

**GEL**

**Engineering of NC INC**

an affiliate of **The GEL Group INC**

## **PRELIMINARY SITE ASSESSMENT REPORT**

**3101 Old Cullowhee Road  
Norman A. West Property, Parcel 012  
Cullowhee, North Carolina  
State Project B-4159  
WBS Element #33507.1.1  
Jackson County**

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

May 15, 2014

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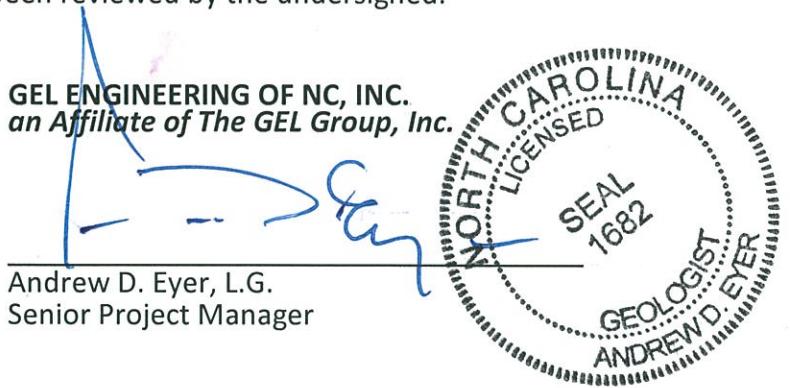
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## Signature Page

This document, entitled *Preliminary Site Assessment Report*, has been prepared for the Norman A. West Property (Parcel 012), located at 3101 Old Cullowhee Road in Cullowhee, North Carolina (State Project B-4159, WBS Element #33507.1.1, Jackson County). It has been prepared by GEL Engineering of NC, Inc. in accordance with the Notice to Proceed provided by the North Carolina Department of Transportation-GeoEnvironmental Section, Geotechnical Engineering Unit for the exclusive use of the North Carolina Department of Transportation. It has been prepared in accordance with accepted quality control practices and has been reviewed by the undersigned.

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

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



05-15-14

Date

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Jackson County**

### **Executive Summary**

The subject site is the Norman A. West property (Parcel 012) located at 3101 Old Cullowhee Road (SR 1002) in Cullowhee, North Carolina. The primary purpose of this investigation was to evaluate the presence or absence of underground storage tanks (USTs) and constituents of concern in soil within the accessible portions of Parcel 012 and the existing North Carolina Department of Transportation (NCDOT) Right-of-Way (ROW) adjacent to Parcel 012, as a result of previous and/or current operations at the subject site.

Parcel 012 contains a 3-story building that includes a real estate office and an antique store on the 1<sup>st</sup> and 2<sup>nd</sup> floors, and apartments on the 3rd floor. A detached 1-story wooden building is located on the southeast side of the 3-story building, and a detached 1-story storage building is located in the southwestern portion of the site. There is currently no visible evidence of existing USTs or vents at the site, and representatives of the North Carolina Department of Environment and Natural Resources (NCDENR) Asheville District office indicated that there are no files for the site in its database, including UST closure records. No NCDENR UST Incident number or Facility ID number has been assigned to the property.

GEL Engineering of NC, Inc. (GEL) performed a preliminary site assessment within the accessible portions of Parcel 012 and adjacent NCDOT ROW that included a geophysical investigation, and the collection and analysis of soil samples. No subsurface anomalies indicative of suspected or known USTs were identified within the investigation area based on the results of the geophysical investigation.

## **Executive Summary (continued)**

Soil samples were collected for analysis from nine borings constructed within the investigation area and analyzed for petroleum hydrocarbon constituents, volatile organic compounds (VOCs), and semi-volatile organic compounds (SVOCs). Gasoline Range Organics (GRO) was not detected in any of the collected soil samples and one VOC, acetone, was detected at significantly low levels in three soil samples. Diesel Range Organics (DRO) was detected at levels exceeding the NCDENR DRO Action Level in soil samples collected from borings S12-6 through S12-9. In addition, one SVOC, benzo(a)pyrene, was detected in soil sample S12-8 at a level exceeding the NCDENR Maximum Soil Contaminant Concentration (MSCC).

Based on the detection of elevated DRO concentrations in soil samples S12-6 through S12-9, it is estimated that there is an approximate total volume of 100 cubic yards of impacted soil (DRO >10 mg/kg) in the vicinity of borings S12-6, S12-7, and S12-9, and 104 cubic yards of impacted soil in the vicinity of boring S12-8.

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 S12-6 through S12-9 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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### **1.0 Introduction**

This document presents the details of a geophysical survey and preliminary site assessment performed at the Norman A. West property (Parcel 012) located at 3101 Old Cullowhee Road (SR 1002) in Cullowhee, North Carolina. The investigation was performed within the accessible portions of Parcel 012, and included the existing North Carolina Department of Transportation (NCDOT) right-of-way (ROW) for Old Cullowhee Road and Edgewater Road.

Parcel 012 contains a 3-story building that includes a real estate office and an antique store on the 1<sup>st</sup> and 2<sup>nd</sup> floors, and apartments on the 3rd floor. A detached 1-story wooden building is located on the southeast side of the 3-story building, and a detached 1-story storage building is located in the southwestern portion of the site.

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 accessible portions of the property and adjacent NCDOT ROW 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 property within Parcel 012, 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 012.

The 3-story building on the property includes a real estate office and an antique shop on the 1<sup>st</sup> and 2<sup>nd</sup> floors, and apartments on the 3rd floor. Photograph 1 in Appendix I shows the real estate office and antiques shop, and Photograph 2 shows the back of the 3rd floor apartments. The asphalt paved area in front of the building is used for parking. A separate, small 1-story wooden office building is located on the southeast side of the 3-story building, as shown in Photographs 3 and 4, and a 1-story storage building is located in the southwestern portion of the site, as shown in Photographs 4 and 5. A portion of the separate 1-story office building appears to be used for storage, and it is reportedly also used by an architect as office space on a part time basis. The storage building at the rear of the property is padlocked, but reportedly does not contain any petroleum products or hazardous materials.

The manager of the onsite real estate operation indicated that the site has never been used for gasoline distribution, automobile repair activities, or storage of petroleum products or hazardous materials. He indicated that Old Cullowhee Road was previously located closer to the onsite structure than it is now, and that existing and abandoned underground storm water drainage pipes, as well as an existing sanitary sewer main are located beneath the asphalt paving at the front of (on the northeast side of) the onsite buildings. Two abandoned septic tanks are still existing at the entrance to the real estate office, as shown in Photograph 6, but there is no information available regarding whether or not they have been closed through emplacement of inert material in the tanks' interiors. The manager also indicated that the facility located on the adjacent property (Parcel 008) was previously used as a service station and for minor auto repairs.

Representatives of the NCDENR Asheville District office indicated that there are no files for the Parcel 012 site in its database, including UST closure records. No NCDENR UST Incident number or Facility ID number has been assigned to the property.

One existing groundwater monitoring well was observed at Parcel 012 during the investigation, as shown on Figure 4 and in Photograph 5 of Appendix I, and is located within the preliminary site investigation area shown in Figure 2. GEL assigned an ID of

MW12-1 to the well as part of the preliminary assessment. Based on discussions with personnel in the NCDENR Asheville District Office, well MW12-1 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. The well is currently inaccessible, and groundwater quality data for the well and information regarding its originally assigned ID were not available in NCDENR files that were reviewed in the Asheville District Office. Northing and Easting coordinates for the well are listed in the table in Section 4.2.

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

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

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

The United States Department of Agriculture's *Web Soil Survey* (2014) (<http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>) maps the native soil in the investigation area as "Braddock-Urban Land Complex" (BrC), which is characterized as stream terraces consisting of clay and clay loam derived from old alluvium, and "Cowee-Evard-Urban Land Complex" (CrD), which is characterized as mountain slope or back slope physiography consisting of sandy and clayey loam derived from residuum overlying weathered bedrock. The soils encountered at the site during the preliminary site assessment for Parcel 012 consisted predominantly of red/brown, sandy, clayey silt and gravels overlying saprolite and weathered gneiss bedrock.

Groundwater was not encountered in borings constructed as part of the preliminary site assessment. Previous depth to groundwater measurements made in monitoring wells located in the Cullowhee area indicate the water table in the area of the site is typically located at depths of at least 20 feet below ground surface (bgs). Based on the USGS topographic map presented as Figure 1, the site is located approximately 2100 feet

above mean sea level. The topography in Figure 1 indicates that groundwater in the vicinity of Parcel 012 most likely flows in a southerly direction towards the Tuckasegee River. Storm water from the site, as well as adjacent sites north of Parcel 008, flows in a southerly direction to the river.

#### **4.0 Subsurface Investigation**

To evaluate the presence or absence of USTs and/or impact to subsurface soil within the accessible portions of Parcel 012 and adjacent NCDOT ROW, GEL performed a limited site assessment within the accessible portions of the highlighted area shown in Figure 2 that consisted of the following tasks:

- Performance of a geophysical investigation to identify the presence or absence of USTs and associated appurtenances within the accessible portions of Parcel 012 and the Old Cullowhee Road ROW.
- Soil vapor screening of soil samples collected from subsurface soil borings located within the accessible portions of Parcel 012 and the ROW to evaluate the potential presence or absence of soil impact from petroleum constituents of concern.
- Collection and laboratory analysis of soil samples from the subsurface borings.

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

##### **4.1 Geophysical Survey**

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

###### **4.1.1 Ground Penetrating Radar Methodology**

A RAMAC digital radar control system configured with a 250 Megahertz (MHz) antenna array was used in this investigation. GPR is an electromagnetic geophysical method that detects interfaces between subsurface materials with differing dielectric constants. The

GPR system consists of an antenna that houses the transmitter and receiver, a digital control unit that both generates and digitally records the GPR data, and a color video monitor to view data as they are collected in the field.

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

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

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

operations on the proposed road improvements. Figures 2 through 4 show the general site layout for Parcel 012.

The 3-story building on the property includes a real estate office and an antique shop on the 1<sup>st</sup> and 2<sup>nd</sup> floors, and apartments on the 3rd floor. Photograph 1 in Appendix I shows the real estate office and antiques shop, and Photograph 2 shows the back of the 3rd floor apartments. The asphalt paved area in front of the building is used for parking. A separate, small 1-story wooden office building is located on the southeast side of the 3-story building, as shown in Photographs 3 and 4, and a 1-story storage building is located in the southwestern portion of the site, as shown in Photographs 4 and 5. A portion of the separate 1-story office building appears to be used for storage, and it is reportedly also used by an architect as office space on a part time basis. The storage building at the rear of the property is padlocked, but reportedly does not contain any petroleum products or hazardous materials.

The manager of the onsite real estate operation indicated that the site has never been used for gasoline distribution, automobile repair activities, or storage of petroleum products or hazardous materials. He indicated that Old Cullowhee Road was previously located closer to the onsite structure than it is now, and that existing and abandoned underground storm water drainage pipes, as well as an existing sanitary sewer main are located beneath the asphalt paving at the front of (on the northeast side of) the onsite buildings. Two abandoned septic tanks are still existing at the entrance to the real estate office, as shown in Photograph 6, but there is no information available regarding whether or not they have been closed through emplacement of inert material in the tanks' interiors. The manager also indicated that the facility located on the adjacent property (Parcel 008) was previously used as a service station and for minor auto repairs.

Representatives of the NCDENR Asheville District office indicated that there are no files for the Parcel 012 site in its database, including UST closure records. No NCDENR UST Incident number or Facility ID number has been assigned to the property.

One existing groundwater monitoring well was observed at Parcel 012 during the investigation, as shown on Figure 4 and in Photograph 5 of Appendix I, and is located within the preliminary site investigation area shown in Figure 2. GEL assigned an ID of

MW12-1 to the well as part of the preliminary assessment. Based on discussions with personnel in the NCDENR Asheville District Office, well MW12-1 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. The well is currently inaccessible, and groundwater quality data for the well and information regarding its originally assigned ID were not available in NCDENR files that were reviewed in the Asheville District Office. Northing and Easting coordinates for the well are listed in the table in Section 4.2.

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

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

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

The United States Department of Agriculture's *Web Soil Survey* (2014) (<http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>) maps the native soil in the investigation area as "Braddock-Urban Land Complex" (BrC), which is characterized as stream terraces consisting of clay and clay loam derived from old alluvium, and "Cowee-Evard-Urban Land Complex" (CrD), which is characterized as mountain slope or back slope physiography consisting of sandy and clayey loam derived from residuum overlying weathered bedrock. The soils encountered at the site during the preliminary site assessment for Parcel 012 consisted predominantly of red/brown, sandy, clayey silt and gravels overlying saprolite and weathered gneiss bedrock.

Groundwater was not encountered in borings constructed as part of the preliminary site assessment. Previous depth to groundwater measurements made in monitoring wells located in the Cullowhee area indicate the water table in the area of the site is typically located at depths of at least 20 feet below ground surface (bgs). Based on the USGS topographic map presented as Figure 1, the site is located approximately 2100 feet

above mean sea level. The topography in Figure 1 indicates that groundwater in the vicinity of Parcel 012 most likely flows in a southerly direction towards the Tuckasegee River. Storm water from the site, as well as adjacent sites north of Parcel 008, flows in a southerly direction to the river.

#### **4.0 Subsurface Investigation**

To evaluate the presence or absence of USTs and/or impact to subsurface soil within the accessible portions of Parcel 012 and adjacent NCDOT ROW, GEL performed a limited site assessment within the accessible portions of the highlighted area shown in Figure 2 that consisted of the following tasks:

- Performance of a geophysical investigation to identify the presence or absence of USTs and associated appurtenances within the accessible portions of Parcel 012 and the Old Cullowhee Road ROW.
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- Collection and laboratory analysis of soil samples from the subsurface borings.

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

##### **4.1 Geophysical Survey**

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

###### **4.1.1 Ground Penetrating Radar Methodology**

A RAMAC digital radar control system configured with a 250 Megahertz (MHz) antenna array was used in this investigation. GPR is an electromagnetic geophysical method that detects interfaces between subsurface materials with differing dielectric constants. The

GPR system consists of an antenna that houses the transmitter and receiver, a digital control unit that both generates and digitally records the GPR data, and a color video monitor to view data as they are collected in the field.

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

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

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

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above mean sea level. The topography in Figure 1 indicates that groundwater in the vicinity of Parcel 012 most likely flows in a southerly direction towards the Tuckasegee River. Storm water from the site, as well as adjacent sites north of Parcel 008, flows in a southerly direction to the river.

