ELECTRICAL RESISTANCE HEATING REMEDIAL ACTION REPORT

CTS OF ASHEVILLE, INC. SUPERFUND SITE

235 Mills Gap Road
Asheville, Buncombe County, North Carolina
EPA ID: NCD003149556
Consent Decree – Civil Action No. 1:16-cv-380

Prepared for:

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Prepared by:

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Wood Project 6252-16-2012

August 7, 2018

wood.

August 7, 2018

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Superfund Remedial and Site Evaluation Branch
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Subject: **Electrical Resistance Heating Remedial Action Report**
CTS of Asheville, Inc. Superfund Site
235 Mills Gap Road, Asheville, Buncombe County, North Carolina
EPA ID: NCD003149556
Consent Decree – Civil Action No. 1:16-cv-380
Wood Project 6252-16-2012

Dear Mr. Zeller:

Please find attached the Electrical Resistance Heating Remedial Action Report (RA Report) for the above-referenced Site. Wood Environment & Infrastructure Solutions, Inc. prepared this RA Report on behalf of CTS Corporation to comply with the Consent Decree for Interim Remedial Design/Remedial Action at the CTS of Asheville, Inc. Superfund Site between the United States of America and CTS Corporation, Mills Gap Road Associates, and Northrop Grumman Systems Corporation (entered on March 7, 2017).

If you have questions regarding this RA Report, please contact us at (828) 252-8130.

Sincerely,

Wood Environment & Infrastructure Solutions, Inc.

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LIST OF ACRONYMS

bgs	below ground surface
CD	Consent Decree
CQA/QCP	Construction Quality Assurance/Quality Control Plan
cy	cubic yard
ERH	electrical resistance heating
LGAC	liquid-phase granular activated carbon
LNAPL	light non-aqueous phase liquid
MDL	method detection limit
µg/L	micrograms per liter
µg/m^3	micrograms per cubic meter
mg/kg	milligrams per kilogram
MSD	Metropolitan Sewerage District (of Buncombe County)
NAPL	non-aqueous phase liquid
NCDEQ	North Carolina Department of Environmental Quality
O&M	operation and maintenance
OWS	oil-water separator
ppb	parts per billion
PID	photoionization detector
PCU	power control unit
QAPP	Quality Assurance Project Plan
QA/QC	quality assurance/quality control
RAO	remedial action objective
RAWP	Remedial Action Work Plan
RA	Remedial Action
RD	Remedial Design
ROD	Record of Decision
RTO	regenerative thermal oxidizer
SOW	Statement of Work
SVOC	semivolatile organic compound
TCE	trichloroethene (also, trichloroethylene)
TMP	temperature monitoring point
USEPA	United States Environmental Protection Agency
VOC	volatile organic compound
VR	vapor recovery
WNCRAQA	Western North Carolina Regional Air Quality Agency

1.0 BACKGROUND

This document presents the Electrical Resistance Heating (ERH) Remedial Action Report (RA Report) for construction of the ERH system at the CTS of Asheville, Inc. Superfund Site (Site) located at 235 Mills Gap Road in Asheville, Buncombe County, North Carolina (Figure 1). This ERH RA Report has been prepared to comply with Paragraph 4.5 (d) of the Statement of Work (SOW) of the Consent Decree for Interim Remedial Design/Remedial Action (CD) at the Site between the United States of America and CTS Corporation, Mills Gap Road Associates, and Northrop Grumman Systems Corporation (Settling Defendants).

1.1 SITE DESCRIPTION

The approximate center of the Site is located at north latitude 35°29'36" and west longitude 82°30'25". The Site formerly contained an approximate 95,000-square foot, single-story brick and metal structure on the southern portion of the Site. The building was demolished in December 2011 and the concrete building pad remains intact. The northeastern portion of the Site contains an asphalt-paved parking area, and asphalt-paved driveways are located parallel to the north (front) of the building pad and southeast (rear) of the building pad. A six-foot high chain-link fence surrounds the Site and a locked gate at the north end of the Site controls access to the Site from Mills Gap Road. The Site is unoccupied. The Site and surrounding area is illustrated on Figure 2.

1.2 BACKGROUND

A non-aqueous phase liquid (NAPL) investigation was conducted at the Site in 2013 and 2014. An approximate one-acre area containing light NAPL (LNAPL) with comingled trichloroethene (TCE) was identified (Amec, 2014a). A Focused Feasibility Study was conducted to evaluate potential remedial alternatives for the one-acre LNAPL area. ERH was chosen as the recommended alternative (Amec Foster Wheeler, 2015a). An additional approximate 0.2-acre area located adjacent and upgradient of the LNAPL area where

elevated TCE concentrations had been detected was added to the proposed treatment area (Amec Foster Wheeler, 2015b). This 1.2-acre area is considered the TCE source area.

The United States Environmental Protection Agency (USEPA) approved ERH as the recommended interim remedial alternative for the TCE source area and memorialized the decision in the Interim Record of Decision (ROD) in February 2016. A chronology of events related to implementation of the ROD and construction of the ERH system is summarized in Table 1.

1.3 REMEDIAL ACTION OBJECTIVE

ERH is being implemented in the approximate 1.2-acre source area. In addition to TCE, the source area contains LNAPL from weathered fuel oil. In this area, TCE exists in three states: dissolved in groundwater, sorbed to saturated soil, and partitioned in the petroleum LNAPL. A remedial action objective (RAO) of a 95 percent reduction of TCE concentrations will be applied to saturated soil, groundwater and LNAPL samples collected in the ERH treatment area.

An Interim Remedial Action Objective Values Technical Memorandum (Interim RAO Tech Memo), was submitted to USEPA on June 1, 2018. The Interim RAO Tech Memo described the procedures conducted to collect baseline/pre-remediation samples of saturated soil, groundwater and LNAPL in the treatment area. The average concentration for each media were presented, as well as the calculated 5 percent interim RAO TCE values (i.e., 95 percent removal).

The pre-remediation and calculated interim RAO values are summarized in the following table:

Media	Average Pre-Remediation TCE Concentration	Interim RAO TCE Concentration
Saturated soil	59,496 µg/kg	2,975 µg/kg
Groundwater	16,523 µg/L	826 µg/L
LNAPL	8,080 mg/kg	404 mg/kg
µg/kg – micrograms per kilogram µg/L – micrograms per liter mg/kg – milligrams per kilogram		

The Interim RAO Tech Memo was approved by USEPA on June 4, 2018.

Based on ERH remediation system performance indicators, at a time mutually-agreed upon with the ERH contractor, "confirmation" or post-remediation saturated soil, groundwater, and LNAPL samples will be collected. Groundwater and LNAPL samples will be collected from the same monitoring wells where pre-remediation samples were collected. Soil samples will be collected from a boring adjacent (i.e., within approximately two feet) to each pre-remediation boring, and soil samples will be collected from the same sample intervals from the respective adjacent borings.

If sufficient LNAPL is not present in a monitoring well for collection of a post-remediation sample, the TCE concentration will be considered as zero at that location for averaging purposes. If TCE is not detected above the Method Detection Limit (MDL) in saturated soil and groundwater samples, one-half of the MDL concentration for that sample will be used in the post-remediation average concentration determination.

1.4 COMPLIANCE MONITORING

Two waste streams are generated during operation of the ERH system: wastewater discharge and air/vapor discharge. Wastewater samples are collected monthly during operation to evaluate compliance with the Metropolitan Sewerage District (MSD) of Buncombe County wastewater pretreatment permit, as described in Section 2.6. Although a

permit was not required for the air/vapor discharge or perimeter air conditions, air samples are collected to evaluate compliance with the Western North Carolina Regional Air Quality Agency (WNCRAQA) regulations, as described in Section 3.3.

1.5 REMEDIAL DESIGN ELEMENTS

The ERH Final Remedial Design (Final RD) was submitted to USEPA on November 27, 2017, and approved by USEPA on December 18, 2017. The Final RD contained descriptions of the remedial design elements, construction activities, operation and maintenance (O&M) procedures, monitoring activities, and procedures for protecting human health and the environment. Elements of the remedial design are described below. The Final RD was completed by TRS Group, Inc. (TRS), the ERH contractor, with input from Wood and the Settling Defendants.

ERH is a process whereby soil and groundwater are heated by passing an electrical current through the subsurface between electrodes. Resistance of the flow of electrical current by the subsurface materials (primarily groundwater) induces the heating. A power control unit (PCU), which is a variable transformer system capable of providing multiple simultaneous power outputs at automatically adjustable levels, delivers energy to the electrodes.

