50	31.6	63	10-110	
Hexachlorobenzene	ug/L	50	37.2	74	22-127	
Hexachlorocyclopentadiene	ug/L	50	35.4	71	10-110	
Hexachloroethane	ug/L	50	31.6	63	10-110	
Indeno(1,2,3-cd)pyrene	ug/L	50	52.6	105	18-130	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1

Pace Project No.: 92184131

LABORATORY CONTROL SAMPLE: 1110273

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Isophorone	ug/L	50	47.8	96	23-114	
N-Nitroso-di-n-propylamine	ug/L	50	37.1	74	21-114	
N-Nitrosodimethylamine	ug/L	50	22.4	45	10-110	
N-Nitrosodiphenylamine	ug/L	50	36.5	73	24-123	
Naphthalene	ug/L	50	36.9	74	14-110	
Nitrobenzene	ug/L	50	42.7	85	16-106	
Pentachlorophenol	ug/L	100	82.0	82	10-123	
Phenanthrene	ug/L	50	44.2	88	25-119	
Phenol	ug/L	50	18.8	38	10-110	
Pyrene	ug/L	50	47.5	95	22-127	
2,4,6-Tribromophenol (S)	%			88	27-110	
2-Fluorobiphenyl (S)	%			72	27-110	
2-Fluorophenol (S)	%			42	12-110	
Nitrobenzene-d5 (S)	%			78	21-110	
Phenol-d6 (S)	%			33	10-110	
Terphenyl-d14 (S)	%			89	31-107	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 1110274      1110275

Parameter	Units	MS 92184117012		MSD Spike		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
		Result	Spike Conc.	Conc.	Result							
1,2,4-Trichlorobenzene	ug/L	ND	100	100	76.2	76.7	76	77	10-110	1		
1,2-Dichlorobenzene	ug/L	ND	100	100	74.2	75.3	74	75	10-110	2		
1,3-Dichlorobenzene	ug/L	ND	100	100	68.3	73.2	68	73	10-110	7		
1,4-Dichlorobenzene	ug/L	ND	100	100	73.5	75.2	74	75	10-110	2		
1-Methylnaphthalene	ug/L	ND	100	100	86.9	88.4	87	88	14-110	2		
2,4,5-Trichlorophenol	ug/L	ND	100	100	94.9	94.7	95	95	19-105	0		
2,4,6-Trichlorophenol	ug/L	ND	100	100	81.7	84.8	82	85	13-108	4		
2,4-Dichlorophenol	ug/L	ND	100	100	85.4	88.2	85	88	29-111	3		
2,4-Dimethylphenol	ug/L	ND	100	100	88.8	92.9	89	93	21-103	5		
2,4-Dinitrophenol	ug/L	ND	500	500	402	447	80	89	10-109	10		
2,4-Dinitrotoluene	ug/L	ND	100	100	102	103	102	103	27-104	1		
2,6-Dinitrotoluene	ug/L	ND	100	100	97.4	99.4	97	99	28-101	2		
2-Chloronaphthalene	ug/L	ND	100	100	77.4	75.8	77	76	14-102	2		
2-Chlorophenol	ug/L	ND	100	100	81.8	87.2	82	87	16-110	6		
2-Methylnaphthalene	ug/L	ND	100	100	91.9	95.0	92	95	13-110	3		
2-Methylphenol(o-Cresol)	ug/L	ND	100	100	79.9	88.1	80	88	19-110	10		
2-Nitroaniline	ug/L	ND	200	200	217	216	108	108	26-103	0 M1		
2-Nitrophenol	ug/L	ND	100	100	85.6	89.9	86	90	20-110	5		
3&4-Methylphenol(m&p Cresol)	ug/L	ND	100	100	74.6	81.0	75	81	20-110	8		
3,3'-Dichlorobenzidine	ug/L	ND	200	200	163	163	81	81	25-112	0		
3-Nitroaniline	ug/L	ND	200	200	191	188	95	94	29-110	2		
4,6-Dinitro-2-methylphenol	ug/L	ND	200	200	179	188	90	94	10-117	5		
4-Bromophenylphenyl ether	ug/L	ND	100	100	84.0	86.8	84	87	20-105	3		
4-Chloro-3-methylphenol	ug/L	ND	200	200	184	189	92	95	22-110	3		
4-Chloroaniline	ug/L	ND	200	200	170	165	85	83	20-100	3		

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## QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1