#### **4.0 Subsurface Investigation**

To evaluate the presence or absence of USTs and/or impact to subsurface soil within the accessible portions of Parcel 012 and adjacent NCDOT ROW, GEL performed a limited site assessment within the accessible portions of the highlighted area shown in Figure 2 that consisted of the following tasks:

- Performance of a geophysical investigation to identify the presence or absence of USTs and associated appurtenances within the accessible portions of Parcel 012 and the Old Cullowhee Road ROW.
- Soil vapor screening of soil samples collected from subsurface soil borings located within the accessible portions of Parcel 012 and the ROW to evaluate the potential presence or absence of soil impact from petroleum constituents of concern.
- Collection and laboratory analysis of soil samples from the subsurface borings.

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

##### **4.1 Geophysical Survey**

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

###### **4.1.1 Ground Penetrating Radar Methodology**

A RAMAC digital radar control system configured with a 250 Megahertz (MHz) antenna array was used in this investigation. GPR is an electromagnetic geophysical method that detects interfaces between subsurface materials with differing dielectric constants. The

GPR system consists of an antenna that houses the transmitter and receiver, a digital control unit that both generates and digitally records the GPR data, and a color video monitor to view data as they are collected in the field.

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

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

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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 accessible portions of Parcel 012 and the adjacent NCDOT ROWs, 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 012 prior to the initiation of the preliminary site assessment field activities at the site and were marked with paint.

The collected GPR and TDEM data did not identify any “Known USTs,” “Probable USTs,” or “Possible USTs” at Parcel 012 or within the adjacent NCDOT ROW. There was no visual evidence of USTs or UST vents in the investigation area. TDEM data collected in the investigation area indicated responses resulting from parked vehicles and metal manholes, as shown in Figure 3.

#### **4.2 Subsurface Soil Investigation**

To evaluate the presence or absence of impact to subsurface soil by constituents of concern, GEL collected soil samples from nine subsurface soil borings, S12-1 through S12-9, at Parcel 012 on December 17, 2013, for analysis of total petroleum hydrocarbon indicator parameters. The soil borings were constructed within Parcel 012 and the NCDOT ROW for Old Cullowhee Road, as shown on Figure 4 and in Photographs in Appendix I. Soil boring S12-1 was constructed on a topographically high area of the site that is currently used as a parking area for the 3<sup>rd</sup> floor apartments in the onsite 3-story building, as shown in Photograph 2. Soil borings S12-2 and S12-6 were constructed on the northeast and northwest sides of the onsite 3-story building, respectively, borings S-12-3, S12-4, and S12-5 were constructed north of and upgradient from the onsite structures, and boring S12-7 was constructed near the Parcel 012 northwest property line the edge of paving for Old Cullowhee Road. Borings S12-8 and S12-9 were constructed along the property line separating Parcel 008 and Parcel 012, as shown in Photograph 5. The northing and easting coordinates for the boring locations are listed in the table below.

**Summary of Location Data and PID Measurements  
for Soil Samples Collected for Analysis at Parcel 012**

Soil Boring	Depth Interval of Soil Sample Collected for Analysis (feet bgs)	PID Reading (ppm)	Northing	Easting
S12-1	7-8	0.0	596319.932	754289.362
S12-2	7-8	0.0	596366.259	754243.431
S12-3	4-5	0.0	596398.499	754282.347
S12-4	7-8	0.0	596431.810	754245.179
S12-5	7-8	0.0	596411.005	754188.276
S12-6	7-8	0.0	596343.941	754192.086
S12-7	7-8	0.0	596328.502	754147.709
S12-8	4-5	0.0	596288.222	754172.493
S12-9	7-8	0.0	596259.906	754215.826

Notes:

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

All borings were advanced to a total depth of 8 feet bgs, except borings S12-3 and S12-8, which were terminated at 5 feet bgs due to probe refusal when bedrock was encountered. Soil samples were collected at depths of 3-4 feet and 7-8 feet from borings S12-1, S12-2, S12-4, S12-5, S12-6, S12-7, and S12-9, and from depths of 3-4 feet and 4-5 feet from borings S12-3 and S12-8. All soil samples were inspected for indications of impact by constituents of concern, including petroleum hydrocarbons, such as odors, discoloration, or visible sheen. This sampling was accomplished using DPT provided by Regional Probing Services. Soil boring lithologic logs are attached as Appendix II of this document. Groundwater was not encountered in any borings.

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

No organic vapor concentrations were measured in any of the soil screening samples collected from the five borings. Therefore, to assess the subsurface soil quality, soil samples collected at a depth of 7-8 feet bgs from borings S12-1, S12-2, S12-4, S12-5, S12-6, S12-7, and S12-9, and samples collected at a depth of 4-5 feet from borings S12-3 and S12-8 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. 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. Splits of the soil samples were also submitted to Pace Analytical Services, Inc. (Pace) in Huntersville, North Carolina for analysis of diesel range organics (DRO) and gasoline range organics (GRO) for soil samples S12-1 through S12-4 using EPA Method 8015, and volatile organic compounds (VOCs) using EPA Method 8260B and semi-volatile organic compounds (SVOCs) using EPA Method 8270D. The analytical results are included on the Certificates of Analysis provided in Appendix III, and a summary of the analytical results is presented in Table 1.

The QROS and Pace results indicate GRO was not detected in any of the soil samples, but the QROS results indicated DRO was detected in samples S12-3, and S12-5 through S12-9. The detected DRO levels in samples S12-6 through S12-9 exceeded the NCDENR action level for DRO (10 milligrams per kilogram (mg/kg)). Acetone was the only VOC detected in soil samples analyzed by Pace. It was detected in S12-6, S12-8, and S12-9 at levels of 0.12 mg/kg, 0.136 mg/kg, and 0.272 mg/kg, respectively, which are significantly below the NCDENR Maximum Soil Contaminant Concentration (MSCC) of 24 mg/kg for acetone. Four SVOCs were detected by Pace in soil sample S12-8 (benzo(a)pyrene, chrysene, fluoranthene, and pyrene). The detected benzo(a)pyrene concentration, 0.403 mg/kg, exceeded the NCDENR MSCC for benzo(a)pyrene (0.088 mg/kg). The detected concentrations of the other three SVOCs were significantly below their respective MSCCs.

It is estimated that there is an approximate total volume of 100 cubic yards of impacted soil (DRO >10 mg/kg) in the vicinity of borings S12-6, S12-7, and S12-9, and 104 cubic yards of impacted soil in the vicinity of boring S12-8 based on the following assumed

areas within the investigation area (as shown on Figure 4) and assumed depths of impacted soil:

Boring S12-6 Area

- 340 square feet x 8 feet = 100 cubic yards

Boring S12-7 Area

- 340 square feet x 8 feet = 100 cubic yards

Boring S12-8 Area

- 560 square feet x 5 feet = 104 cubic yards

Boring S12-9 Area

- 340 square feet x 8 feet = 100 cubic yards

## 5.0 Conclusions and Recommendations

GEL performed a preliminary site assessment within the accessible portions of Parcel 012 and adjacent NCDOT ROW that included a geophysical investigation, and the collection and analysis of soil samples. No subsurface anomalies indicative of suspected or known USTs were identified within the investigation area based on the results of the geophysical investigation.

Soil samples were collected for analysis from nine borings constructed within the investigation area and analyzed for petroleum hydrocarbon constituents, VOCs, and SVOCs. GRO was not detected in any of the collected soil samples and one VOC, acetone, was detected at significantly low levels in three soil samples. DRO was detected at levels exceeding the NCDENR DRO Action Level in soil samples collected from borings S12-6 through S12-9. In addition, one SVOC, benzo(a)pyrene, was detected in soil sample S12-8 at a level exceeding the NCDENR MSCC.

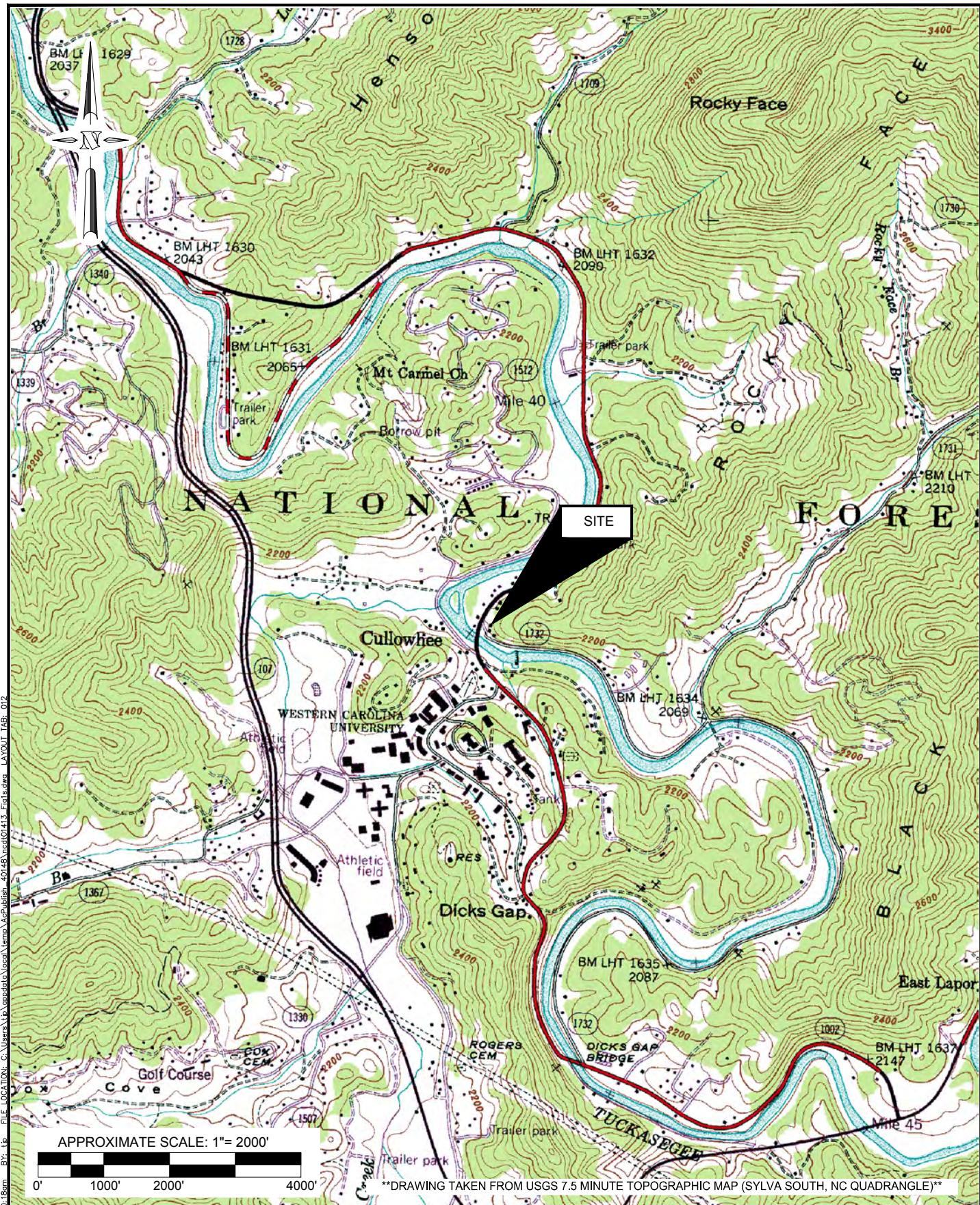
Based on the detection of elevated DRO concentrations in soil samples S12-6 through S12-9, it is estimated that there is an approximate total volume of 100 cubic yards of impacted soil (DRO >10 mg/kg) in the vicinity of borings S12-6, S12-7, and S12-9, and 104 cubic yards of impacted soil in the vicinity of boring S12-8.

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 S12-6 through S12-9 as part of planned construction activities by NCDOT be handled appropriately and further characterized for petroleum constituents, as needed.



## **FIGURES**

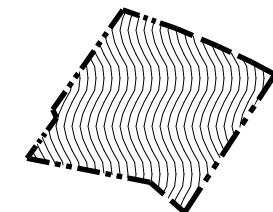
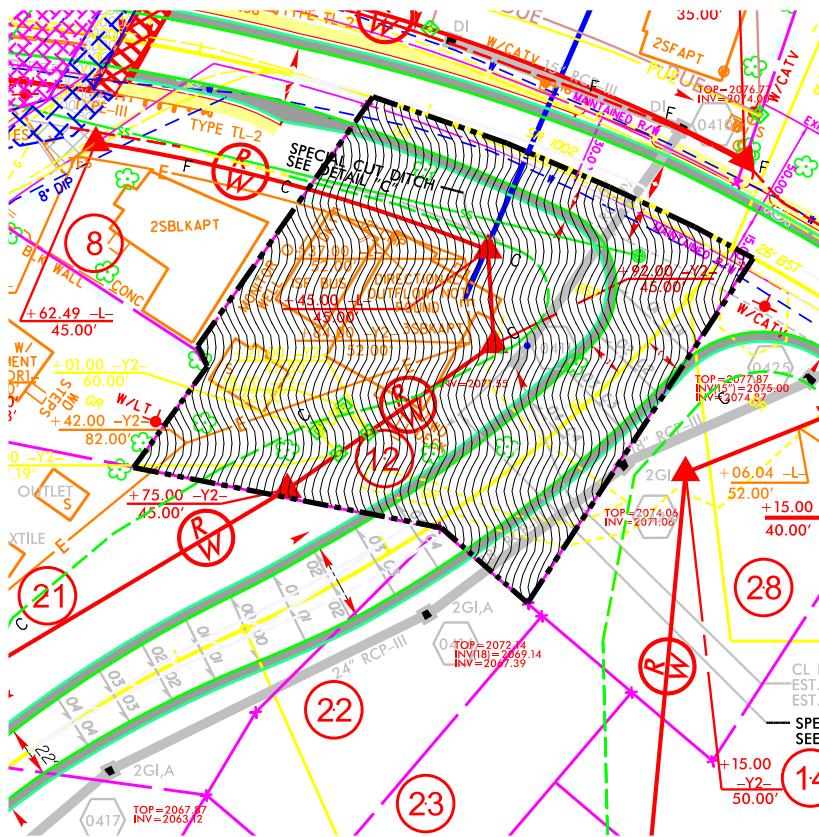
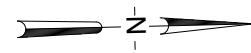