The electrodes consist of the electrode element(s) and backfill consisting of graphite and steel shot. The backfill materials are conductive and essentially increase the surface area of the electrode. The electrode elements are installed from the water table to top of bedrock. The heat created by resistance to the current creates steam and evaporates the volatile contaminants. Vacuum blowers at ground surface connected to vapor recovery (VR) points create a negative pressure in the treatment area. The steam generated by ERH acts as a carrier gas to transport volatile organic compounds (VOCs) to the VR points. Steam and contaminant vapors are then transported to the ERH treatment compound. The heat

generated in the subsurface is monitored by temperature monitoring points (TMPs), which contain multi-level temperature probes at each TMP.

The Final RD indicated a treatment area of approximately 56,100 square feet and a treatment volume of approximately 47,200 cubic yards. The actual treatment volume was expected to change based on the depth to the water table and drilling refusal encountered in the field. The general average subsurface temperature goal is 87 degrees Celsius, which is the boiling point of TCE; however, this value changes with varying TCE concentrations in the water and depth in the water column (pressure). The energy density goal is 175 kilowatt-hours per cubic yard, which, with the assumed treatment volume and energy required for the treatment system equipment, results in an energy consumption of approximately 8,510,000 kilowatt-hours. The Final RD included specifications for subsurface heating, vapor extraction, and monitoring equipment, and the installation of an above-ground vapor treatment system.

The Final RD included 229 electrodes co-located with vapor recovery wells, 2 vapor-only recovery points, and 18 TMPs.

The Final RD included installation of an above-ground vapor treatment system consisting of the following:

- Two steam condensers with cooling towers
- Two vacuum blowers
- A condensate treatment system, including an oil-water separator (OWS), two liquid granular activated carbon (LGAC) units and an air stripper
- A regenerative thermal oxidizer (RTO) with an acid gas scrubber

The Final RD included the use of two PCUs connected to a temporary electrical service. The PCUs consist of a variable voltage transformer system capable of providing three simultaneous power outputs at automatically adjustable levels of 130 to 860 volts. The Final

RD indicated the ERH system would contain remote data acquisition software to collect and store data related to subsurface temperatures, power input, voltage, amperage, and treatment system operational parameters.

2.0 CONSTRUCTION ACTIVITIES

2.1 WELL ABANDONMENT ACTIVITIES

Prior to initiating installation of subsurface system components, existing PVC piezometers/ wells in the treatment area were abandoned. The following wells were abandoned in accordance with North Carolina Department of Environmental Quality (NCDEQ) regulations using a neat cement grout:

- Monitoring well MW-3A
- Piezometers PZ-1, PZ-2 and PZ-3
- SVE extraction wells VE-1 through VE-15
- SVE pilot test observation wells OW-1, OW-3 and OW-4 (OW-2 could not be located)

The NCDEQ well abandonment forms for the above piezometers/wells are included in Appendix A.

2.2 SITE PREPARATION ACTIVITIES

Prior to subsurface system component installation activities, the following Site preparation activities were conducted:

- Clearing of vegetation around the Site entrance to provide improved ingress/egress visibility from/to Mills Gap Road.
- Installation of signage along Mills Gap Road notifying traffic of the Site entrance.
- Installation of new/additional fencing and gate at the entrance to the Site with a holding area. A Site trailer was installed along the new fencing in such a way that Site visitors can only enter the restricted-access area through the Site trailer.
- Installation of a gravel drive to the northwestern area of the former building pad to allow for heavy equipment and supply unloading on the former building pad.
- Clearing/grubbing in the treatment area to remove vegetation and other surface obstructions.
- Clearing and tree removal in the southern and southeastern portion of the treatment area, as necessary for drill rig access, piping installation, and overhead electrical line installation.

Prior to installation of subsurface components on the adjacent property to the east, a portion of the fence where the treatment area extends off-Site to the east was removed and a temporary fence was installed approximately 10 feet to the east, on the adjacent off-Site property. The temporary fence has screens to prevent persons from being able to contact the area on the interior of the fence where electrode components are located.

2.3 SUBSURFACE INSTALLATION ACTIVITIES

Drilling activities were conducted between December 11, 2017, and May 3, 2018. The drilling activities were temporarily suspended at the end of February 2018 for relocation of an overhead electrical line in the eastern and southeastern portion of the treatment area. Drilling activities resumed the week of March 19, 2018.

Vertical electrode borings were advanced at 190 locations. Angled electrode borings were advanced at 37 locations where there are surface obstructions or steep topography and at the eastern property boundary/fence to access the subsurface treatment area on the off-site property to the east. Figure 3 contains a layout of the electrodes and TMPs.

At locations where the treatment interval was thick (i.e., greater than approximately 28 feet) two electrode elements were installed so that the power delivery to the elements could be adjusted over more discrete intervals. In areas where quartz/rock zones were identified (these zones result in a higher electrical resistance), two elements were installed when the treatment interval was greater than approximately 23 feet. A total of 353 electrode elements were installed.

Two planned electrodes, V2 and W4 located in the southwestern portion of the treatment area, were not installed, as the depth to bedrock was approximately one foot below the water table at the time of drilling. Also, during system start-up testing, it was determined that the lower elements at electrodes B12 and J14 were not operating as designed. A

replacement J14 electrode, with a shallow and deep element, was installed on June 26, 2018. The deep element at electrode B12 was not replaced, as this electrode is in the most downgradient edge of the treatment area and will receive heated groundwater from the upgradient treatment area. Also, if determined necessary, this area can be treated during the second part of the Interim RA (in-situ chemical oxidation of the downgradient plume).

The electrodes, which have co-located VR points and 'drip tubes', were installed using nominal 8.25-inch diameter hollow-stem augers (creating a 12-inch diameter borehole). The borings were advanced to auger refusal. At some locations where auger refusal was shallower than anticipated, roller cone rotary equipment was used to advance the boring deeper. In most cases where roller cone rotary equipment was used, it appears that the bedrock is indeed shallower than the surrounding area.

The electrodes extend from the depth of the water table to drilling refusal. The electrode elements consist of a copper plate connected to a power supply cable. The borehole annulus surrounding the elements was backfilled with graphite and steel shot. Where two elements were installed in a boring, an approximate three-foot layer of sand was placed between the two elements/conductive intervals. A 'drip tube' consisting of slotted copper tubing attached to crosslinked high-density polyethylene piping was placed immediately above the top of the conductive backfill (Note: the drip tube will be used to inject water if determined to be needed during ERH operation).

The vapor recovery points consist of a one-inch diameter, three-foot long stainless-steel screen, which was positioned approximately four feet above the conductive backfill. Course sand was placed to approximately two-feet about the screen above which an approximate one-foot layer of extra fine sand was placed. The remainder of the borehole above the extra fine sand was backfilled with neat Portland cement.

The 18 TMPs were installed using nominal 3.25-inch or 4.25-inch hollow-stem augers. The borings were advanced until auger refusal was encountered. A 1.5-inch diameter copper or steel pipe was placed in the borings and the boring annulus was backfilled with neat Portland cement. Resistance temperature detectors were placed at five-foot intervals in the TMPs from the water table to approximately one foot above the shallowest adjacent electrode.

Two individual VR points were installed in angled borings advanced using nominal 4.25-inch hollow-stem augers (creating a nominal 8-inch diameter borehole) to the eastern off-Site property. The VR points were installed in the same manner as the co-located VR points.

During drilling, ambient air monitoring was performed using a photoionization detector (PID) capable of measuring volatile organics in the parts per billion (ppb) range to monitor ambient air conditions in the areas of the drilling activities and the waste containers. The monitoring indicated air quality was protective of on-site workers and the adjacent community during the drilling activities.

Wood provided oversight of the drilling activities and managed the waste pickup/disposal/ manifesting (see Section 2.4). TRS provided the electrode/TMP design and materials for the electrodes and TMPs. Copies of log books used to document construction activities are included in Appendix B. Table 2 contains a summary of the electrode construction details.

2.4 MONITORING WELL CONSTRUCTION

Eighteen monitoring wells were installed in the ERH treatment area between February 20 and March 23, 2018. As described in the USEPA-approved ERH Performance Monitoring Well Construction Modifications Technical Memorandum, dated February 20, 2018, two of the proposed monitoring wells were not installed due to the shallower than expected depth to bedrock, and several monitoring well clusters were relocated due to obstructions or the

depths of adjacent electrodes. The locations of these eighteen new monitoring wells are shown in Figure 5. The monitoring well construction diagrams and NCDEQ monitoring well construction records are included in Appendix C.