Pace Project No.: 92184131

Parameter	Units	92184117012		MS Spike		MSD Spike		MS Result		MSD Result		% Rec	
		Result	Conc.	Conc.	Result	MSD	% Rec	MSD	% Rec	Limits	RPD		Qual
4-Chlorophenylphenyl ether	ug/L	ND	100	100	91.1	90.5	91	91	91	19-102	1		
4-Nitroaniline	ug/L	ND	200	200	211	201	106	101	101	29-110	5		
4-Nitrophenol	ug/L	ND	500	500	286	297	57	59	59	10-110	4		
Acenaphthene	ug/L	ND	100	100	88.0	87.3	88	87	87	17-100	1		
Acenaphthylene	ug/L	ND	100	100	90.0	89.0	90	89	89	21-100	1		
Aniline	ug/L	ND	100	100	55.9	45.0	56	45	45	10-110	22		
Anthracene	ug/L	ND	100	100	93.2	92.8	93	93	93	24-109	0		
Benz(a)anthracene	ug/L	ND	100	100	86.6	89.7	87	90	90	22-117	4		
Benz(a)pyrene	ug/L	ND	100	100	87.4	91.8	87	92	92	23-104	5		
Benz(b)fluoranthene	ug/L	ND	100	100	81.8	90.7	82	91	91	23-103	10		
Benz(g,h,i)perylene	ug/L	ND	100	100	94.3	94.0	94	94	94	18-111	0		
Benz(k)fluoranthene	ug/L	ND	100	100	81.2	79.7	81	80	80	22-113	2		
Benzoic Acid	ug/L	ND	500	500	188	231	38	46	46	10-110	20		
Benzyl alcohol	ug/L	ND	200	200	147	163	73	82	82	19-101	11		
bis(2-Chloroethoxy)methane	ug/L	ND	100	100	89.9	95.4	90	95	95	22-110	6		
bis(2-Chloroethyl) ether	ug/L	ND	100	100	89.9	94.1	90	94	94	16-110	5		
bis(2-Chloroisopropyl) ether	ug/L	ND	100	100	93.0	96.9	93	97	97	14-110	4		
bis(2-Ethylhexyl)phthalate	ug/L	ND	100	100	88.8	96.2	89	96	96	23-102	8		
Butylbenzylphthalate	ug/L	ND	100	100	89.8	97.9	90	98	98	25-110	9		
Chrysene	ug/L	ND	100	100	92.1	96.1	92	96	96	23-115	4		
Di-n-butylphthalate	ug/L	ND	100	100	90.9	90.9	91	91	91	26-110	0		
Di-octylphthalate	ug/L	ND	100	100	89.5	97.4	89	97	97	22-110	8		
Dibenz(a,h)anthracene	ug/L	ND	100	100	97.1	100	97	100	100	21-112	3		
Dibenzofuran	ug/L	ND	100	100	80.9	78.9	81	79	79	19-102	2		
Diethylphthalate	ug/L	ND	100	100	88.7	88.3	89	88	88	29-110	0		
Dimethylphthalate	ug/L	ND	100	100	85.5	84.9	86	85	85	27-110	1		
Fluoranthene	ug/L	ND	100	100	99.7	98.7	100	99	99	23-112	1		
Fluorene	ug/L	ND	100	100	93.5	90.0	94	90	90	22-104	4		
Hexachloro-1,3-butadiene	ug/L	ND	100	100	77.9	75.9	78	76	76	10-110	3		
Hexachlorobenzene	ug/L	ND	100	100	75.2	75.7	75	76	76	21-116	1		
Hexachlorocyclopentadiene	ug/L	ND	100	100	84.7	91.9	85	92	92	10-110	8		
Hexachloroethane	ug/L	ND	100	100	71.1	75.2	71	75	75	10-110	6		
Indeno(1,2,3-cd)pyrene	ug/L	ND	100	100	97.6	100	98	100	100	20-113	3		
Isophorone	ug/L	ND	100	100	102	107	102	107	107	50-150	5		
N-Nitroso-di-n-propylamine	ug/L	ND	100	100	74.5	82.1	74	82	82	21-105	10		
N-Nitrosodimethylamine	ug/L	ND	100	100	65.1	69.5	65	69	69	10-110	6		
N-Nitrosodiphenylamine	ug/L	ND	100	100	74.4	74.7	74	75	75	23-107	0		
Naphthalene	ug/L	ND	100	100	86.9	87.6	87	88	88	10-110	1		
Nitrobenzene	ug/L	ND	100	100	92.0	94.3	92	94	94	20-110	3		
Pentachlorophenol	ug/L	ND	200	200	153	163	76	81	81	10-118	6		
Phenanthrene	ug/L	ND	100	100	88.3	87.3	88	87	87	24-106	1		
Phenol	ug/L	ND	100	100	53.2	56.9	53	57	57	12-110	7		
Pyrene	ug/L	ND	100	100	87.9	95.1	88	95	95	24-114	8		
2,4,6-Tribromophenol (S)	%						88	91	91	27-110			
2-Fluorobiphenyl (S)	%						85	85	85	27-110			
2-Fluorophenol (S)	%						61	65	65	12-110			
Nitrobenzene-d5 (S)	%						90	89	89	21-110			