PLOTTED: Feb 03, 2014 - 10:15pm By: tjp

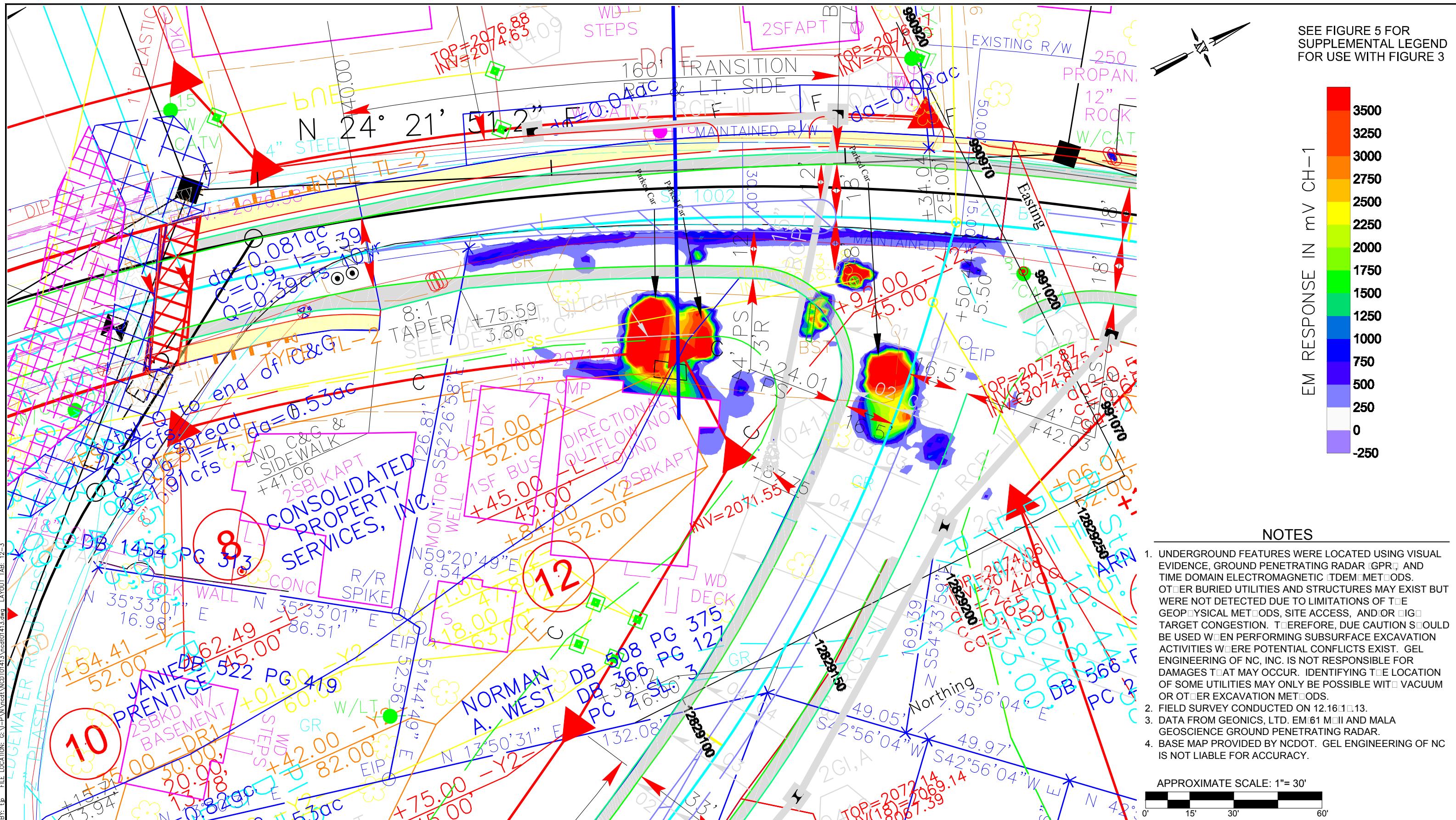
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PROJECT: ndcdt01413	PRELIMINARY SITE ASSESSMENT PARCEL 012 CULLOWHEE, JACKSON COUNTY, NORTH CAROLINA TIP NO. B4150 WBS ELEMENT NO. 335011.1	SITE LOCATION MAP	FIGURE 1
DATE: February 3, 2014		DRAWN: TJP APPRV.: ADE	



GEL ENGINEERING of NC, Inc. an Affiliate of THE GEL GROUP, Inc.		PROJECT: nc01413  PRELIMINARY SITE ASSESSMENTS JACKSON COUNTY, NORTH CAROLINA TIP NO. B-4159, WBS ELEMENT NO. 33507.1.1	DESIGNATED INVESTIGATION AREA FOR PARCEL 012	FIGURE 2
		DATE: April 2, 2014	DRAWN BY: ADE	
<b>GEL</b>		Post Office Box 14262 Research Triangle Park, NC 27709 (919) 544-1100		



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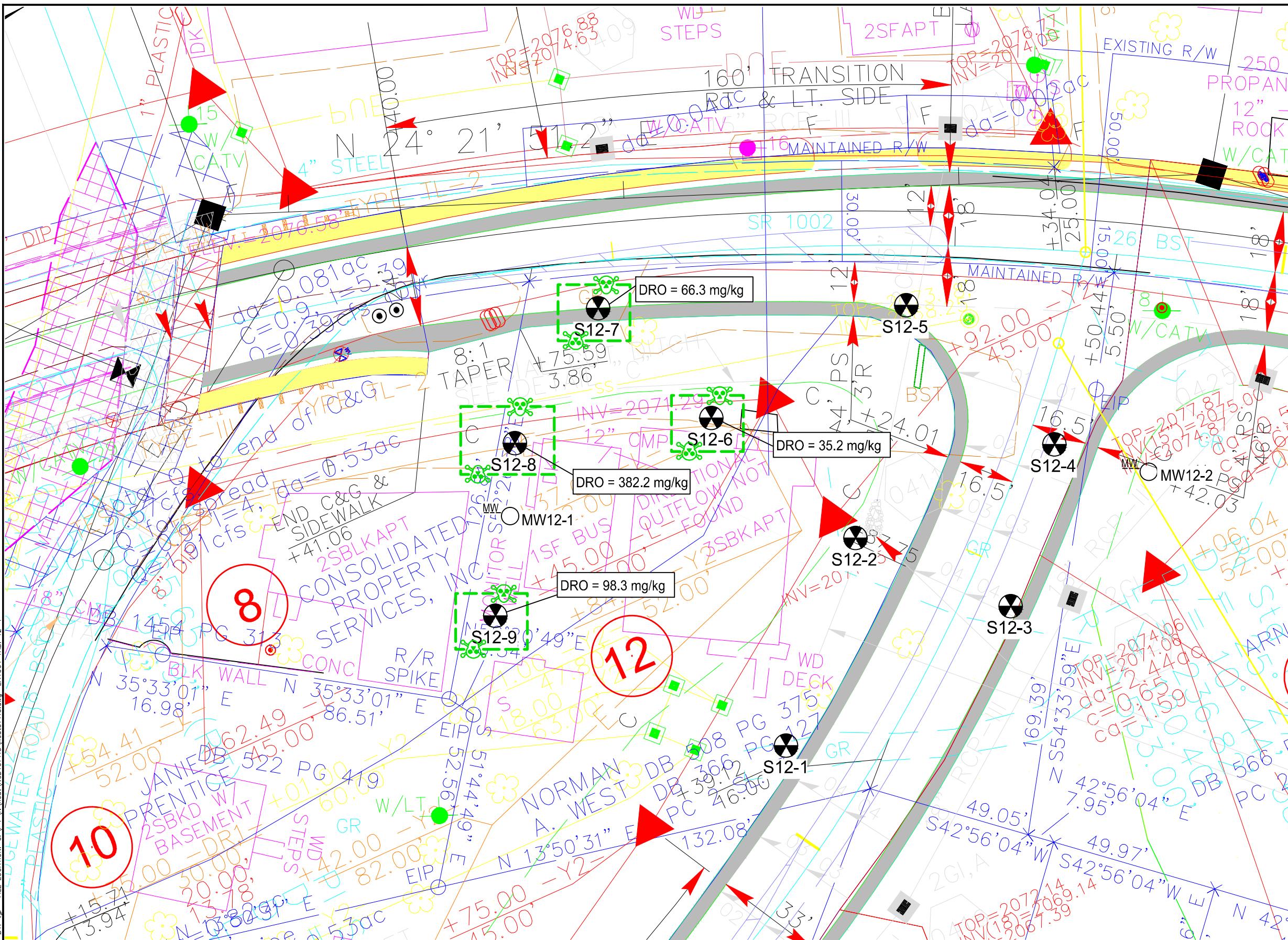
PROJECT: ncdt0141

**PRELIMINARY SITE ASSESSMENT  
PARCEL 012  
CULLOWHEE, JACKSON COUNTY  
NORTH CAROLINA**

## SITE MAP SHOWING RESULTS OF GEOPHYSICAL INVESTIGATION

## FIGURE 3

SEE FIGURE 5 FOR  
SUPPLEMENTAL LEGEND  
FOR USE WITH FIGURE 4



### LEGEND

- SOIL BORING LOCATION
- EXISTING MONITORING WELL LOCATION
- KNOWN SOIL CONTAMINATION
- DRO CONCENTRATION DETECTED BY QROS

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

### VEGETATION:

- 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

AATUR

E.O.I.

NOTE: LEGEND WAS PROVIDED BY NCDOT

<p>GEL ENGINEERING of NC, Inc. an Affiliate of THE GEL GROUP, Inc.</p> <p><b>GEL</b></p> <p>Post Office Box 14262 Research Triangle Park, NC 27709 (919) 544-1100</p>	<p>PROJECT: nc01413</p> <p>PRELIMINARY SITE ASSESSMENT PARCEL 012 CULLOWHEE, JACKSON COUNTY, NORTH CAROLINA TIP NO. B-4159, WBS ELEMENT NO. 33507.1.1</p> <p>DATE: April 2, 2014</p>	<p>SUPPLEMENTAL LEGEND FOR USE WITH FIGURES 2, 3, AND 4</p>	<p>FIGURE 5</p>
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## **TABLES**

**TABLE 1**  
**SUMMARY OF ANALYTICAL RESULTS FOR COLLECTED SOIL SAMPLES**  
**Preliminary Site Assessment**  
**Parcel 012, 3101 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
S-12-1	<0.6	<6.8	<0.6	<7.2	<0.6	<0.6	< 0.58	<0.06	<0.029
S-12-2	<0.7	<5.7	<0.7	<5.5	<0.7	<0.7	< 0.7	<0.07	<0.035
S-12-3	2.2	7.5	<0.6	<5.6	<0.6	2.2	1.79	0.09	<0.03
S-12-4	<0.7	<5.5	<0.7	<5.7	<0.7	<0.7	< 0.7	<0.07	<0.035
S-12-5	4.5	NA	<0.5	NA	<0.5	4.5	3.21	0.08	<0.026
S-12-6	35.2	NA	<0.6	NA	<0.6	35.2	25.68	0.58	<0.03
S-12-7	66.3	NA	<7.8	NA	<7.8	66.3	23	<0.8	<0.39
S-12-8	382.2	NA	<7.9	NA	<7.9	382.2	279.4	6.8	<0.39
S-12-9*	98.3	NA	<9.1	NA	<9.1	98.3	72.8	1.2	<0.46
<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>

Sample ID	Pace Detected SVOCs				Pace Detected VOCs
	Benzo(a)pyrene	Chrysene	Fluoranthene	Pyrene	Acetone
S-12-1	NA	NA	NA	NA	NA
S-12-2	NA	NA	NA	NA	NA
S-12-3	NA	NA	NA	NA	NA
S-12-4	NA	NA	NA	NA	NA
S-12-5	<0.375	<0.375	<0.375	<0.375	<0.0863
S-12-6	<0.373	<0.373	<0.373	<0.373	0.12
S-12-7	<0.391	<0.391	<0.391	<0.391	<0.0940
S-12-8	0.403	0.400	0.855	0.511	0.136
S-12-9	<0.401	<0.401	<0.401	<0.401	0.272
<b>NCDENR MSCC</b>	<b>0.088</b>	<b>39</b>	<b>290</b>	<b>270</b>	<b>24</b>

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

**APPENDIX I**  
**PHOTOGRAPHS**



Photograph 1: View looking northeast at onsite real estate office and antique shop. The locations of soil borings S12-6 and S12-7 are also shown.



Photograph 2: View looking northwest at location of soil boring S12-1. Entrances to apartments on 3<sup>rd</sup> floor of onsite 3-story building are shown in background.



Photograph 3: View looking southeast at detached 1-story office building.



Photograph 4: View looking southwest at onsite detached 1-story office building and detached storage building. Parcel 008 is in the background.



Photograph 6: View looking southwest at soil boring locations S12-8 and S12-9, and existing groundwater monitoring well location MW12-1. Detached storage building is shown in the background.



Photograph 7: View looking southeast at covers for two abandoned septic tanks located at front entrance to onsite real estate office.



Photograph 8: View looking southwest at soil boring location S12-2.



Photograph 9: View looking west at soil boring locations S12-3 and S12-4.



Photograph 10: View looking north at soil boring locations S12-5, S12-6, and S12-7.