2.5 WASTE MANAGEMENT ACTIVITIES

During installation of initial electrodes, soil samples were collected from soil cuttings generated at varying depths between 4 and 64 feet below ground surface (bgs). The soil samples were submitted to Pace Analytical Services for analysis of VOCs and semivolatile organic compounds (SVOCs) according to USEPA Methods 8260 and 8270, respectively. Also, soil samples collected from the unsaturated/vadose zone were also submitted for analysis of RCRA metals using the Toxicity Leaching Characteristic Procedure and USEPA Methods 6010 and 7470. The analytical reports are included in Appendix D.

The analytical results indicated that soil from the unsaturated zone (from ground surface to 15 to 20 feet bgs) could be managed as non-hazardous waste, and saturated soil could be managed as hazardous waste (total VOC concentrations of 60 to 500 mg/kg). During the drilling activities, the soil generated was transferred to 'roll-off' waste containers. The non-hazardous/unsaturated soil cuttings were segregated from the hazardous/saturated soil cuttings.

Prior to demobilization of a drill rig from the Site, the drill rig and drilling equipment were decontaminated using a pressurized steam cleaner. Water generated from the decontamination activities was containerized in 55-gallon drums. The drums were managed as a hazardous waste. Soil cuttings generated during installation of replacement electrode J14 was containerized in 55-gallon drums. Unsaturated soil cuttings from ground surface to 20 feet were managed as non-hazardous waste and saturated soil cuttings were managed as hazardous waste.

Waste generated during the drilling activities was transported by A&D Environmental Services, or a subcontractor to them, to the appropriate USEPA-approved disposal facility. Approximately 74 tons of non-hazardous soil were disposed of at the Republic Services facility in Enoree, South Carolina. Approximately 1 ton of non-hazardous soil was transferred to the A&D facility located in High Point, North Carolina, and then disposed of at Great Oak Landfill in Randleman, North Carolina. Approximately 479 tons of hazardous soil was disposed of at the US Ecology facility located in Bellville, Michigan. Approximately 3 tons of hazardous soil and 1,300 gallons of hazardous water were disposed of at the Clean Harbors facility in LaPorte, Texas.

Appendix E contains the completed waste manifests generated during the subsurface installation activities.

2.6 WASTEWATER DISCHARGE PERMIT

A permit for discharge of wastewater from a groundwater remediation system was obtained from MSD. Permit Number G-050-18 was issued to CTS Corporation on June 5, 2018. The permit requires the following monitoring activities:

- Collection of influent/effluent water samples from the condensate water treatment system on a monthly basis
- Collection of effluent samples from the acid gas scrubber on a monthly basis
- Measurement of pH on a monthly basis from the combined discharge
- Reporting of total monthly flow

The permit requires analysis of the influent/effluent samples for VOCs and SVOCs according to USEPA Methods 8260 and 8270, respectively. The permit requires a contaminant removal efficiency of greater than 95 percent for the condensate treatment system (Note: the removal efficiency is not calculated for estimated concentrations). The permit also requires that the total concentration of VOCs and SVOCs detected in the acid gas scrubber effluent

be less than 0.10 milligrams per liter (Note: the total VOC/SVOC calculation does not include estimated concentrations). The results are reported to MSD monthly.

2.7 SURFACE INSTALLATION AND START-UP ACTIVITIES

Surface installation activities began the week of February 26, 2018, and included construction of the water and vapor treatment systems. Surface installation activities were conducted by TRS, as described in TRS's Construction and Start-up Report, dated July 30, 2018 (Appendix F). As-built drawings of the constructed system, which are sealed by the engineer of record, are included as an attachment to TRS's Report.

As described in TRS's Report, system start-up began on May 14, 2018. Start-up and shakedown activities included energizing the system components and testing the functionality of equipment and interlocks. Application of energy to the subsurface began on May 29, 2018, at which time step-and-touch voltage surveys were conducted. The system reached continuous full operating power on June 8, 2018.

2.8 DESIGN MODIFICATIONS

Due to an increase in the treatment volume from what was estimated in the Final RD, two design modifications to the ERH treatment system were made. The original design included two condenser units and two vacuum blowers. To accommodate the additional treatment volume, an additional condenser/blower package was installed. The original design also included an air stripper to provide additional/polishing treatment of the condensate water. Due to a limitation on the air flow that the RTO can accept, the air stripper was not installed. The air stripper remains at the Site so that it can be incorporated into the ERH system if determined necessary.

Other design modifications include:

- Two electrodes, V2 and W4, were not installed, as sufficient treatment thickness was not encountered.
- A replacement electrode J14 was installed. A VR point was not installed in the replacement electrode borehole, as the VR point at the adjacent original electrode is operational.
- At some locations, the treatment interval was less than 10 feet, which is TRS's minimum treatment interval thickness. In such instances, a 10-foot electrode element was installed and extends into the unsaturated/vadose zone soil (Note: the electrode length above the water table was not included in the treatment volume calculations discussed in Section 3.1).

2.9 ERH SYSTEM OPERATION AND MAINTENANCE

TRS is responsible for operation and maintenance (O&M) of the ERH system with oversight by Wood. O&M information is included in TRS's Final Design, Execution Plan, and Operation & Maintenance Plan which was included in Appendix C of the Final RD. O&M activities are being conducted as planned, and generally include the following:

- Measurement of operational parameters, including power input, subsurface temperatures, and condensate production.
- Optimization/reconfiguration of power input to electrodes based on subsurface temperatures.
- Adjustment of vapor recovery flow to optimize vapor recovery.
- Measurement of LNAPL thickness in the OWS.
- Inspection and maintenance of equipment based on manufacturer's recommendations.
- Implementation of voltage surveys.
- Operation of security equipment.

3.0 PERFORMANCE STANDARDS AND CONSTRUCTION QUALITY CONTROL

The follow sections describe the performance standards and monitoring associated with the ERH system, as well as the construction quality control implemented during ERH system construction.

3.1 TREATMENT VOLUME

The depth to auger refusal was generally less than anticipated in the western and southern portions of the treatment area, and generally greater than anticipated in the central, northern, and eastern portions of the treatment area. Also, due to two electrodes not being installed because of minimal saturated zone thickness, the treatment area decreased by approximately 490 square feet. The original treatment interval was estimated to average 22.7 feet, and the original treatment volume was calculated to be 47,250 cubic yards (cy). Using the average constructed treatment interval of 26.2 feet, and an area of 55,610 square feet, the calculated treatment volume which was constructed is approximately 53,960 cy.

3.2 SAMPLING AND ANALYSIS STRATEGY

Samples will be collected during operation of the ERH system for system performance monitoring, remediation performance monitoring, and health and environmental-related monitoring, as follows:

- System performance monitoring includes collection of screening measurements and samples for chemical analysis to monitor the performance of the vapor and liquid treatment systems (Note: some of these samples are also for compliance monitoring).
- Remediation performance monitoring includes collection of samples for chemical analysis to determine whether the remedial goal has been achieved.
- Health and environmental protection-related monitoring includes collection of air samples to monitor ambient conditions at the property boundary.

Data quality procedures are described in the ERH Remedial Action Work Plan (RAWP) Quality Assurance Project Plan (QAPP), dated January 17, 2018. The samples to be collected, as well as associated quality assurance/quality control procedures, are described in the following sections.

3.3 VAPOR TREATMENT SYSTEM SAMPLING

Influent and effluent vapor samples are collected from the vapor treatment system. Influent samples are collected from the vapor piping upstream of the RTO and effluent samples are collected from the discharge stack on the acid gas scrubber. The samples are submitted for VOCs according to TO-15. The samples are submitted for a Level II data package, as data validation of the analytical results is not warranted. This influent VOC data is used to calculate the VOC mass extracted from the subsurface. The effluent VOC data is used to calculate the VOC mass being discharged and to determine if the mass being discharged in compliance with WNCRAQA regulations. The influent and effluent samples were collected twice per week during the first two weeks of system operation and are now collected weekly during the peak heating period.

The concentration of VOCs in the vapor stream is also screened using a PID. The PID provides qualitative results, but is useful to monitor relative VOC concentrations for evaluation of system performance.