## REPORT OF LABORATORY ANALYSIS

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**Pace Analytical Services, Inc.**  
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**Pace Analytical Services, Inc.**  
2225 Riverside Dr.  
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(828)254-7176

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

## QUALITY CONTROL DATA

Project: B-4159 WBS33507.1.1

Pace Project No.: 92184131

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MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1110274      1110275

Parameter	Units	Result	MS	MSD	MS	MSD	MS	MSD	% Rec	% Rec	Limits	RPD	Qual
			Spike Conc.	Spike Conc.				Result	% Rec				
Phenol-d6 (S)	%							50	53	10-110			
Terphenyl-d14 (S)	%							77	83	31-107			

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## QUALIFIERS

Project: B-4159 WBS33507.1.1

Pace Project No.: 92184131

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### 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

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
S0	Surrogate recovery outside laboratory control limits.

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: B-4159 WBS33507.1.1

Pace Project No.: 92184131

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92184131001	MW-11-1	EPA 3510	OEXT/25285	EPA 8270	MSSV/8598
92184131001	MW-11-1	EPA 8260		MSV/25386	

## REPORT OF LABORATORY ANALYSIS

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Client Name: GEL EOC of NL

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 -130265963 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.: 18 C Biological Tissue is Frozen: Yes  No  N/A

Date and Initials of person examining  
contents: 2/19/13 12:19:243

Temp should be above freezing to 6°C

Comments:

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

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: JACKSON CO.

SCURF Review:	<u>AMB</u>	Date: <u>12/19/13</u>	Place label here
SRF Review:	<u>AMB</u>	Date: <u>12/19/13</u>	OR

Handwrite project number  
(if no label available)

92184131

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)

# CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:		Page: <u>1</u> of <u>1</u>
Company: <u>GEL ENG. of N.C.</u>	Report To: <u>A. Eyer</u>	Attention: <u>NC DOT</u>	Copy To:	Company Name:	REGULATORY AGENCY	
Address: <u>P.O. Box 14262</u>		Address:		Pace Quote Reference:	NPDES <input checked="" type="checkbox"/> GROUND WATER	DRINKING WATER
Email To: <u>RTP N.C. 27709</u>		Pace Project Manager:		UST	RCRA	OTHER
Phone: <u>ADEq@1.com</u>	Purchase Order No: <u>WBS No. 33507-1-i</u>	Pace Profile # <u>5994-3</u>	Project Name: <u>B-4159</u>	Site Location:	STATE: <u>NC</u>	
Requested Due Date/TAT: <u>Normal TA</u>	Project Number: <u>NC DOT 01413</u>					

ITEM #	SAMPLE ID (A-Z, 0-9, -)	Matrix Codes		SAMPLE TYPE (G=GRAB; C=COMB)	COLLECTED				# OF CONTAINERS	Preservatives				Analysis Test ↓	Y/N	Residual Chlorine (Y/N)	Pace Project No./Lab ID: <u>00</u>	
		MATRIX CODE	MATRIX CODE		DATE	TIME	DATE	TIME		SAMPLE TEMP AT COLLECTION	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl					NaOH
1	<u>MW-11-1</u>	<u>WT</u>	<u>6</u>	<u>12-19-13</u>	<u>13:30</u>		<u>5</u>	<u>2</u>	<u>3</u>						<u>V/V</u>	<u>V/V</u>	<u>V/V</u>	<u>32</u>
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	<u>Steve Ruckman</u>	<u>12/19/13</u>	<u>14:00</u>	<u>David L. Anderson</u>	<u>12/19/13</u>	<u>14:00</u>	

SAMPLER NAME AND SIGNATURE	
PRINT Name of Sampler: <u>Steve Ruckman</u>	DATE Signed: <u>12/19/13</u>
SIGNATURE of Sampler: <u>l. ruckman</u>	Comments: <input type="checkbox"/> Laboratory analysis only <input type="checkbox"/> In-field environmental testing <input type="checkbox"/> Sampling and analysis