**APPENDIX II**

**SOIL BORING LITHOLOGIC LOGS**

## SOIL BORING LOG

Boring/Well No.: **S12-1**

Date Started: 12/17/13

Date Completed: 12/17/13

No.	Depth Interval	Blow Counts	PID (ppm)	Soil Description	Soil Type
1	0.0' – 1.0'	--	--	Red Brown Sandy Silt with Gravel; Moist; Noncohesive	ML
2	1.0' – 4.0'	--	0.0	Brown/Tan Saprolite; Moist; Highly weathered rock	
3	4.0' – 7.0'	--	--	Brown/Tan Saprolite; Moist; Highly weathered rock	
4	7.0' – 8.0'	--	0.0	Red Silt; Moist; Micaceous; Noncohesive	ML
5					
6				Total depth = 8 feet below land surface	
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.: **S12-2**

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 Sandy Clay with Gravel; Moist	CL
2	4.0' – 8.0'	--	0.0	Red/Brown/Tan Saprolite; Moist; Highly weathered rock	
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.: **S12-3**

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	CL
2	4.0' – 5.0'	--	--	Black/White/Tan Saprolite; Moist; 5' refusal; Gneiss	
3					
4				Total depth = 5 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.: **S12-4**

Date Started: 12/17/13

Date Completed: 12/17/13

No.	Depth Interval	Blow Counts	PID (ppm)	Soil Description	Soil Type
1	0.0' – 3.0'	--	--	Red Clay with Sand; Moist; Cohesive; Micaceous	CL
2	3.0' – 4.0'	--	0.0	Red/Brown Sandy Silt with Gravel, Quartz; Moist; Noncohesive	ML
3	4.0' – 6.0'	--	--	Red/Brown Sandy Silt with Gravel, Quartz; Moist; Noncohesive	ML
4	6.0' – 8.0'	--	0.0	Red/Brown/Tan Saprolite; Moist; Highly weathered rock	
5					
6				Total depth = 8 feet below land surface	
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.: **S12-5**

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	Brown Tan Sandy Silt; Moist; Noncohesive; Micaceous	ML
2	4.0' – 8.0'	--	0.0	Red/Brown Sandy Silt with gravel; Moist; Noncohesive; Micaceous; weathered rock throughout	ML
3					
4				Total depth = 8 feet below land surface	
5					
6					
7					
8					
9					
10					

Notes:

- 1) 4-foot continuous cores using DPT.
- 2) PID readings shown are for discrete samples collected at depth intervals of 3' – 4', and 7' – 8'

## SOIL BORING LOG

Boring/Well No.: **S12-6**

Date Started: 12/17/13

Date Completed: 12/17/13

No.	Depth Interval	Blow Counts	PID (ppm)	Soil Description	Soil Type
1	0.0' – 6.0'	--	0.0	Red Clay; Moist; Cohesive, Tight Clay; Quartz at 5'	CL
2	6.0' – 8.0'	--	0.0	Red/Brown Sandy Silt; Moist	ML
3					
4				Total depth = 8 feet below land surface	
5					
6					
7					
8					
9					
10					

Notes:

- 1) 4-foot continuous cores using DPT.
- 2) PID readings shown are for discrete samples collected at depth intervals of 3'– 4', and 7'– 8'

## SOIL BORING LOG

Boring/Well No.: **S12-7**

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 Silt; Moist; Noncohesive; Micaceous	ML
2	4.0' – 8.0'	--	0.0	Red/Brown Sandy Silt; Moist; weathered rock throughout	ML
3					
4				Total depth = 8 feet below land surface	
5					
6					
7					
8					
9					
10					

Notes:

- 1) 4-foot continuous cores using DPT.
- 2) PID readings shown are for discrete samples collected at depth intervals of 3'– 4', and 7'– 8'

## SOIL BORING LOG

Boring/Well No.: **S12-8**

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 Clay, fill material with glass and debris; Moist; Asphalt 0'-0.5'	CL
2	4.0' – 5.0'	--	0.0	Red/Brown Sandy Silt, fill material; Moist; Rock at 5'	ML
3					
4				Total depth = 5 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 4'– 5'

## SOIL BORING LOG

Boring/Well No.: **S12-9**

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 Sandy Silt; Moist	ML
2	4.0' – 8.0'	--	0.0	Brown, Red/Brown Silt; Moist; Quartz at 5'	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'

**APPENDIX III**

**CERTIFICATES OF ANALYSIS AND  
CHAIN OF CUSTODY RECORD FOR 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

Contact: Andrew Eyer

Samples analysed

Thursday, December 19, 2013

Project: B-4159, Cullowhee NC

Operator

CSB

Matrix	Sample ID	Dilution used	BTEX	GRO	DRO	TPH	Total Aromatics	16 EPA PAHs	BaP	Ratios			HC Fingerprint Match
			(C6 - C9)	(C5 - C10)	(C10 - C35)	(C5 - C35)	(C10-C35)	% light	% mid	% heavy			
s	S-13-2	10.5	<0.5	<0.5	1	1	0.97	0.36	< 0.026	44.9	46.9	8.2	Match not possible
s	S-15-1	10.8	<0.5	<0.5	23	23	17.5	0.4	< 0.027	48.3	45.7	6	V.Deg.PHC 99.9%
s	S-12-1	11.5	<0.6	<0.6	<0.6	<0.6	< 0.58	< 0.06	< 0.029	0	0	100	Match not possible
s	S-12-2 (Low Volume)	14.0	<0.7	<0.7	<0.7	<0.7	< 0.7	< 0.07	< 0.035	0	0	100	Match not possible
s	S-12-4(Low Volume)	14.0	<0.7	<0.7	<0.7	<0.7	< 0.7	< 0.07	< 0.035	0	0	100	Match not possible
Initial Calibrator QC check				OK	Low Range Calibrator Final check					OK	0.076		
					High Range Calibrator Final check					OK	1.562		

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

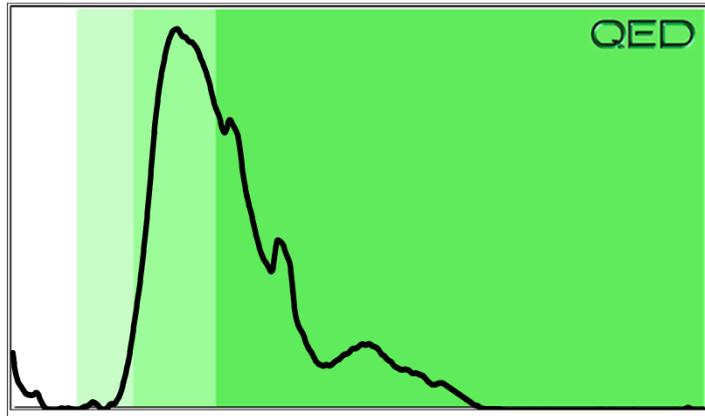
Soil values are not corrected for moisture or stone content

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

% = match confidence

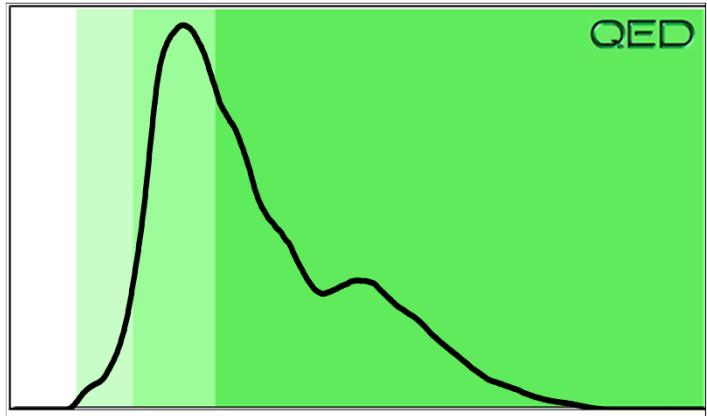
Match not possible

S-13-2



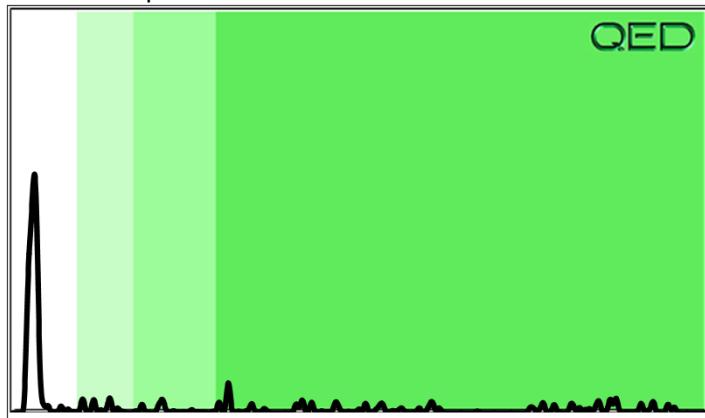
V.Deg.PHC 99.9%

S-15-1



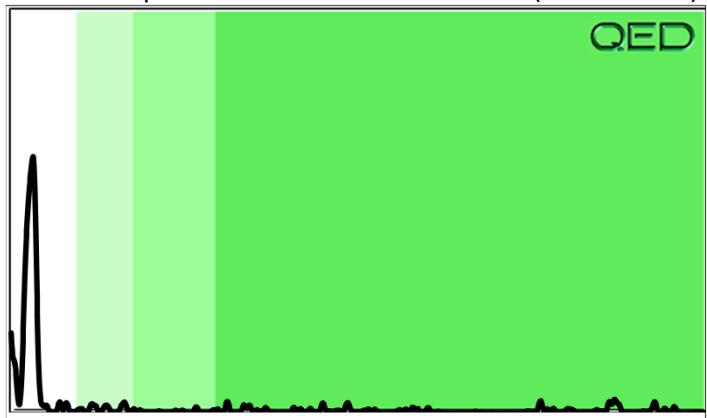
Match not possible

S-12-1



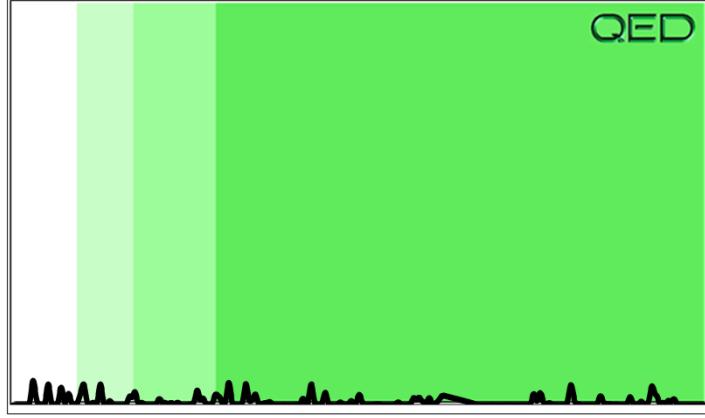
Match not possible

S-12-2 (Low Volume)



Match not possible

S-12-4 (Low Volume)





## Hydrocarbon Analysis Results

**Client:** GEL

**Address:**

## Samples taken

DECEMBER 17/18 2013

**Address:** Samples extracted DECEMBER 17/18 2013

## Samples extracted

DECEMBER 17/18 2013

DECEMBER 20 2013

**Contact:** ANDREW EYER

## Operator

CSB

**Project:** GEL B-4159 CULLOWHEE NC

Initial Calibrator QC check

OK

Low Range Calibrator Final check

## High Range Calibrator Final check

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 Fingerprint match abbreviations

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

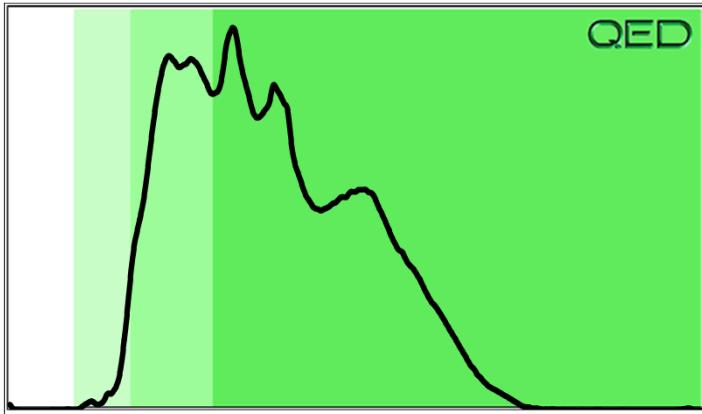
Soil values are not corrected for moisture or stone content

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

% = match confidence

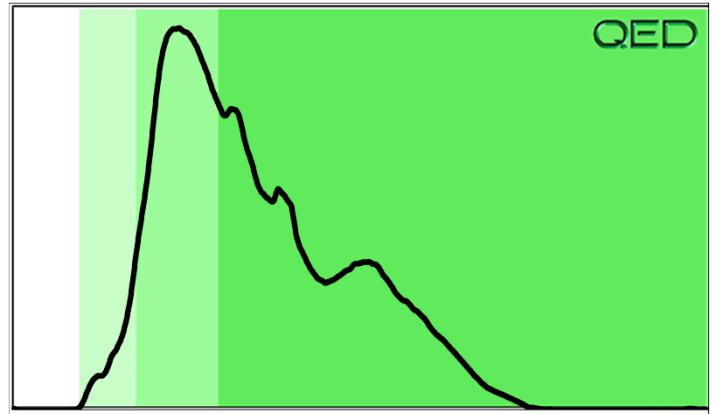
V.Deg.PHC 77.5%

S-12-3



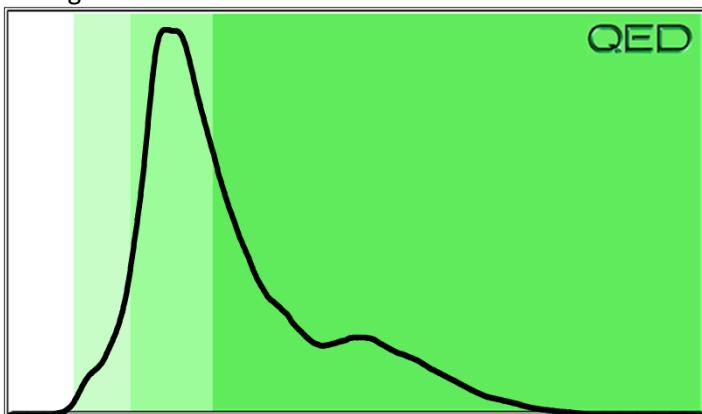
V.Deg.PHC 99.1%

S-12-5



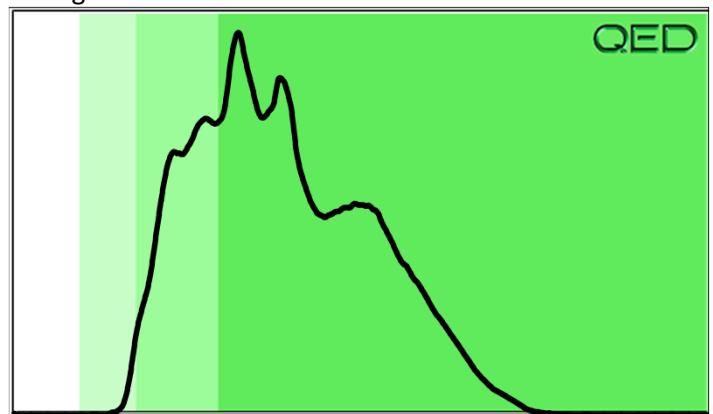
V.Deg.PHC 98.4%

S-12-6



V.Deg Fuel 56%

S-12-7



## Hydrocarbon Analysis Results

Client: GEL

Address:

Samples taken

DECEMBER 1010, 2013

Samples extracted

DECEMBER 1010, 2013

Samples analysed

Frid0, Dec00 or 20, 2013

Contact: ANDREW EYER

Operator

CSB

Project: GEL B415 CULLOWEE 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	
0	S1200	15.0	0.0	0.0	32.2	32.2	204	6.0	0.30	56.6	30	5.0	V.D0P0C 3.10
0	S1200 L0000000	12.0	0.1	0.1	66.0	66.0	50.2	1.2	0.46	51.1	34.4	14.6	V.D0P0C 0.20
0	S001 L0000000	26.0	0.13	0.13	3.2	3.2	2.03	0.013	0.065	36.5	403	14.2	V.D0P0C 4.50
0	S002	10.0	0.5	0.5	1.0	1.0	1.43	0.005	0.025	46.6	43.6	0.0	V.D0P0C 0.60
0	S005 L0000000	26.0	0.13	0.13	5.3	5.3	42.25	0.60	0.065	30	30	23.4	D0rd0d F000t05.50
0	S004	13.3	0.0	0.0	3.5	3.5	2.26	0.00	0.033	01.6	102	0.2	D0F00 2.50
0	S003 L0000000	26.0	0.13	0.13	60.0	60.0	40.02	0.00	0.065	06.2	104	5.4	V.D0F00 t00.50
0	S601 L0000000	26.0	0.13	0.13	5.1	5.1	3.50	0.013	0.065	64.1	30.1	5.0	V.D0P0C 0.40
0	S602	11.5	0.6	0.6	26.0	26.0	1000	0.50	0.020	53.0	30	6.4	V.D0P0C 0.10
0	S603 L0000000	06.0	40.3	40.3	121.0	121.0	03.6	04	2.02	54.4	32.2	13.4	D0rd0d F000t00.20

Initial Calibrator QC check

Fail

Low Range Calibrator Final check

Low

0.063

High Range Calibrator Final check

OK

1.459

Results corrected for ED C1 and

Fingerprint print did not identify the operator selected library etc.