3.4 WATER TREATMENT SYSTEM SAMPLING

In compliance with the wastewater discharge permit, influent and effluent water samples are collected from the condensate water treatment system. Influent samples are collected upstream of the OWS and effluent samples are collected downstream of the LGAC. Samples are also collected from the acid gas scrubber effluent. The samples are submitted for VOCs and SVOCs according to USEPA Methods 8260 and 8270, respectively. The samples are

submitted for a Level II data package, as data validation of the analytical results is not warranted. The condensate treatment system results are used to determine if the compound recovery rate of 95 percent is being achieved. The acid gas scrubber effluent results are used to determine if concentrations of total VOCs and SVOCs are less than 100 micrograms per liter.

3.5 AMBIENT AIR MONITORING/SAMPLING

Ambient air is monitored at four locations near the perimeter of the Site (Figure 4). The air monitors consist of a calibrated PID that measures total VOCs in the ppb range. The PIDs take a reading every minute. The reading is uploaded to a website via a telemetry system and the readings are remotely observed and downloaded. The 24-hour average is calculated by the PID and the value is also uploaded. If the 24-hour average value exceeds 11 ppb, the PID will alarm and efforts to determine the source of the elevated PID readings will be conducted. This air monitoring data is considered screening level data and is not used to determine compliance with a regulation.

Ambient air samples are collected at the four air monitoring stations to determine compliance with the WNCRAQA regulation, which is an annualized average TCE concentration of 59 micrograms per cubic meter. Baseline ambient air samples were collected prior to operation of the ERH system. Ambient air samples were collected every two weeks during initial ERH system operation and are collected weekly during peak subsurface heating. After peak heating, ambient air samples will be collected every two weeks.

Ambient air samples are collected over a 24-hour period and submitted for analysis of VOCs according to Method TO-15. The samples are submitted for a Level IV data package and data validation of the analytical results is performed.

3.6 RAO SAMPLING

RAO sampling consists of collecting saturated soil, groundwater, and LNAPL samples to document that the RAO of 95 percent removal of TCE has been met. The results of the baseline/pre-remediation sampling were provided in the RAO Tech Memo and are discussed in Section 1.3. Sampling procedures are described in the RAWP Field Sampling and Analysis Plan, and quality assurance/quality control procedures are described in the RAWP QAPP.

3.7 CONSTRUCTION QA/QC

Construction quality assurance/quality control (QA/QC) procedures were implemented as described in the Construction Quality Assurance/Quality Control Plan (CQA/QCP), which was Appendix D of the Final RD. The CQA/QCP described planned and systematic activities that provide confidence that the remedial action construction will satisfy plans, specifications, and related requirements. There were no changes to the project (personnel) organization as presented in the CQA/QCP. The following QA/QC activities were conducted:

- Surveying of electrode locations was conducted by North Carolina-licensed surveyors. Locating of subsurface utilities in the area of the system installation was completed by professional subsurface utility locators.
- Drilling activities were conducted by North Carolina-licensed well contractors.
- Utility construction activities were conducted by North Carolina-licensed contractors in accordance with applicable regulations.
- During construction, phases of the construction were reviewed as related to the design. In general, reviews were conducted after drilling/electrode installation activities, during system surface construction, and at shakedown/initial operation. USEPA participated in the phased inspections.
- Construction deficiencies were identified when a performed work, material, or installation did not meet project plans or specifications. An example of a major deficiency was the operation of electrode J14. The corrective action was the replacement of the electrode elements adjacent to the original electrode.
- Minor deficiencies identified during the construction were corrected promptly and documented by TRS.

The ERH system was constructed as designed, with exception of items described in Section 2.8.

Construction QA/QC related to the system equipment was performed by TRS with oversight by Wood. TRS's Construction and Start-up Report (Appendix F) describes QA/QC documentation and includes the ERH system as-built documentation/drawings.

3.8 USEPA OVERSIGHT ACTIVITIES

The USEPA provided oversight of the ERH system construction activities. The USEPA Remedial Project Manager visited the Site nine times during the construction activities, including during the shakedown testing period of the system construction, and at the completion of system construction and initial system operation. USEPA Public Relations personnel also visited the Site six times to conduct meetings with community members and media outlets. USEPA has not collected environmental samples associated with construction of the ERH system.

4.0 FINAL INSPECTION AND CERTIFICATIONS

TRS conducted the final inspection of the constructed ERH system, with oversight by Wood and USEPA. Construction of the ERH system is complete and the system is operating properly and as designed.

4.1 SAFETY

Safety procedures contained in the Site Health and Safety Plan were followed during the RA construction activities. There were no Occupational Safety and Health Administration recordable incidents, or releases of material/chemicals to the environment/community which required a response. During the start-up of the ERH system, the Skyland Fire Department was invited to the Site and received a tour of the system for familiarity of the operations in the event of a Site response. TRS's Start-up Safety Checklist is contained in Appendix F.

4.2 CERTIFICATIONS

As required by Section 4.5(d) of the CD SOW, below are the required Certifications by the Settling Defendants' Project Coordinator and the Supervising Contractor.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violation.

For the Settling Defendants:

George Lytwynyshyn, CTS Corporation
Project Coordinator

For the Supervising Contractor

Matthew Wallace, P.E.
Wood Environment & Infrastructure Solutions, Inc.

5.0 CONTACT INFORMATION

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6.0 REFERENCES

Amec Environment & Infrastructure, Inc., 2014a. NAPL Investigation Report, CTS of Asheville, Inc. Superfund Site (May 5, 2014).

Amec Environment & Infrastructure, Inc., 2014b. Report of Soil Vapor Extraction Confirmation Sampling and Analysis, CTS of Asheville, Inc. Superfund Site (May 5, 2014)

Amec Foster Wheeler, 2015a. Final NAPL Area Focused Feasibility Study Report, CTS of Asheville, Inc. Superfund Site, September 10, 2015.

Amec Foster Wheeler, 2015b. NAPL Area Focused Feasibility Study Report Addendum, CTS of Asheville, Inc. Superfund Site, November 25, 2015.

TABLES

TABLE 1
Chronology of Events Related to ERH Interim Remedial Action
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Wood Project 6252-16-2012

Date	Event
2/11/2016	Interim Action Record of Decision signed
3/7/2017	Consent Decree entered
4/19/2017	Remedial Design Work Plan submitted to USEPA
5/1/2017	Remedial Design Work Plan approved by USEPA
9/29/2017	ERH Preliminary Remedial Design submitted to USEPA
11/27/2017	ERH Final Remedial Design submitted to USEPA
12/7/2017	USEPA approval to begin ERH installation activities
12/11/2017 - 5/3/2018	Installation of subsurface components (electrodes, temperature monitoring points, monitoring wells)
12/18/2017	ERH Final Remedial Design approved by USEPA
1/17/2018	ERH Remedial Action Work Plan submitted to USEPA
2/16/2018	ERH Remedial Action Work Plan approved by USEPA
2/20/2018	ERH Performance Monitoring Well Construction Modifications Technical Memorandum submitted to USEPA
2/23/2018	USEPA approval of monitoring well construction modifications
2/26/2018	Begin installation of aboveground piping/cabling and connection of treatment equipment
3/5/2018 - 3/12/2018	Collect baseline soil samples
3/6/2018	Conduct the Preconstruction Conference at the Site
3/29/2018 - 4/4/2018	Collect baseline groundwater and LNAPL samples
5/14/2018 - 6/8/2018	Conduct testing of equipment (shakedown period) and Inspection of Constructed Remedy
5/22/2018	Begin continuous ambient air monitoring at the perimeter of the Site
6/1/2018	Interim Remedial Action Objective Values Technical Memorandum submitted to USEPA
6/4/2018	Interim Remedial Action Objective Values Technical Memorandum approved by USEPA
6/6/2018 - 6/7/2018	Collect baseline ambient air samples at the perimeter of the Site
6/8/2018	ERH system fully operational

Prepared By: SEA 7/6/18
Checked By: MEW 7/6/18

TABLE 2
Summary of Electrode Installations
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Wood Project 6252-16-2012

Electrode ID	Date Installed	Vertical or Angled	Number of Elements	Assumed Water Table Depth (feet bgs)	Top of Conductive Interval (feet bgs)	Bottom of Conductive Interval (feet bgs)	Treatment Thickness (feet)
B-12	2/1/2018	V	2	24	24	62.5	38.5
B-13	1/31/2018	V	2	24	24	70	46
C-11	2/13/2018	V	2	24	24	59.5	35.5
C-12	2/13/2018	V	2	24	24	62	38
C-13	2/14/2018	V	2	24	24	63	39
C-14	2/15/2018	V	2	24	24	63.5	39.5
D-11	2/12/2018	V	2	24	24	61.5	37.5
D-12	2/8/2018	V	2	24	24	60	36
D-13	2/6/2018	V	2	24	24	60.5	36.5
D-14	2/5/2018	V	2	24	24	62	38
D-15	2/2/2018	V	2	24	24	61	37
E-11	1/18/2018	V	2	24	24	60	36
E-12	1/17/2018	V	2	24	24	60	36
E-13	1/16/2018	V	2	24	24	60	36
E-14	1/16/2018	V	2	24	24	61	37
E-15	1/15/2018	V	2	24	24	60	36
F-11	1/19/2018	V	2	24	24	60	36
F-12	1/22/2018	V	2	24	24	61	37
F-13	1/23/2018	V	2	24	24	60	36
F-14	1/23/2018	V	2	24	24	60	36
F-15	1/24/2018	V	2	24	24	60	36
F-16	1/25/2018	V	2	24	24	65	41
G-11	1/11/2018	V	2	23	23	62	39
G-12	1/10/2018	V	2	23	23	61	38
G-13	12/15/2017	V	2	23	23	54	31
G-14	12/14/2017	V	2	23	23	57	34
G-15	12/13/2017	V	2	19	19	68	49
H-11	1/9/2018	V	2	23	23	68	45
H-12	1/9/2018	V	2	23	23	60	37
H-13	1/5/2018	V	2	23	23	55	32
H-14	1/4/2018	V	2	23	23	60	37
H-15	1/3/2018	V	2	23	23	61	38
J-11	12/13/2017	V	2	19	19	70	51
J-12	12/14/2017	V	2	23	23	70	47
J-13	1/10/2018	V	2	23	23	61	38
J-14	1/9/2018	V	2	23	23	73	50
J-14R	6/26/2018	V	2	23	23	73	50
J-15	1/9/2018	V	2	23	23	63	40
K-10	2/13/2018	V	2	20	20	70	50
K-11	2/14/2018	V	2	21	21	65	44

TABLE 2
Summary of Electrode Installations
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Wood Project 6252-16-2012

Electrode ID	Date Installed	Vertical or Angled	Number of Elements	Assumed Water Table Depth (feet bgs)	Top of Conductive Interval (feet bgs)	Bottom of Conductive Interval (feet bgs)	Treatment Thickness (feet)
K-12	2/15/2018	V	2	22	22	68	46
K-13	2/19/2018	V	2	22	22	66	44
K-14	2/20/2018	V	2	22	22	59.5	37.5
K-15	2/20/2018	V	2	22	22	65	43
L-4	12/21/2017	V	2	18	17.9	62.5	44.5
L-5	1/11/2018	V	2	18.5	18.5	47	28.5
L-6	12/13/2017	V	2	17	16.4	45	28
L-7	12/14/2017	V	2	20	19.7	50.5	30.5
L-8	12/15/2017	V	2	19	19	51.5	32.5
L-9	1/26/2018	V	2	20	20	55	35
L-10	1/30/2018	V	2	20	20	51	31
L-11	2/2/2018	V	2	21	21	55	34
L-12	2/5/2018	V	2	21	21	57	36
L-13	2/12/2018	V	2	22	22	75	53
L-14	2/8/2018	V	2	21.9	21.9	63	41.1
M-4	12/19/2017	V	2	19	19	46	27
M-5	1/2/2018	V	2	19	19	46	27
M-6	1/15/2018	V	1	19	19	43.5	24.5
M-7	12/15/2017	V	2	18.7	18.7	46.5	27.8
M-8	1/3/2018	V	2	19	19	47	28
M-9	1/4/2018	V	2	19	19	57	38
M-10	1/29/2018	V	2	20	20	56	36
M-11	1/30/2018	V	2	20	20	57	37
M-12	2/6/2018	V	2	21	21	62.5	41.5
M-13	2/9/2018	V	2	21	21	69.5	48.5
M-14	2/6/2018	V	2	21	21	73.5	52.5
P-3	1/22/2018	V	1	18	18	40	22
P-4	2/22/2018	A (12^{o})	1	18	18	40.1	22.1
P-5	1/17/2018	V	2	18	18	41	23
P-6	1/16/2018	V	2	19	19	45	26
P-7	1/16/2018	V	2	19	19	43.5	24.5
P-8	1/5/2018	V	2	19	19	46	27
P-9	1/25/2018	V	2	19	19	49	30
P-10	1/11/2018	V	2	19	19	51	32
P-11	1/29/2018	V	2	20	20	52	32
P-12	1/31/2018	V	2	20	20	58	38
P-13	2/8/2018	V	2	20	20	60.5	40.5
P-14	2/6/2018	V	2	21	21	60.5	39.5
R-3	1/22/2018	V	1	18	18	33	15
R-4	1/23/2018	V	1	18	18	31.5	13.5

TABLE 2
Summary of Electrode Installations
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Wood Project 6252-16-2012

Electrode ID	Date Installed	Vertical or Angled	Number of Elements	Assumed Water Table Depth (feet bgs)	Top of Conductive Interval (feet bgs)	Bottom of Conductive Interval (feet bgs)	Treatment Thickness (feet)
R-5	1/23/2018	V	1	18	18	31	13
R-6	1/24/2018	V	1	18	18	33	15
R-7	1/24/2018	V	1	18.5	18.5	36	17.5
R-8	1/10/2018	V	2	19	19	45.5	26.5
R-9	1/9/2018	V	2	18.3	18.3	44.5	26.2
R-10	1/9/2018	V	2	18.4	18.4	48	29.6
R-11	1/5/2018	V	2	19	19	49.5	30.5
R-12	1/31/2018	V	2	19	19	51	32
R-13	2/6/2018	V	2	20	20	56.5	36.5
R-14	2/5/2018	V	2	20	20	56	36
S-2	1/30/2018	V	1	17	17	29.5	12.5
S-3	1/29/2018	V	1	17	16	29.5	12.5
S-4	1/26/2018	V	1	18	18	30.5	12.5
S-5	1/26/2018	V	1	18	18	28.5	10.5
S-6	1/25/2018	V	1	18	18	34.5	16.5
S-7	1/25/2018	V	1	18	18	32	14
S-8	1/25/2018	V	1	18	18	33	15
S-9	12/22/2017	V	1	19	19	39	20
S-10	12/14/2017	V	1	19	19	42	23
S-11	12/13/2017	V	2	18	18	46.5	28.5
S-12	12/13/2017	V	2	17	16.2	48	31
S-13	2/1/2018	V	2	19	19	50.5	31.5
S-14	1/31/2018	V	2	20	20	50.5	30.5
S-15	2/21/2018	V	2	20	20	52.5	32.5
S-19	12/13/2018	V	2	19.5	19.5	47	27.5
S-20	2/20/2018	V	2	19.5	19.5	52	32.5
S-21	3/26/2018	V	2	20	20	60	40
S-22	3/27/2018	V	2	25	25	65	40
T-2	12/19/2017	V	1	17	14.6	24.5	7.5
T-3	12/22/2018	V	1	17	13.9	24	7
T-4	2/2/2018	V	1	17	14	28	11
T-5	1/30/2018	V	1	17	15.5	25.5	8.5
T-6	1/19/2018	V	1	18	14	24	6
T-7	1/19/2018	V	1	18	17.8	31	13
T-8	2/1/2018	V	1	18	18	32	14
T-9	1/12/2018	V	1	18	17.8	35.5	17.5
T-10	1/2/2018	V	1	19	19.1	40.5	21.5
T-11	1/3/2018	V	1	19	19	43	24
T-12	1/4/2018	V	1	19	19	41.5	22.5
T-13	2/19/2018	V	2	19	19	46	27

TABLE 2
Summary of Electrode Installations
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Wood Project 6252-16-2012