Concentration in oil or pland or water or plas

Fingerprint etc correlation

Ext = Specific calibration standard, result etc. d PFM = Poor library fingerprint etc

Soil concentration corrected for dilution etc content

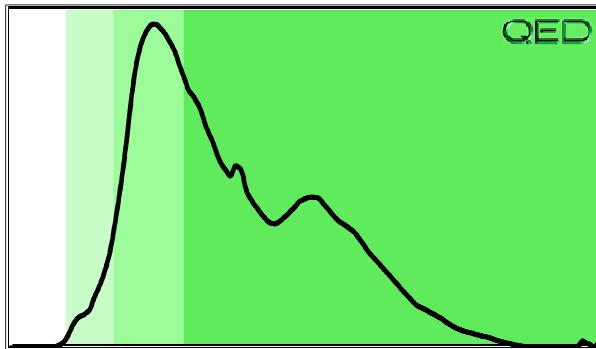
SBS = it specific compound detected

LBS = Library compound detected

= etc confidence

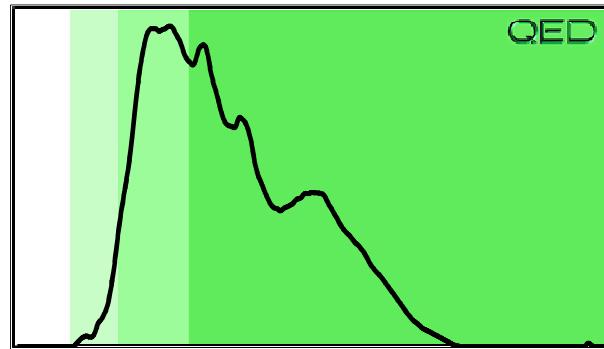
V.Deg.PHC 93.1%

S-12-8



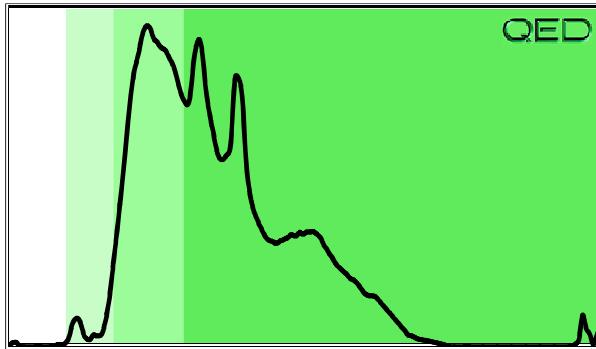
V.Deg.PHC 90.2%

S-12-9 (Low volume)



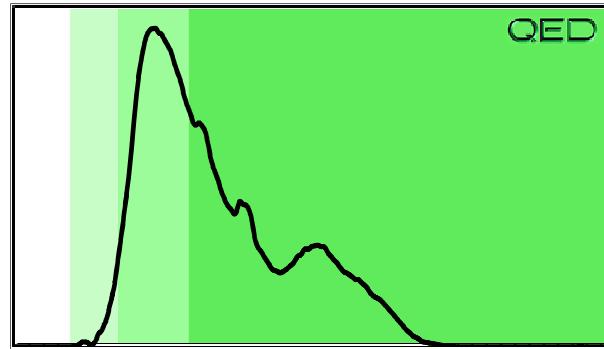
V.Deg.PHC 94.5%

S-8-1 (Low volume)



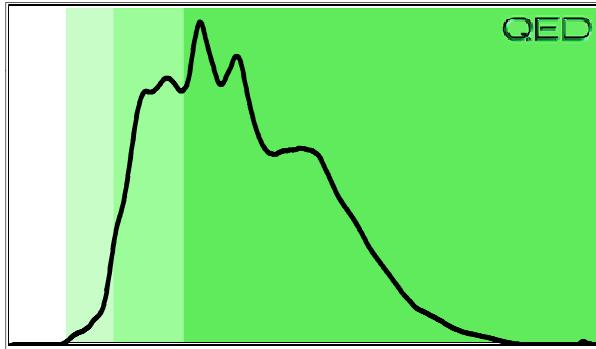
V.Deg.PHC 99.6%

S-8-2



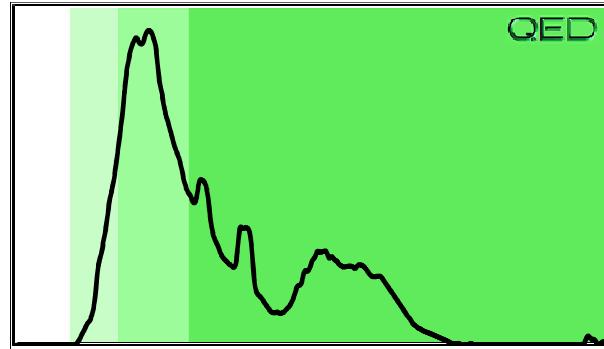
Degraded Fuel (est) 57.5%

S-8-5 (Low volume)



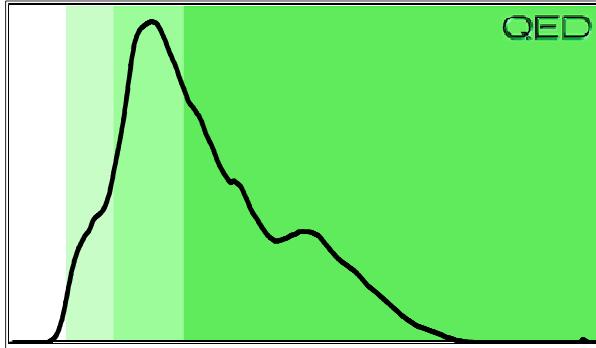
Deg.Fuel 82.5%

S-8-4



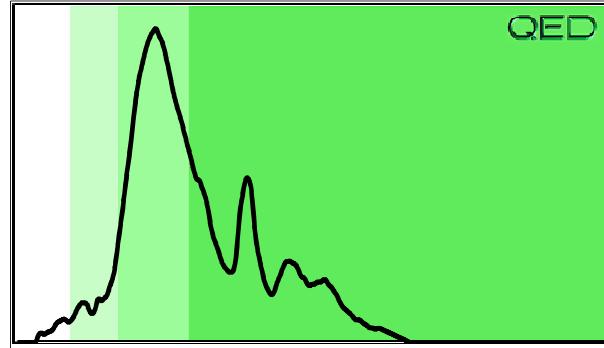
V.Deg Fuel (est) 90.5%

S-8-3 (Low volume)



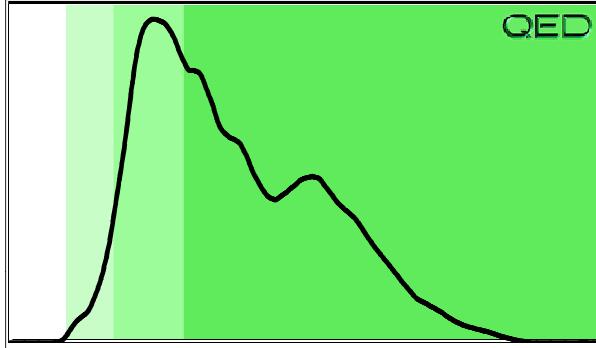
V.Deg.PHC 98.4%

S-6-1 (Low volume)



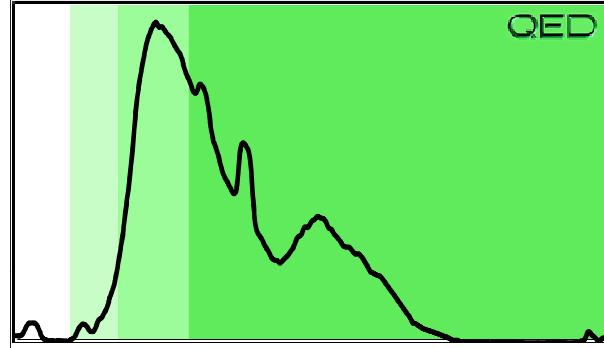
V.Deg.PHC 89.1%

S-6-2



Degraded Fuel (est) 89.2%

S-6-3 (Low volume)





## Hydrocarbon Analysis Results

**Client:** GEL

**Address:**

## Samples taken

Thursday, December 19, 2013

Thursday, December 19, 2013

## Samples extracted

Monday, December 23, 2013

**Contact:** Andrew Eyer

## Operator

MKB

**Project:** B-4159 Cullowhee, NC

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

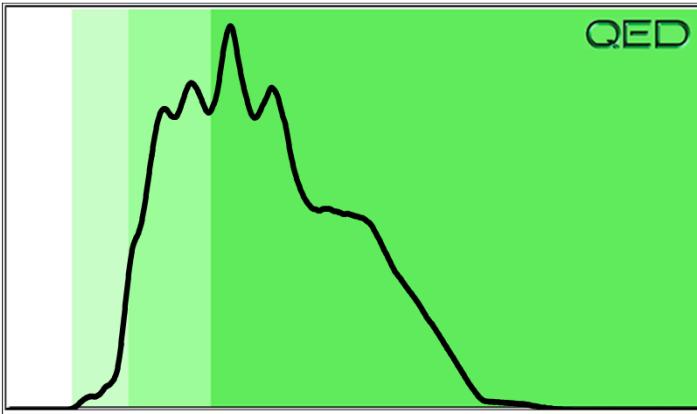
Soil values are not corrected for moisture or stone content

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

% = match confidence

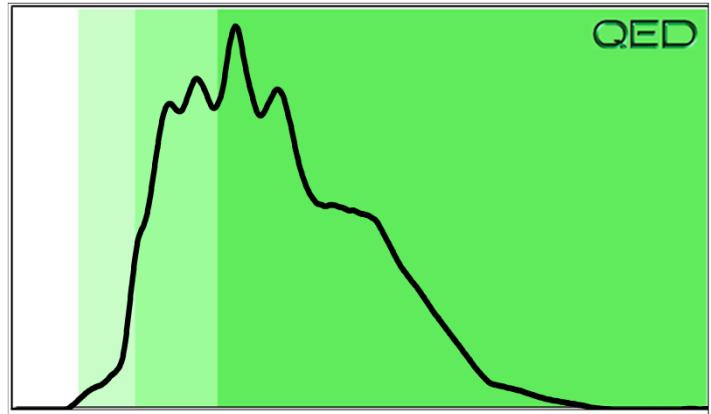
V.Deg.PHC 71.7%

S-6-7 REPLICATE



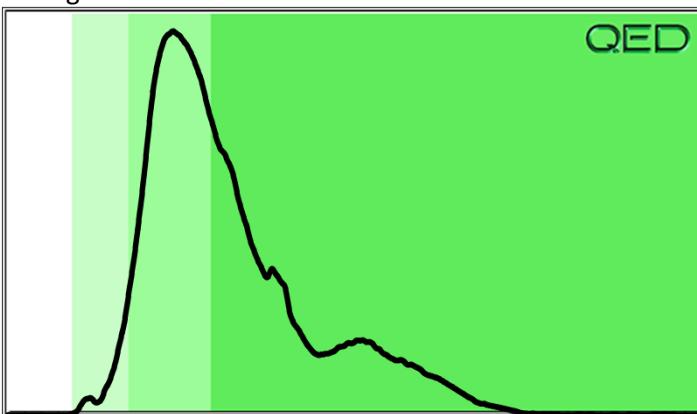
V.Deg.PHC 72%

S-6-7 REPLICATE



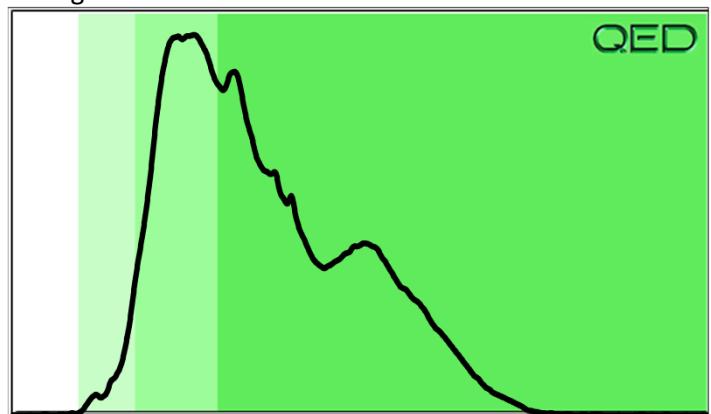
V.Deg.PHC 99.8%

S-20-1 REPLICATE



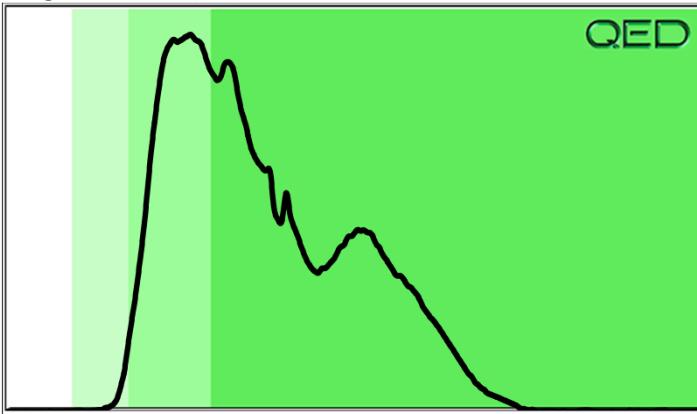
V.Deg.PHC 94.8%

S-12-9 REPLICATE



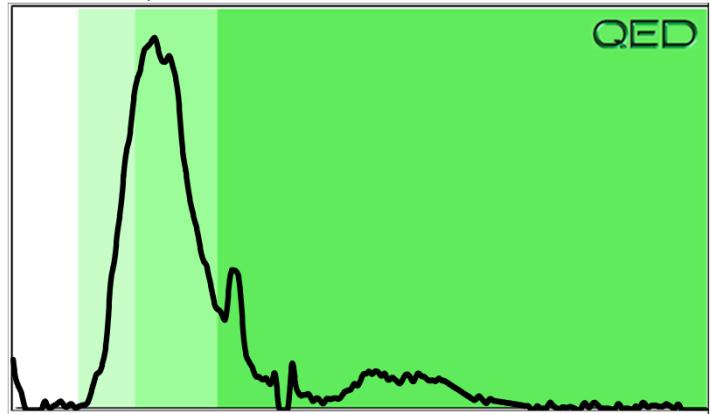
Degraded Fuel (est) 79%

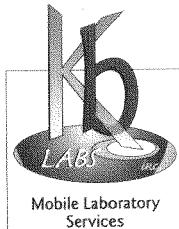
S-6-8 REPLICATE



Match not possible

S-8-4 REPLICATE





# CHAIN-OF-CUSTODY RECORD

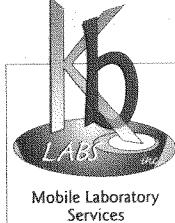
6821 SW Archer Road  
Gainesville, FL 32608  
TEL (352) 367-0073 · FAX (352) 378-6491