Electrode ID	Date Installed	Vertical or Angled	Number of Elements	Assumed Water Table Depth (feet bgs)	Top of Conductive Interval (feet bgs)	Bottom of Conductive Interval (feet bgs)	Treatment Thickness (feet)
T-14	1/30/2018	V	2	19	19	47.5	28.5
T-15	2/8/2018	V	2	19	19	46	27
T-16	2/8/2018	V	2	20	20	48	28
T-17	2/16/2018	V	1	20	20	35	15
T-18	2/12/2018	V	2	20	20	48	28
T-19	2/13/2018	V	2	21	21	44	23
T-20	2/20/2018	V	2	20	20	49	29
T-21	3/26/2018	V	2	22	22	53	31
T-22	3/21/2018	V	2	21	21	60	39
T-23	3/28/2018	A (5^{o})	2	24	24	60.8	36.8
T-24	4/2/2018	A (19^{o})	2	29	29	62.4	33.4
V-3	12/21/2017	A (41^{o})	1	17	10.9	18.9	1.9
V-4	1/3/2018	A (45^{o})	1	17	10.8	19.1	2.1
V-5	1/17/2018	V	1	17	14	25.5	8.5
V-6	1/18/2018	V	1	17	15	25.5	8.5
V-7	1/18/2018	V	1	18	17	30	12
V-8	1/31/2018	V	1	18	18	30	12
V-9	1/31/2018	V	1	18	18	34	16
V-10	2/2/2018	V	1	18	18	38	20
V-11	1/22/2018	V	1	18	18	41.5	23.5
V-12	2/2/2018	V	1	18	18	40	22
V-13	1/18/2018	V	1	18	17.8	44	26
V-14	1/29/2018	V	2	17	17	49	32
V-15	2/19/2018	V	1	18	18	37	19
V-16	2/16/2018	V	1	19	19	30.5	11.5
V-17	2/16/2018	V	1	20	20	30.5	10.5
V-18	2/19/2018	V	1	20	20	37	17
V-19	2/20/2018	V	1	20	20	45	25
V-20	3/28/2018	V	1	20	20	46	26
V-21	3/28/2018	V	2	22	22	51	29
V-22	3/22/2018	V	2	21	21	58	37
V-23	3/20/2018	A (13^{o})	2	21	21	59.4	38.4
V-24	4/3/2018	A (24^{o})	2	25	25	60.3	35.3
V-25	3/28/2018	A (34^{o})	2	30	30	68.8	38.8
W-5	2/14/2018	A (32^{o})	1	17	15.5	23.7	6.7
W-6	1/22/2018	V	1	16	15	25	9
W-7	1/22/2018	V	1	17	15.5	25.5	8.5
W-8	1/22/2018	V	1	17	16.9	27	10
W-9	1/31/2018	V	1	18	18	34	16
W-10	1/30/2018	V	1	18	18	37	19

TABLE 2
Summary of Electrode Installations
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Wood Project 6252-16-2012

Electrode ID	Date Installed	Vertical or Angled	Number of Elements	Assumed Water Table Depth (feet bgs)	Top of Conductive Interval (feet bgs)	Bottom of Conductive Interval (feet bgs)	Treatment Thickness (feet)
W-11	1/29/2018	V	1	18	17.7	39	21
W-12	1/29/2018	V	1	18	18	43	25
W-13	1/5/2018	V	1	18	18.1	36	18
W-14	1/19/2018	V	1	18	18	40	22
W-15	2/9/2018	V	1	18	18	40.5	22.5
W-16	2/14/2018	V	1	18	18	42.5	24.5
W-17	2/14/2018	V	1	19	19	42	23
W-18	1/24/2018	V	1	19	19	36	17
W-19	1/25/2018	V	1	19	18.7	45	26
W-20	4/2/2018	V	2	21	21	50	29
W-21	3/28/2018	V	2	23	23	54	31
W-22	3/19/2018	V	2	22	22	60	38
W-23	4/18/2018	A (21^{o})	2	25	25	53.2	28.2
W-24	4/4/2018	A (31^{o})	2	25	25	55.7	30.7
W-25	5/2/2018	A (43^{o})	2	30	30	55.7	25.7
W-26	5/2/2018	A (45^{o})	2	30	30	55.2	25.2
X-6	1/11/2018	V	1	16	14.9	27	11
X-7	1/11/2018	V	1	16	15.9	30	14
X-8	1/12/2018	V	1	17	17	33	16
X-9	1/15/2018	V	1	17	17	36	19
X-10	2/5/2018	V	1	17	17	40	23
X-11	2/6/2018	V	1	17	17.2	40	23
X-12	2/6/2018	V	1	18	18	30	12
X-13	2/8/2018	V	1	18	18	39	21
X-14	1/9/2018	V	1	18	17.9	40	22
X-15	2/8/2018	V	1	18	18	39	21
X-16	1/23/2018	V	1	18	17.9	31.5	13.5
X-17	1/24/2018	A (15^{o})	1	18	17.4	33.8	15.8
X-18	1/25/2018	A (23^{o})	1	18	16.7	36.8	18.8
X-19	4/5/2018	V	2	20	20	46	26
X-20	4/3/2018	V	2	23	23	50	27
X-21	4/2/2018	V	2	24	24	56	32
X-22	3/26/2018	A (8^{o})	2	22	22	63.4	41.4
X-23	3/27/2018	A (18^{o})	2	27	25.7	62.8	35.8
X-24	4/12/2018	A (33^{o})	2	28	28	54.5	26.5
X-25	4/17/2018	A (45^{o})	2	27	27	43.8	16.8
X-26	4/17/2018	A (45^{o})	2	31	31	53	22
Y-8	1/16/2018	A (21^{o})	1	16	16	31.7	15.7
Y-9	1/16/2018	A (15^{o})	1	16.5	16.5	26.6	10.1
Y-10	1/23/2018	V	1	17	15	25	8

TABLE 2
Summary of Electrode Installations
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Wood Project 6252-16-2012

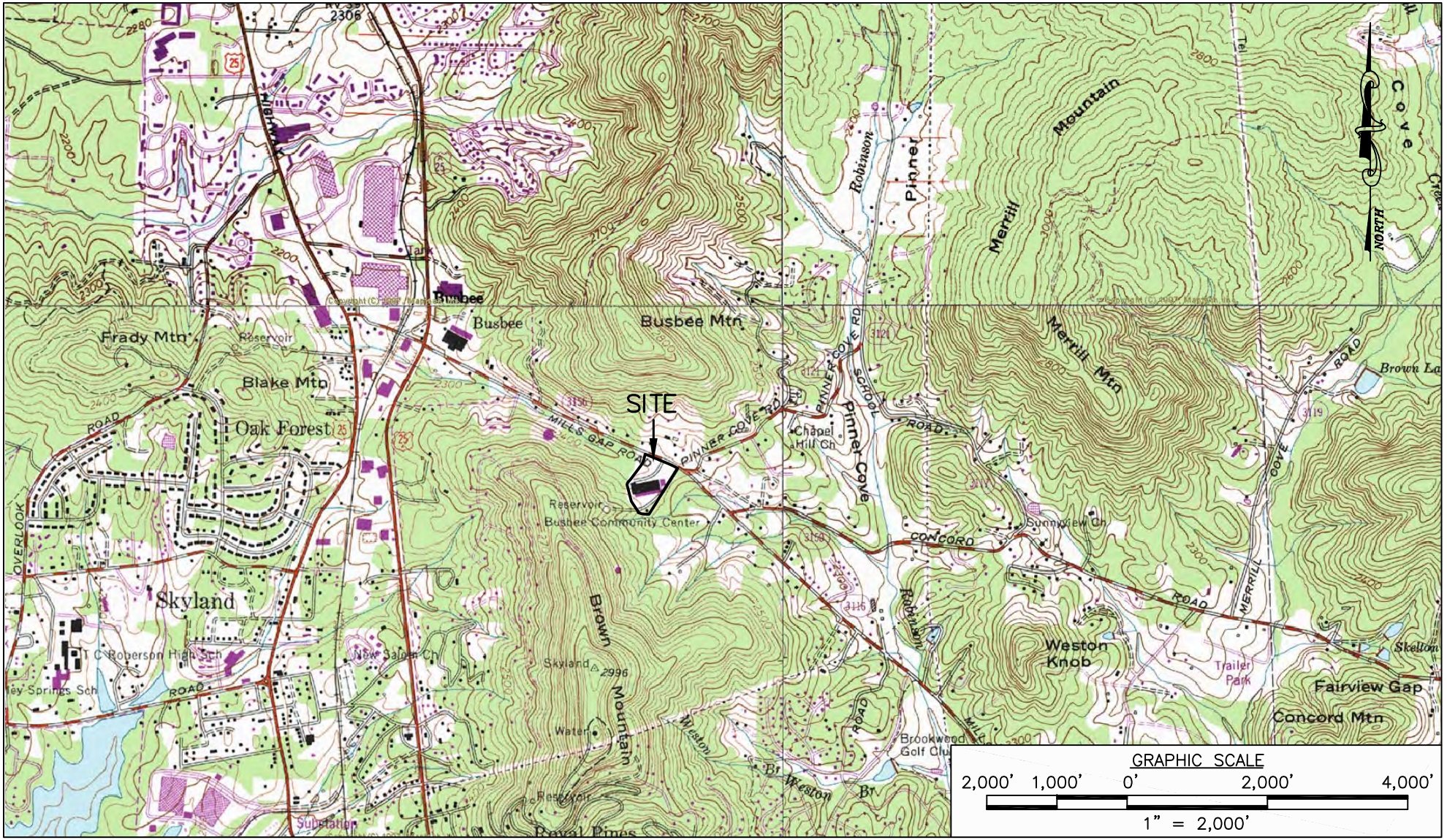
Electrode ID	Date Installed	Vertical or Angled	Number of Elements	Assumed Water Table Depth (feet bgs)	Top of Conductive Interval (feet bgs)	Bottom of Conductive Interval (feet bgs)	Treatment Thickness (feet)
Y-11	1/10/2018	A (11°)	1	17	17	27	10
Y-12	1/10/2018	A (9°)	1	17	17	29.1	12.1
Y-13	12/19/2017	A (10°)	1	17	16.5	34.5	17.5
Y-14	1/4/2018	A (15°)	1	17	10.3	20.3	3.3
Y-15	1/4/2018	A (24°)	1	17	9	18.3	1.3
Y-16	1/26/2018	A (23°)	1	17	15.6	26.7	9.7
Y-17	3/19/2018	V	1	27	27	41.5	14.5
Y-18	3/20/2018	V	1	25	25	41	16
Y-19	4/5/2018	V	1	24	24	46	22
Y-20	4/4/2018	V	1	25	25	50	25
Y-21	4/3/2018	V	1	25	25	55	30
Y-22	3/21/2018	A (15°)	2	22	22	65.7	43.7
Y-23	3/22/2018	A (28°)	2	22	19.4	66.2	44.2
Y-24	4/11/2018	A (35°)	2	26	26	50	24
Y-25	4/11/2018	A (45°)	1	28	28	40	12
Y-26	4/30/2018	A (45°)	1	30	30	43.8	13.8
Z-11	2/26/2018	A (17°)	1	17	14	23.9	6.9
Z-12	2/23/2018	A (20°)	1	17	14.5	23.5	6.5
Z-13	2/22/2018	A (17°)	1	25	25	40.2	15.2
Z-14	2/20/2018	A (11°)	1	30	22	44.7	14.7
Z-15	2/19/2018	V	1	30	22	38.5	8.5
Z-16	2/15/2018	V	1	33	29.5	39.5	6.5
Z-17	2/19/2018	V	1	31.5	31.5	45	13.5
Z-18	3/20/2018	V	1	27	27	40	13
Z-19	4/4/2018	V	1	25	25	45	20
Z-20	4/4/2018	V	1	25	25	50	25
AA-18	3/20/2018	V	1	28	28	40	12
AA-19	4/4/2018	V	1	28	28	44	16

Notes:

1. Depths are the vertical depth from ground surface.
2. V - vertical boring; A - angled boring (the indicated angle is relative to vertical).
3. The treatment thickness is the distance between the assumed water table depth and bottom of the conductive interval.

Prepared By: SEA 7/25/18
Checked By: GLH 7/25/18

FIGURES



TOPOGRAPHIC SITE MAP
CTS OF ASHEVILLE, INC. SUPERFUND SITE
ASHEVILLE, NORTH CAROLINA

wood.

DRAWN: SEA	ENG CHECK: --	DATE: AUGUST 2018	PROJECT: 6252162012
DFT CHECK: MEW	APPROVAL: MEW	SCALE: 1" = 2,000'	FIGURE: 1

REFERENCE: USGS QUADRANGLES: ASHEVILLE (1961), OTEEN (1962), FRUITLAND (1978) AND SKYLAND (1978)

SILK TREE LANE

SOUTHSIDE VILLAGE DRIVE

JASMINE LANE

NODDING LANE

SITE

FORMER BUILDING

PINNERS COVE ROAD

MILLS GAP ROAD

Prepared/Date: BRP 11/08/16
Checked/Date: SEK 11/08/16

N

0 50 100 Feet

Legend

Spring

Fence

Property Line

amec foster wheeler

CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina

Site Map

Project 6252162012

Figure 2

Refer to TRS drawing Y–1 for
a description of equipment

N

B12 B13 C14 C13 C12 C11 D15 D14 D13 TMP-D13 D12 D11 E15 E14 E13 E12 E11 F16 F15 F14 F13 F12 F11 G15 G14 G13 G12 G11 TMP G12 H15 H14 H13 H12 H11 J15 J14 J13 J12 J11 K15 K14 K13 K12 K11 TMP-K12 L14 L13 L12 L11 L10 M14 M13 M12 L9 L8 L7 L6 L5 M11 M10 M9 M8 M7 M6 TMP-M6 TMP-M9 P14 P13 P12 P11 P10 R14 R13 TMP-R13 R12 R11 P9 P8 M5 M4 P7 P6 P5 P4 P3 R10 TMP-R10 R9 R8 R7 R6 R5 TMP-R5 R4 R3 S15 S14 S13 S12 S11 S10 S9 S8 S7 T16 T15 T14 T13 T12 TMP-T12 T11 T10 T9 T8 T7 T6 T5 T4 T3 T2 S6 S5 S4 TMP-S3 S3 S2 V16 V15 TMP-V16 V14 V13 V12 V11 TMP-T9 V10 V9 V8 V7 V6 V5 V4 V3 W5 W6 W7 TMP-W7 W8 W9 W10 W11 W12 W13 W14 W15 X8 X9 X10 TMP-X11 X11 X12 X13 X14 TMP-X14 X15 X16 X17 X18 Y8 Y9 Y10 Y11 Y12 Y13 Y14 Y15 Y16 Y17 Y18 Y19 Y20 Z11 Z12 Z13 Z14 Z15 Z16 Z17 Z18 Z19 Z20 X6 X7 AA18 AA19 T18 T17 T19 T20 T21 TMP-T21 T22 T23 T24 V18 V19 V20 V21 V22 V23 V24 V25 W18 W19 W20 W21 W22 W23 W24 W25 W26 TMP-W23 X19 X20 X21 X22 X23 X24 X25 X26 Y21 Y22 Y23 Y24 Y25 Y26 TMP-Y18 S19 S20 S21 S22

LEGEND

- ○ B12 — Vertical Electrode
- ⊘ Y–8 — Angled Electrode
- ▽ TMP–D13 — Temperature Monitoring Point

0 20 40 80

SCALE IN FEET

wood.