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)							
SAMPLE FIELD ID\ NUMBER	DATE SAMPLED	TIME SAMPLED	COMP.	GRAB	DATE REC'D	TIME REC'D	STATION LOCATION / No.			COMMENT / SAMPLE PRE FIX
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



# 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	O Other (see Remarks)
SAMPLE FIELD ID.\ NUMBER	DATE SAMPLED	TIME SAMPLED	COMP.	GRAB	DATE REC'D	TIME REC'D	STATION LOCATION / No. Weight					COMMENT / SAMPLE PRE FIX
S-12-3	12/17/13	1310		X			11.77	S 1	✓			48 hr TA
S-12-5		1509		X			13.6	S 1	✓			48 hr TA
S-12-6		1540		X			11.45	S 1	✓			48 hr TA
S-12-7		1555		X			11.7	S 1	✓			48 hr TA
S-12-8		1610		X			11.59	S 1	✓			48 hr TA
S-12-9 Low volume		1625		X			7.17(10)	S 1	✓			48 hr TA
S-8-1 Low volume		1635		X			(10)	S 1	✓			48 hr TA
S-8-2	12/18/13	0855		X			14.06	S 1	✓			48 hr TA
S-8-5 Low volume		0925		X			(10)	S 1	✓			48 hr TA
S-8-4		1000		X			10.49	S 1	✓			48 hr TA
S-8-3 Low volume		1025		X			(10)	S 1	✓			48 hr TA
S-6-1 Low volume		1150		X			(10)	S 1	✓			48 hr TA
S-6-2		1220		X			12.2	S 1	✓			48 hr TA
S-6-3 Low volume		1235		X			(10)	S 1	✓			48 hr TA
S-4-1		1505		X			12.32	S 1	✓			48 hr TA
Precleaned Containers Relinquished by: (Signature)		Date / Time	Received by: (Signature)				Date / Time	Remarks and Observations				
<i>Stacy D Jr</i>		12/19/13 1400										
Relinquished by: (Signature)		Date / Time	Received by: (Signature)				Date / Time	<i>12/20/13</i>				

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

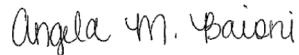
Dear Andrew Eyer:

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.**  
205 East Meadow Road - Suite A  
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## CERTIFICATIONS

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

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### 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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## 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

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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
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	TNM	1	PASI-C
92184006016	S-12-3	EPA 8015 Modified	NU1	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92184006017	S-12-5	EPA 8015 Modified	GAW	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92184006018	S-12-6	EPA 8270	BPJ	74	PASI-C
		EPA 8260	DLK	70	PASI-C
92184006019	S-12-7	ASTM D2974-87	TNM	1	PASI-C
		EPA 8270	BPJ	74	PASI-C
92184006020	S-12-8	EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92184006021	S-12-9	EPA 8270	BPJ	74	PASI-C
		EPA 8260	DLK	70	PASI-C
92184006022	S-8-1	ASTM D2974-87	TNM	1	PASI-C
		EPA 8270	BPJ	74	PASI-C
92184006023	S-8-2	EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92184006024	S-8-5	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	

## 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-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

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**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

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**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	
Phenanthrene	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

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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							
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	

## REPORT OF LABORATORY ANALYSIS

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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

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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						
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

---

**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	

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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	12.0 %		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-12-6      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>8270 MSSV Microwave</b>		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
Acenaphthene	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	83-32-9	
Acenaphthylene	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	208-96-8	
Aniline	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	62-53-3	
Anthracene	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	120-12-7	
Benzo(a)anthracene	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	56-55-3	
Benzo(a)pyrene	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	50-32-8	
Benzo(b)fluoranthene	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	205-99-2	
Benzo(g,h,i)perylene	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	191-24-2	
Benzo(k)fluoranthene	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	207-08-9	
Benzoic Acid	ND ug/kg		1870	1	12/19/13 13:00	12/20/13 21:50	65-85-0	
Benzyl alcohol	ND ug/kg		747	1	12/19/13 13:00	12/20/13 21:50	100-51-6	
4-Bromophenylphenyl ether	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	101-55-3	
Butylbenzylphthalate	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	85-68-7	
4-Chloro-3-methylphenol	ND ug/kg		747	1	12/19/13 13:00	12/20/13 21:50	59-50-7	
4-Chloroaniline	ND ug/kg		1870	1	12/19/13 13:00	12/20/13 21:50	106-47-8	
bis(2-Chloroethoxy)methane	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	111-91-1	
bis(2-Chloroethyl) ether	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	108-60-1	
2-Chloronaphthalene	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	91-58-7	
2-Chlorophenol	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	95-57-8	
4-Chlorophenylphenyl ether	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	7005-72-3	
Chrysene	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	218-01-9	
Dibenz(a,h)anthracene	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	53-70-3	
Dibenzofuran	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	132-64-9	
1,2-Dichlorobenzene	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	95-50-1	
1,3-Dichlorobenzene	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	541-73-1	
1,4-Dichlorobenzene	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	106-46-7	
3,3'-Dichlorobenzidine	ND ug/kg		1870	1	12/19/13 13:00	12/20/13 21:50	91-94-1	
2,4-Dichlorophenol	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	120-83-2	
Diethylphthalate	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	84-66-2	
2,4-Dimethylphenol	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	105-67-9	
Dimethylphthalate	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	131-11-3	
Di-n-butylphthalate	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	84-74-2	
4,6-Dinitro-2-methylphenol	ND ug/kg		747	1	12/19/13 13:00	12/20/13 21:50	534-52-1	
2,4-Dinitrophenol	ND ug/kg		1870	1	12/19/13 13:00	12/20/13 21:50	51-28-5	
2,4-Dinitrotoluene	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	121-14-2	
2,6-Dinitrotoluene	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	606-20-2	
Di-n-octylphthalate	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	117-84-0	
bis(2-Ethylhexyl)phthalate	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	117-81-7	
Fluoranthene	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	206-44-0	
Fluorene	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	86-73-7	
Hexachloro-1,3-butadiene	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	87-68-3	
Hexachlorobenzene	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	118-74-1	
Hexachlorocyclopentadiene	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	77-47-4	
Hexachloroethane	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	67-72-1	
Indeno(1,2,3-cd)pyrene	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	193-39-5	

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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>8270 MSSV Microwave</b>		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
Isophorone	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	78-59-1	
1-Methylnaphthalene	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	90-12-0	
2-Methylnaphthalene	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	91-57-6	
2-Methylphenol(o-Cresol)	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50		
Naphthalene	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	91-20-3	
2-Nitroaniline	ND ug/kg		1870	1	12/19/13 13:00	12/20/13 21:50	88-74-4	
3-Nitroaniline	ND ug/kg		1870	1	12/19/13 13:00	12/20/13 21:50	99-09-2	
4-Nitroaniline	ND ug/kg		747	1	12/19/13 13:00	12/20/13 21:50	100-01-6	
Nitrobenzene	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	98-95-3	
2-Nitrophenol	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	88-75-5	
4-Nitrophenol	ND ug/kg		1870	1	12/19/13 13:00	12/20/13 21:50	100-02-7	
N-Nitrosodimethylamine	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	62-75-9	
N-Nitroso-di-n-propylamine	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	621-64-7	
N-Nitrosodiphenylamine	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	86-30-6	
Pentachlorophenol	ND ug/kg		1870	1	12/19/13 13:00	12/20/13 21:50	87-86-5	
Phenanthrene	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	85-01-8	
Phenol	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	108-95-2	
Pyrene	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	129-00-0	
1,2,4-Trichlorobenzene	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	120-82-1	
2,4,5-Trichlorophenol	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	95-95-4	
2,4,6-Trichlorophenol	ND ug/kg		373	1	12/19/13 13:00	12/20/13 21:50	88-06-2	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	42 %		23-110	1	12/19/13 13:00	12/20/13 21:50	4165-60-0	
2-Fluorobiphenyl (S)	43 %		30-110	1	12/19/13 13:00	12/20/13 21:50	321-60-8	
Terphenyl-d14 (S)	59 %		28-110	1	12/19/13 13:00	12/20/13 21:50	1718-51-0	
Phenol-d6 (S)	54 %		22-110	1	12/19/13 13:00	12/20/13 21:50	13127-88-3	
2-Fluorophenol (S)	44 %		13-110	1	12/19/13 13:00	12/20/13 21:50	367-12-4	
2,4,6-Tribromophenol (S)	56 %		27-110	1	12/19/13 13:00	12/20/13 21:50	118-79-6	
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
Acetone	120 ug/kg		96.0	1		12/21/13 18:33	67-64-1	A+
Benzene	ND ug/kg		4.8	1		12/21/13 18:33	71-43-2	
Bromobenzene	ND ug/kg		4.8	1		12/21/13 18:33	108-86-1	
Bromochloromethane	ND ug/kg		4.8	1		12/21/13 18:33	74-97-5	
Bromodichloromethane	ND ug/kg		4.8	1		12/21/13 18:33	75-27-4	
Bromoform	ND ug/kg		4.8	1		12/21/13 18:33	75-25-2	
Bromomethane	ND ug/kg		9.6	1		12/21/13 18:33	74-83-9	
2-Butanone (MEK)	ND ug/kg		96.0	1		12/21/13 18:33	78-93-3	
n-Butylbenzene	ND ug/kg		4.8	1		12/21/13 18:33	104-51-8	
sec-Butylbenzene	ND ug/kg		4.8	1		12/21/13 18:33	135-98-8	
tert-Butylbenzene	ND ug/kg		4.8	1		12/21/13 18:33	98-06-6	
Carbon tetrachloride	ND ug/kg		4.8	1		12/21/13 18:33	56-23-5	
Chlorobenzene	ND ug/kg		4.8	1		12/21/13 18:33	108-90-7	
Chloroethane	ND ug/kg		9.6	1		12/21/13 18:33	75-00-3	
Chloroform	ND ug/kg		4.8	1		12/21/13 18:33	67-66-3	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

**Sample: S-12-6      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	

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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						
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						
Acenaphthene	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	83-32-9	
Acenaphthylene	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	208-96-8	
Aniline	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	62-53-3	
Anthracene	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	120-12-7	
Benzo(a)anthracene	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	56-55-3	
Benzo(a)pyrene	<b>403</b> ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	50-32-8	
Benzo(b)fluoranthene	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	205-99-2	
Benzo(g,h,i)perylene	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	191-24-2	
Benzo(k)fluoranthene	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	207-08-9	
Benzoic Acid	ND ug/kg		1930	1	12/19/13 13:00	12/20/13 22:44	65-85-0	
Benzyl alcohol	ND ug/kg		773	1	12/19/13 13:00	12/20/13 22:44	100-51-6	
4-Bromophenylphenyl ether	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	101-55-3	
Butylbenzylphthalate	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	85-68-7	
4-Chloro-3-methylphenol	ND ug/kg		773	1	12/19/13 13:00	12/20/13 22:44	59-50-7	
4-Chloroaniline	ND ug/kg		1930	1	12/19/13 13:00	12/20/13 22:44	106-47-8	
bis(2-Chloroethoxy)methane	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	111-91-1	
bis(2-Chloroethyl) ether	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	108-60-1	
2-Chloronaphthalene	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	91-58-7	
2-Chlorophenol	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	95-57-8	
4-Chlorophenylphenyl ether	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	7005-72-3	
Chrysene	<b>400</b> ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	218-01-9	
Dibenz(a,h)anthracene	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	53-70-3	
Dibenzofuran	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	132-64-9	
1,2-Dichlorobenzene	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	95-50-1	
1,3-Dichlorobenzene	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	541-73-1	
1,4-Dichlorobenzene	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	106-46-7	
3,3'-Dichlorobenzidine	ND ug/kg		1930	1	12/19/13 13:00	12/20/13 22:44	91-94-1	
2,4-Dichlorophenol	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	120-83-2	
Diethylphthalate	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	84-66-2	
2,4-Dimethylphenol	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	105-67-9	
Dimethylphthalate	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	131-11-3	
Di-n-butylphthalate	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	84-74-2	
4,6-Dinitro-2-methylphenol	ND ug/kg		773	1	12/19/13 13:00	12/20/13 22:44	534-52-1	
2,4-Dinitrophenol	ND ug/kg		1930	1	12/19/13 13:00	12/20/13 22:44	51-28-5	
2,4-Dinitrotoluene	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	121-14-2	
2,6-Dinitrotoluene	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	606-20-2	
Di-n-octylphthalate	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	117-84-0	
bis(2-Ethylhexyl)phthalate	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	117-81-7	
Fluoranthene	<b>855</b> ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	206-44-0	
Fluorene	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	86-73-7	
Hexachloro-1,3-butadiene	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	87-68-3	
Hexachlorobenzene	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	118-74-1	
Hexachlorocyclopentadiene	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	77-47-4	
Hexachloroethane	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	67-72-1	
Indeno(1,2,3-cd)pyrene	ND ug/kg		386	1	12/19/13 13:00	12/20/13 22:44	193-39-5	

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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	
Phenanthrene	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

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

**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	<b>17.6 %</b>		0.10	1		12/20/13 17:06		

## REPORT OF LABORATORY ANALYSIS

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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

**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						
Isophorone	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	78-59-1	
1-Methylnaphthalene	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	90-12-0	
2-Methylnaphthalene	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	91-57-6	
2-Methylphenol(o-Cresol)	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37		
Naphthalene	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	91-20-3	
2-Nitroaniline	ND ug/kg		1830	1	12/19/13 13:00	12/20/13 23:37	88-74-4	
3-Nitroaniline	ND ug/kg		1830	1	12/19/13 13:00	12/20/13 23:37	99-09-2	
4-Nitroaniline	ND ug/kg		732	1	12/19/13 13:00	12/20/13 23:37	100-01-6	
Nitrobenzene	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	98-95-3	
2-Nitrophenol	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	88-75-5	
4-Nitrophenol	ND ug/kg		1830	1	12/19/13 13:00	12/20/13 23:37	100-02-7	
N-Nitrosodimethylamine	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	62-75-9	
N-Nitroso-di-n-propylamine	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	621-64-7	
N-Nitrosodiphenylamine	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	86-30-6	
Pentachlorophenol	ND ug/kg		1830	1	12/19/13 13:00	12/20/13 23:37	87-86-5	
Phenanthrene	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	85-01-8	
Phenol	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	108-95-2	
Pyrene	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	129-00-0	
1,2,4-Trichlorobenzene	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	120-82-1	
2,4,5-Trichlorophenol	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	95-95-4	
2,4,6-Trichlorophenol	ND ug/kg		366	1	12/19/13 13:00	12/20/13 23:37	88-06-2	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	45 %		23-110	1	12/19/13 13:00	12/20/13 23:37	4165-60-0	
2-Fluorobiphenyl (S)	48 %		30-110	1	12/19/13 13:00	12/20/13 23:37	321-60-8	
Terphenyl-d14 (S)	53 %		28-110	1	12/19/13 13:00	12/20/13 23:37	1718-51-0	
Phenol-d6 (S)	45 %		22-110	1	12/19/13 13:00	12/20/13 23:37	13127-88-3	
2-Fluorophenol (S)	42 %		13-110	1	12/19/13 13:00	12/20/13 23:37	367-12-4	
2,4,6-Tribromophenol (S)	41 %		27-110	1	12/19/13 13:00	12/20/13 23:37	118-79-6	
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
Acetone	ND ug/kg		87.4	1		12/21/13 19:51	67-64-1	
Benzene	ND ug/kg		4.4	1		12/21/13 19:51	71-43-2	
Bromobenzene	ND ug/kg		4.4	1		12/21/13 19:51	108-86-1	
Bromochloromethane	ND ug/kg		4.4	1		12/21/13 19:51	74-97-5	
Bromodichloromethane	ND ug/kg		4.4	1		12/21/13 19:51	75-27-4	
Bromoform	ND ug/kg		4.4	1		12/21/13 19:51	75-25-2	
Bromomethane	ND ug/kg		8.7	1		12/21/13 19:51	74-83-9	
2-Butanone (MEK)	ND ug/kg		87.4	1		12/21/13 19:51	78-93-3	
n-Butylbenzene	ND ug/kg		4.4	1		12/21/13 19:51	104-51-8	
sec-Butylbenzene	ND ug/kg		4.4	1		12/21/13 19:51	135-98-8	
tert-Butylbenzene	ND ug/kg		4.4	1		12/21/13 19:51	98-06-6	
Carbon tetrachloride	ND ug/kg		4.4	1		12/21/13 19:51	56-23-5	
Chlorobenzene	ND ug/kg		4.4	1		12/21/13 19:51	108-90-7	
Chloroethane	ND ug/kg		8.7	1		12/21/13 19:51	75-00-3	
Chloroform	ND ug/kg		4.4	1		12/21/13 19:51	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-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

**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>8270 MSSV Microwave</b>		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
Acenaphthene	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	83-32-9	
Acenaphthylene	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	208-96-8	
Aniline	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	62-53-3	
Anthracene	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	120-12-7	
Benzo(a)anthracene	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	56-55-3	
Benzo(a)pyrene	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	50-32-8	
Benzo(b)fluoranthene	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	205-99-2	
Benzo(g,h,i)perylene	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	191-24-2	
Benzo(k)fluoranthene	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	207-08-9	
Benzoic Acid	ND ug/kg		2100	1	12/19/13 13:00	12/21/13 00:04	65-85-0	
Benzyl alcohol	ND ug/kg		838	1	12/19/13 13:00	12/21/13 00:04	100-51-6	
4-Bromophenylphenyl ether	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	101-55-3	
Butylbenzylphthalate	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	85-68-7	
4-Chloro-3-methylphenol	ND ug/kg		838	1	12/19/13 13:00	12/21/13 00:04	59-50-7	
4-Chloroaniline	ND ug/kg		2100	1	12/19/13 13:00	12/21/13 00:04	106-47-8	
bis(2-Chloroethoxy)methane	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	111-91-1	
bis(2-Chloroethyl) ether	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	108-60-1	
2-Chloronaphthalene	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	91-58-7	
2-Chlorophenol	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	95-57-8	
4-Chlorophenylphenyl ether	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	7005-72-3	
Chrysene	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	218-01-9	
Dibenz(a,h)anthracene	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	53-70-3	
Dibenzofuran	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	132-64-9	
1,2-Dichlorobenzene	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	95-50-1	
1,3-Dichlorobenzene	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	541-73-1	
1,4-Dichlorobenzene	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	106-46-7	
3,3'-Dichlorobenzidine	ND ug/kg		2100	1	12/19/13 13:00	12/21/13 00:04	91-94-1	
2,4-Dichlorophenol	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	120-83-2	
Diethylphthalate	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	84-66-2	
2,4-Dimethylphenol	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	105-67-9	
Dimethylphthalate	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	131-11-3	
Di-n-butylphthalate	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	84-74-2	
4,6-Dinitro-2-methylphenol	ND ug/kg		838	1	12/19/13 13:00	12/21/13 00:04	534-52-1	
2,4-Dinitrophenol	ND ug/kg		2100	1	12/19/13 13:00	12/21/13 00:04	51-28-5	
2,4-Dinitrotoluene	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	121-14-2	
2,6-Dinitrotoluene	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	606-20-2	
Di-n-octylphthalate	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	117-84-0	
bis(2-Ethylhexyl)phthalate	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	117-81-7	
Fluoranthene	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	206-44-0	
Fluorene	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	86-73-7	
Hexachloro-1,3-butadiene	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	87-68-3	
Hexachlorobenzene	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	118-74-1	
Hexachlorocyclopentadiene	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	77-47-4	
Hexachloroethane	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	67-72-1	
Indeno(1,2,3-cd)pyrene	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	193-39-5	

## REPORT OF LABORATORY ANALYSIS

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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>8270 MSSV Microwave</b>		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
Isophorone	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	78-59-1	
1-Methylnaphthalene	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	90-12-0	
2-Methylnaphthalene	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	91-57-6	
2-Methylphenol(o-Cresol)	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04		
Naphthalene	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	91-20-3	
2-Nitroaniline	ND ug/kg		2100	1	12/19/13 13:00	12/21/13 00:04	88-74-4	
3-Nitroaniline	ND ug/kg		2100	1	12/19/13 13:00	12/21/13 00:04	99-09-2	
4-Nitroaniline	ND ug/kg		838	1	12/19/13 13:00	12/21/13 00:04	100-01-6	
Nitrobenzene	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	98-95-3	
2-Nitrophenol	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	88-75-5	
4-Nitrophenol	ND ug/kg		2100	1	12/19/13 13:00	12/21/13 00:04	100-02-7	
N-Nitrosodimethylamine	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	62-75-9	
N-Nitroso-di-n-propylamine	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	621-64-7	
N-Nitrosodiphenylamine	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	86-30-6	
Pentachlorophenol	ND ug/kg		2100	1	12/19/13 13:00	12/21/13 00:04	87-86-5	
Phenanthrrene	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	85-01-8	
Phenol	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	108-95-2	
Pyrene	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	129-00-0	
1,2,4-Trichlorobenzene	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	120-82-1	
2,4,5-Trichlorophenol	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	95-95-4	
2,4,6-Trichlorophenol	ND ug/kg		419	1	12/19/13 13:00	12/21/13 00:04	88-06-2	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	62 %		23-110	1	12/19/13 13:00	12/21/13 00:04	4165-60-0	
2-Fluorobiphenyl (S)	64 %		30-110	1	12/19/13 13:00	12/21/13 00:04	321-60-8	
Terphenyl-d14 (S)	61 %		28-110	1	12/19/13 13:00	12/21/13 00:04	1718-51-0	
Phenol-d6 (S)	63 %		22-110	1	12/19/13 13:00	12/21/13 00:04	13127-88-3	
2-Fluorophenol (S)	61 %		13-110	1	12/19/13 13:00	12/21/13 00:04	367-12-4	
2,4,6-Tribromophenol (S)	62 %		27-110	1	12/19/13 13:00	12/21/13 00:04	118-79-6	
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
Acetone	ND ug/kg		97.3	1		12/24/13 15:58	67-64-1	
Benzene	ND ug/kg		4.9	1		12/24/13 15:58	71-43-2	
Bromobenzene	ND ug/kg		4.9	1		12/24/13 15:58	108-86-1	
Bromochloromethane	ND ug/kg		4.9	1		12/24/13 15:58	74-97-5	
Bromodichloromethane	ND ug/kg		4.9	1		12/24/13 15:58	75-27-4	
Bromoform	ND ug/kg		4.9	1		12/24/13 15:58	75-25-2	
Bromomethane	ND ug/kg		9.7	1		12/24/13 15:58	74-83-9	
2-Butanone (MEK)	ND ug/kg		97.3	1		12/24/13 15:58	78-93-3	
n-Butylbenzene	ND ug/kg		4.9	1		12/24/13 15:58	104-51-8	
sec-Butylbenzene	ND ug/kg		4.9	1		12/24/13 15:58	135-98-8	
tert-Butylbenzene	ND ug/kg		4.9	1		12/24/13 15:58	98-06-6	
Carbon tetrachloride	ND ug/kg		4.9	1		12/24/13 15:58	56-23-5	
Chlorobenzene	ND ug/kg		4.9	1		12/24/13 15:58	108-90-7	
Chloroethane	ND ug/kg		9.7	1		12/24/13 15:58	75-00-3	
Chloroform	ND ug/kg		4.9	1		12/24/13 15:58	67-66-3	

## REPORT OF LABORATORY ANALYSIS

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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						
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>8270 MSSV Microwave</b>		Analytical Method: EPA 8270 Preparation Method: EPA 3546						
Acenaphthene	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	83-32-9	
Acenaphthylene	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	208-96-8	
Aniline	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	62-53-3	
Anthracene	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	120-12-7	
Benzo(a)anthracene	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	56-55-3	
Benzo(a)pyrene	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	50-32-8	
Benzo(b)fluoranthene	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	205-99-2	
Benzo(g,h,i)perylene	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	191-24-2	
Benzo(k)fluoranthene	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	207-08-9	
Benzoic Acid	ND ug/kg		2130	1	12/19/13 13:00	12/21/13 00:31	65-85-0	
Benzyl alcohol	ND ug/kg		853	1	12/19/13 13:00	12/21/13 00:31	100-51-6	
4-Bromophenylphenyl ether	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	101-55-3	
Butylbenzylphthalate	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	85-68-7	
4-Chloro-3-methylphenol	ND ug/kg		853	1	12/19/13 13:00	12/21/13 00:31	59-50-7	
4-Chloroaniline	ND ug/kg		2130	1	12/19/13 13:00	12/21/13 00:31	106-47-8	
bis(2-Chloroethoxy)methane	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	111-91-1	
bis(2-Chloroethyl) ether	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	108-60-1	
2-Chloronaphthalene	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	91-58-7	
2-Chlorophenol	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	95-57-8	
4-Chlorophenylphenyl ether	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	7005-72-3	
Chrysene	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	218-01-9	
Dibenz(a,h)anthracene	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	53-70-3	
Dibenzofuran	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	132-64-9	
1,2-Dichlorobenzene	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	95-50-1	
1,3-Dichlorobenzene	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	541-73-1	
1,4-Dichlorobenzene	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	106-46-7	
3,3'-Dichlorobenzidine	ND ug/kg		2130	1	12/19/13 13:00	12/21/13 00:31	91-94-1	
2,4-Dichlorophenol	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	120-83-2	
Diethylphthalate	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	84-66-2	
2,4-Dimethylphenol	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	105-67-9	
Dimethylphthalate	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	131-11-3	
Di-n-butylphthalate	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	84-74-2	
4,6-Dinitro-2-methylphenol	ND ug/kg		853	1	12/19/13 13:00	12/21/13 00:31	534-52-1	
2,4-Dinitrophenol	ND ug/kg		2130	1	12/19/13 13:00	12/21/13 00:31	51-28-5	
2,4-Dinitrotoluene	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	121-14-2	
2,6-Dinitrotoluene	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	606-20-2	
Di-n-octylphthalate	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	117-84-0	
bis(2-Ethylhexyl)phthalate	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	117-81-7	
Fluoranthene	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	206-44-0	
Fluorene	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	86-73-7	
Hexachloro-1,3-butadiene	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	87-68-3	
Hexachlorobenzene	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	118-74-1	
Hexachlorocyclopentadiene	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	77-47-4	
Hexachloroethane	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	67-72-1	
Indeno(1,2,3-cd)pyrene	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	193-39-5	

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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>8270 MSSV Microwave</b>		Analytical Method: EPA 8270 Preparation Method: EPA 3546							
Isophorone	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	78-59-1		
1-Methylnaphthalene	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	90-12-0		
2-Methylnaphthalene	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	91-57-6		
2-Methylphenol(o-Cresol)	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	95-48-7		
3&4-Methylphenol(m&p Cresol)	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31			
Naphthalene	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	91-20-3		
2-Nitroaniline	ND ug/kg		2130	1	12/19/13 13:00	12/21/13 00:31	88-74-4		
3-Nitroaniline	ND ug/kg		2130	1	12/19/13 13:00	12/21/13 00:31	99-09-2		
4-Nitroaniline	ND ug/kg		853	1	12/19/13 13:00	12/21/13 00:31	100-01-6		
Nitrobenzene	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	98-95-3		
2-Nitrophenol	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	88-75-5		
4-Nitrophenol	ND ug/kg		2130	1	12/19/13 13:00	12/21/13 00:31	100-02-7		
N-Nitrosodimethylamine	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	62-75-9		
N-Nitroso-di-n-propylamine	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	621-64-7		
N-Nitrosodiphenylamine	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	86-30-6		
Pentachlorophenol	ND ug/kg		2130	1	12/19/13 13:00	12/21/13 00:31	87-86-5		
Phenanthrene	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	85-01-8		
Phenol	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	108-95-2		
Pyrene	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	129-00-0		
1,2,4-Trichlorobenzene	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	120-82-1		
2,4,5-Trichlorophenol	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	95-95-4		
2,4,6-Trichlorophenol	ND ug/kg		426	1	12/19/13 13:00	12/21/13 00:31	88-06-2		
<b>Surrogates</b>									
Nitrobenzene-d5 (S)	55 %		23-110	1	12/19/13 13:00	12/21/13 00:31	4165-60-0		
2-Fluorobiphenyl (S)	49 %		30-110	1	12/19/13 13:00	12/21/13 00:31	321-60-8		
Terphenyl-d14 (S)	56 %		28-110	1	12/19/13 13:00	12/21/13 00:31	1718-51-0		
Phenol-d6 (S)	57 %		22-110	1	12/19/13 13:00	12/21/13 00:31	13127-88-3		
2-Fluorophenol (S)	54 %		13-110	1	12/19/13 13:00	12/21/13 00:31	367-12-4		
2,4,6-Tribromophenol (S)	61 %		27-110	1	12/19/13 13:00	12/21/13 00:31	118-79-6		
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260							
Acetone	<b>228</b> ug/kg		107	1			12/24/13 02:10	67-64-1	A+
Benzene	ND ug/kg		5.4	1			12/24/13 02:10	71-43-2	
Bromobenzene	ND ug/kg		5.4	1			12/24/13 02:10	108-86-1	
Bromochloromethane	ND ug/kg		5.4	1			12/24/13 02:10	74-97-5	
Bromodichloromethane	ND ug/kg		5.4	1			12/24/13 02:10	75-27-4	
Bromoform	ND ug/kg		5.4	1			12/24/13 02:10	75-25-2	
Bromomethane	ND ug/kg		10.7	1			12/24/13 02:10	74-83-9	
2-Butanone (MEK)	ND ug/kg		107	1			12/24/13 02:10	78-93-3	
n-Butylbenzene	ND ug/kg		5.4	1			12/24/13 02:10	104-51-8	
sec-Butylbenzene	ND ug/kg		5.4	1			12/24/13 02:10	135-98-8	
tert-Butylbenzene	ND ug/kg		5.4	1			12/24/13 02:10	98-06-6	
Carbon tetrachloride	ND ug/kg		5.4	1			12/24/13 02:10	56-23-5	
Chlorobenzene	ND ug/kg		5.4	1			12/24/13 02:10	108-90-7	
Chloroethane	ND ug/kg		10.7	1			12/24/13 02:10	75-00-3	
Chloroform	ND ug/kg		5.4	1			12/24/13 02:10	67-66-3	

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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
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
Gasoline Range Organics	mg/kg	49.8	47.9	96	70-165	
4-Bromofluorobenzene (S)	%			98	70-167	

MATRIX SPIKE & 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
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 & 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	

## REPORT OF LABORATORY ANALYSIS

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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	
Bromochloromethane	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	

## REPORT OF LABORATORY ANALYSIS

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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	

## REPORT OF LABORATORY ANALYSIS

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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	

## REPORT OF LABORATORY ANALYSIS

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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	

## REPORT OF LABORATORY ANALYSIS

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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	

## REPORT OF LABORATORY ANALYSIS

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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	

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

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 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	

## REPORT OF LABORATORY ANALYSIS

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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	

## REPORT OF LABORATORY ANALYSIS

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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	

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

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 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			
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		1109340			
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits
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		

## REPORT OF LABORATORY ANALYSIS

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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	
Benzoic 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	

## REPORT OF LABORATORY ANALYSIS

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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	

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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	
Phenanthrene	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 &amp; MATRIX SPIKE DUPLICATE: 1109031 1109032

Parameter	Units	92183618003 Result	MS Spike	MSD Spike	MS	MSD	MS	MSD	% Rec	RPD	Qual
			Conc.	Conc.	Result	Result	% Rec	% Rec	Limits		
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	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

Parameter	Units	92183618003		MS Spike		MSD Spike		MS		MSD		% Rec Limits	RPD	Qual	
		Result	Conc.	Conc.	Result	MSD	Result	% Rec	MSD	% Rec	MSD	% Rec			
4-Bromophenylphenyl ether	ug/kg	ND	2240	2240	1220	929	55	42	31-109	27					
4-Chloro-3-methylphenol	ug/kg	ND	4460	4460	2620	1650	59	37	13-128	46					
4-Chloroaniline	ug/kg	ND	4460	4460	2460	1790J	55	40	18-102						
4-Chlorophenylphenyl ether	ug/kg	ND	2240	2240	1270	968	57	43	29-112	27					
4-Nitroaniline	ug/kg	ND	4460	4460	3170	1470	71	33	16-111	74					
4-Nitrophenol	ug/kg	ND	11200	11200	7020	6250	63	56	14-135	12					
Acenaphthene	ug/kg	ND	2240	2240	1170	978	53	44	26-114	18					
Acenaphthylene	ug/kg	ND	2240	2240	1230	1010	55	45	32-108	19					
Aniline	ug/kg	ND	2240	2240	618	467	28	21	10-107	28					
Anthracene	ug/kg	ND	2240	2240	1330	975	60	44	32-111	31					
Benzo(a)anthracene	ug/kg	ND	2240	2240	1290	870	58	39	25-117	39					
Benzo(a)pyrene	ug/kg	ND	2240	2240	1300	816	58	37	25-106	46					
Benzo(b)fluoranthene	ug/kg	ND	2240	2240	1210	774	54	35	24-110	44					
Benzo(g,h,i)perylene	ug/kg	ND	2240	2240	1140	792	51	35	19-112	36					
Benzo(k)fluoranthene	ug/kg	ND	2240	2240	1190	791	53	35	24-114	40					
Benzoic Acid	ug/kg	ND	11200	11200	1960J	2610	18	23	10-110						
Benzyl alcohol	ug/kg	ND	4460	4460	2690	2370	60	53	24-106	13					
bis(2-Chloroethoxy)methane	ug/kg	ND	2240	2240	1170	1040	53	47	13-119	12					
bis(2-Chloroethyl) ether	ug/kg	ND	2240	2240	1230	1210	55	54	10-134	2					
bis(2-Chloroisopropyl) ether	ug/kg	ND	2240	2240	1220	1130	55	51	10-113	7					
bis(2-Ethylhexyl)phthalate	ug/kg	ND	2240	2240	1210	756	51	30	10-125	46					
Butylbenzylphthalate	ug/kg	ND	2240	2240	1260	805	56	36	18-110	44					
Chrysene	ug/kg	ND	2240	2240	1330	912	60	41	30-110	37					
Di-n-butylphthalate	ug/kg	ND	2240	2240	1210	808	54	36	19-112	39					
Di-n-octylphthalate	ug/kg	ND	2240	2240	1280	793	57	35	17-105	47					
Dibenz(a,h)anthracene	ug/kg	ND	2240	2240	1240	814	55	36	23-111	41					
Dibenzofuran	ug/kg	ND	2240	2240	1090	877	49	39	35-103	22					
Diethylphthalate	ug/kg	ND	2240	2240	1250	900	56	40	27-113	32					
Dimethylphthalate	ug/kg	ND	2240	2240	1260	992	56	44	26-111	24					
Fluoranthene	ug/kg	ND	2240	2240	1390	974	62	44	33-109	35					
Fluorene	ug/kg	ND	2240	2240	1300	1010	58	45	32-113	26					
Hexachloro-1,3-butadiene	ug/kg	ND	2240	2240	915	919	41	41	16-116	0					
Hexachlorobenzene	ug/kg	ND	2240	2240	1090	872	49	39	27-120	22					
Hexachlorocyclopentadiene	ug/kg	ND	2240	2240	859	782	38	35	10-108	9					
Hexachloroethane	ug/kg	ND	2240	2240	1030	1010	46	45	10-117	2					
Indeno(1,2,3-cd)pyrene	ug/kg	ND	2240	2240	1250	817	56	37	10-122	41					
Isophorone	ug/kg	ND	2240	2240	1560	1300	70	58	28-114	18					
N-Nitroso-di-n-propylamine	ug/kg	ND	2240	2240	1400	1100	62	49	27-113	24					
N-Nitrosodimethylamine	ug/kg	ND	2240	2240	973	994	44	44	10-109	2					
N-Nitrosodiphenylamine	ug/kg	ND	2240	2240	961	611	43	27	10-128	45					
Naphthalene	ug/kg	ND	2240	2240	1170	1110	53	50	25-110	6					
Nitrobenzene	ug/kg	ND	2240	2240	1160	1170	52	52	18-114	1					
Pentachlorophenol	ug/kg	ND	4460	4460	2530	1730J	57	39	10-122						
Phenanthrene	ug/kg	ND	2240	2240	1320	996	59	45	30-114	28					
Phenol	ug/kg	ND	2240	2240	1050	805	47	36	11-102	26					
Pyrene	ug/kg	ND	2240	2240	1320	936	59	42	25-116	34					
2,4,6-Tribromophenol (S)	%						53	33	27-110						

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## QUALITY CONTROL DATA

Project: NCDT01413 WBS33507.1.1

Pace Project No.: 92184006

Parameter	Units	92183618003		MS Spike Conc.		MSD Spike Conc.		MS Result		MSD % Rec		% Rec		
		1109031		1109032										
		Result	Conc.	Result	Conc.	Result	Conc.	Result	% Rec	Result	% Rec	Limits	RPD	Qual
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).

## REPORT OF LABORATORY 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		

## REPORT OF LABORATORY 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
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/A

Comments:

Date and Initials of person examining contents: 2012/19/13

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 type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

## Client Notification/ Resolution:

Field Data Required? Y / N

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

Comments/ Resolution: 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.

<b>Section A</b> Required Client Information:		<b>Section B</b> Required Project Information:		<b>Section C</b> Invoice Information:		Page: 1 of 2 <b>1727157</b>	
Company: GEL Eng. of N.C. Address: PO Box 14262 RTP N.C. 27709 Email To: ADE@gel.com Phone: 919-323-8828 Requested Due Date/TAT: Normal TA		Report To: A. Eyer Copy To: Purchase Order No.: WBS No. 33507.1.1 Project Name: B-4159 Project Number: NCDT01413		Attention: A. Eyer NC DOT Company Name: GEL Address: Pace Quote Reference: Pace Project Manager: Pace Profile #: 5996-2		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

ITEM #	Section D Required Client Information		Matrix Codes MATRIX / CODE <small>(see valid codes to left)</small>	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Requested Analysis Filtered (Y/N)				Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
	SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE			COMPOSITE START		COMPOSITE END/GRAB					Y/N ↓					
	DATE	TIME		DATE	TIME	GRO	DRC				VOL's	SURC's				
1 S-18-3	SL G 12/16/13	1330				5	Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol	Other	X X	92184004 001
2 S-18-2	SL G	1350				5									X X	002
3 S-18-1	SL G	1420				5									X X	003
4 S-19-1	SL G	1523				5									X X	004
5 S-20-2	SL G	1555				5									X X	005
6 S-20-1	SL G	1615				5									X X	006
7 S-11-1	SL G	1650				5									X X	007
8 S-11-2	SL G 12/17/13	0930				5									X X	008
9 S-11-3	SL G	0945				5									X X	009
10 S-13-1	SL G	1015				5									X X	010
11 S-13-2	SL G	1045				5									X X	011
12 S-15-1	SL G	1110				5									X X	012
ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	SAMPLE CONDITIONS						
		Steve Rucker GEL 12/18/13 1400				Jackie M. Iler		12/19/13	1115	1.4	Y	N	Y			

ORIGINAL

#### SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

Steve Rucker

SIGNATURE of SAMPLER:

DATE Signed  
(MM/DD/YY): 12/18/13

Temp in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	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

**Section A**

Required Client Information:

Company: GEL ENG. of N.C.

Address: PO Box 14262

RTP N.C. 27709

Email To: ADE@gel.com

Phone: Fax:

Requested Due Date/TAT: NORMAL TA

**Section B**

Required Project Information:

Report To: A. Eyer

Copy To:

Purchase Order No.: WBS No. 33507.1.1

Project Name: B-4159

Project Number: NCDT01413

**Section C**

Invoice Information:

Attention: NCDOT

Company Name:

Address:

Pace Quote Reference:

Pace Project Manager:

Pace Profile #:

**REGULATORY AGENCY**
 NPDES    GROUND WATER    DRINKING WATER

 UST    RCRA

 OTHER \_\_\_\_\_

**Site Location**

STATE: NC

**Requested Analysis Filtered (Y/N)**

ITEM #	SAMPLE ID (A-Z, 0-9 / ,) Sample IDs MUST BE UNIQUE	Matrix Codes MATRIX / CODE <small>DW DW WT WT WW WW P P SL SL OL OL WP WP AR AR TS TS OT OT</small>	MATRIX CODE SAMPLE TYPE (see valid codes to left) <small>G=GRAB C=COMP</small>	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Y/N ↓ Analysis Test ↓	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.						
				COMPOSITE START		COMPOSITE END/GRAB													
				DATE	TIME	DATE	TIME												
1	S-12-1	SLG	12/17/13 1155					Unpreserved	5	H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> HCl NaOH Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> Methanol Other	GRD DRO VOC's SVOC's	X X	92184006-013						
2	S-12-2	SLG		1230					5			X X	014						
3	S-12-4	SLG		1245					5			XX	015						
4	S-12-3	SLG		1310					5			XX	016						
5	S-12-5	SLG		1509					5			XX	017						
6	S-12-6	SLG		1540					5			XX	018						
7	S-12-7	SLG		1555					5			XX	019						
8	S-12-8	SLG		1610					5			XX	020						
9	S-12-9	SLG		1625					5			XX	021						
10	S-8-1	SLG		1635					5			XX	022						
11	S-8-2	SLG	12/18/13 0855						5			XX	023						
12	S-8-5	SLG	12/18/13 0925						5			XX	024						

**ADDITIONAL COMMENTS**
**RELINQUISHED BY / AFFILIATION**

DATE

TIME

**ACCEPTED BY / AFFILIATION**

DATE

TIME

**SAMPLE CONDITIONS**

Steve Rucker GEL 12/18/13 1400 Took in 1Pc

12/19/13 1115 14 Y N Y

**ORIGINAL**
**SAMPLER NAME AND SIGNATURE**

PRINT Name of SAMPLER:

Steve Rucker

SIGNATURE of SAMPLER:

Steve Rucker

 DATE Signed  
(MM/DD/YY):

12/18/13

Temp in °C

 Received on  
Ice (Y/N)

 Custody  
Sealed Cooler  
(Y/N)

 Samples intact  
(Y/N)