ELECTRODE AND TMP LAYOUT
CTS OF ASHEVILLE, INC. SUPERFUND SITE
ASHEVILLE, NORTH CAROLINA

DRAWN: SEA	DATE: 7/23/18
DFT CHECK:	SCALE: 1" = 40'
ENG CHECK:	PROJ: 6252–16–2012
APPROVAL: MEW	FIG: 3

REFERENCE: Drawing Y–1 of TRS Group's Construction and Start–up Report

Prepared/Date: GLH 6/20/2018
Checked/Date: SEA 6/20/2018

Legend

- Ambient Air Sampling/Monitoring Location
- Spring
- Fence
- Property Line

N

0 60 120 Feet

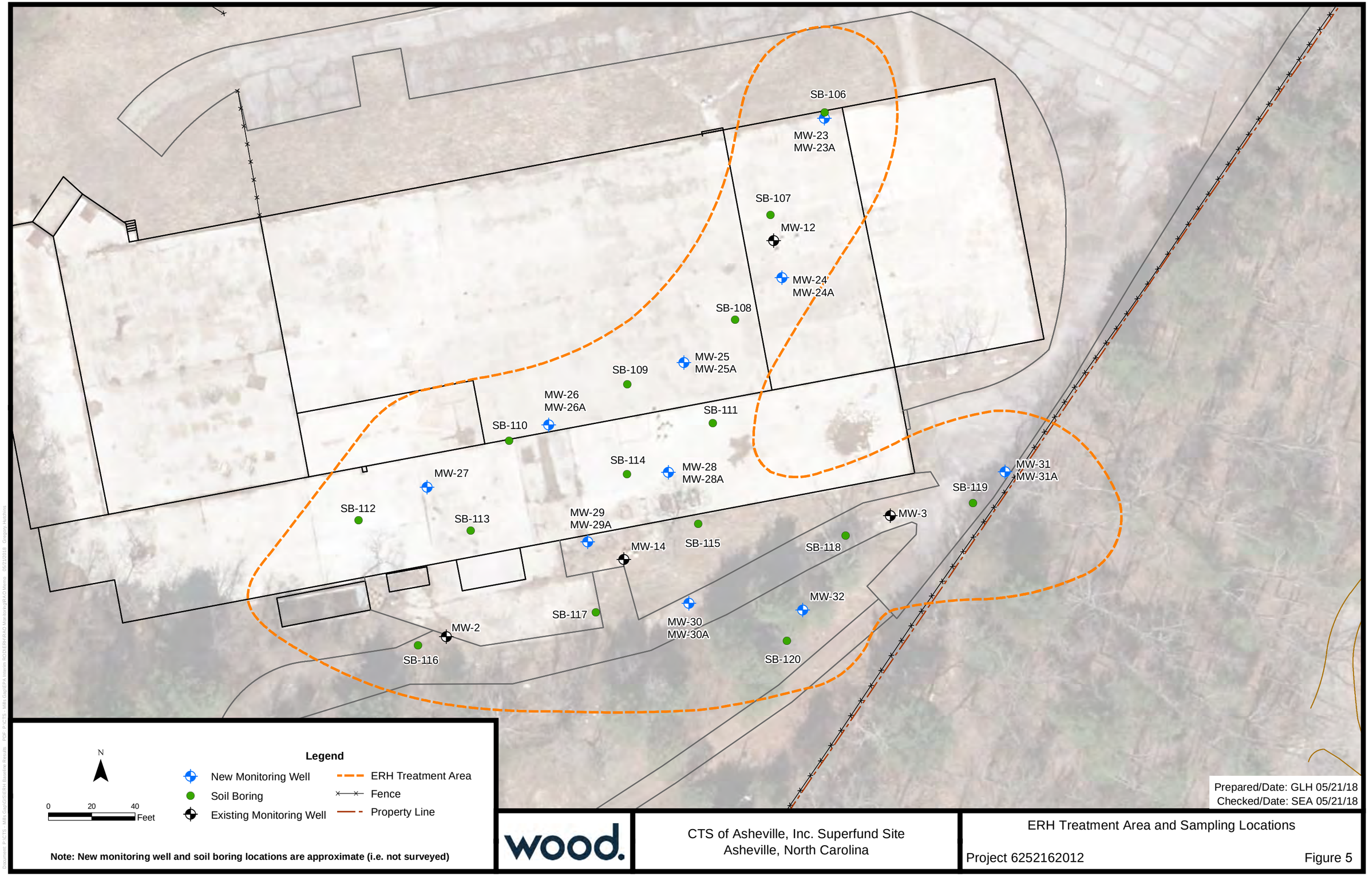
wood.

CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina

Ambient Air Sampling/Monitoring Locations

Project 6252162012

Figure 4



wood.

CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina

ERH Treatment Area and Sampling Locations

Project 6252162012

Figure 5

APPENDIX A

WELL ABANDONMENT RECORDS

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name (or well owner personally abandoning well on his/her property)

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:	
☐Agricultural	☐Municipal/Public
☐Geothermal (Heating/Cooling Supply)	☐Residential Water Supply (single)
☐Industrial/Commercial	☐Residential Water Supply (shared)
☐Irrigation	
Non-Water Supply Well:	
☑Monitoring	☐Recovery
Injection Well:	
☐Aquifer Recharge	☐Groundwater Remediation
☐Aquifer Storage and Recovery	☐Salinity Barrier
☐Aquifer Test	☐Stormwater Drainage
☐Experimental Technology	☐Subsidence Control
☐Geothermal (Closed Loop)	☐Tracer
☐Geothermal (Heating/Cooling Return)	☐Other (explain under 7g)

4. Date well(s) abandoned: 11/29/17

5a. Well location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 33.11" N 82° 30' 21.76" W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

6a. Well ID#: MW-3A

6b. Total well depth: 48.0 (ft.)

6c. Borehole diameter: 2.0 (in.)

6d. Water level below ground surface: 26.0 (ft.)

6e. Outer casing length (if known): _____ (ft.)

6f. Inner casing/tubing length (if known): _____ (ft.)

6g. Screen length (if known): _____ (ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1

For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): 3.5 (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

☑ Neat Cement Grout	☐ Bentonite Chips or Pellets
☐ Sand Cement Grout	☐ Dry Clay
☐ Concrete Grout	☐ Drill Cuttings
☐ Specialty Grout	☐ Gravel
☐ Bentonite Slurry	☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

7.75 GALLONS

7g. Provide a brief description of the abandonment procedure:

WELL ABANDONED VIA TREMIE PIPE WITH PORTLAND BENTONITE SLURRY

8. Certification:

Jacob Messick — 12/08/17

Signature of Certified Well Contractor or Well Owner — Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name (or well owner personally abandoning well on his/her property)

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:

- ☐ Agricultural
- ☐ Municipal/Public
- ☐ Geothermal (Heating/Cooling Supply)
- ☐ Residential Water Supply (single)
- ☐ Industrial/Commercial
- ☐ Residential Water Supply (shared)
- ☐ Irrigation

Non-Water Supply Well:

- ☑ Monitoring
- ☐ Recovery

Injection Well:

- ☐ Aquifer Recharge
- ☐ Groundwater Remediation
- ☐ Aquifer Storage and Recovery
- ☐ Salinity Barrier
- ☐ Aquifer Test
- ☐ Stormwater Drainage
- ☐ Experimental Technology
- ☐ Subsidence Control
- ☐ Geothermal (Closed Loop)
- ☐ Tracer
- ☐ Geothermal (Heating/Cooling Return)
- ☐ Other (explain under 7g)

4. Date well(s) abandoned: 11/29/17

5a. Well location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 32.20" N 82° 30' 24.26" W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

6a. Well ID#: OW-1

6b. Total well depth: 16.0 (ft.)

6c. Borehole diameter: 2.0 (in.)

6d. Water level below ground surface: _____ (ft.)

6e. Outer casing length (if known): _____ (ft.)

6f. Inner casing/tubing length (if known): _____ (ft.)

6g. Screen length (if known): _____ (ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1

For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- ☑ Neat Cement Grout
- ☐ Bentonite Chips or Pellets
- ☐ Sand Cement Grout
- ☐ Dry Clay
- ☐ Concrete Grout
- ☐ Drill Cuttings
- ☐ Specialty Grout
- ☐ Gravel
- ☐ Bentonite Slurry
- ☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

2.75 GALLONS

7g. Provide a brief description of the abandonment procedure:

WELL ABANDONED VIA TREMIE PIPE WITH PORTLAND BENTONITE SLURRY

8. Certification:

Josh Messick

Signature of Certified Well Contractor or Well Owner

12/08/17

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name (or well owner personally abandoning well on his/her property)

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:	
☐Agricultural	☐Municipal/Public
☐Geothermal (Heating/Cooling Supply)	☐Residential Water Supply (single)
☐Industrial/Commercial	☐Residential Water Supply (shared)
☐Irrigation	
Non-Water Supply Well:	
☑Monitoring	☐Recovery
Injection Well:	
☐Aquifer Recharge	☐Groundwater Remediation
☐Aquifer Storage and Recovery	☐Salinity Barrier
☐Aquifer Test	☐Stormwater Drainage
☐Experimental Technology	☐Subsidence Control
☐Geothermal (Closed Loop)	☐Tracer
☐Geothermal (Heating/Cooling Return)	☐Other (explain under 7g)

4. Date well(s) abandoned: 11/29/17

5a. Well location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 32.20" N 82° 30' 24.26" W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

6a. Well ID#: OW-3

6b. Total well depth: 16.0 (ft.)

6c. Borehole diameter: 2.0 (in.)

6d. Water level below ground surface: _____(ft.)

6e. Outer casing length (if known): _____(ft.)

6f. Inner casing/tubing length (if known): _____(ft.)

6g. Screen length (if known): _____(ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1

For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): _____(gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

☑ Neat Cement Grout	☐ Bentonite Chips or Pellets
☐ Sand Cement Grout	☐ Dry Clay
☐ Concrete Grout	☐ Drill Cuttings
☐ Specialty Grout	☐ Gravel
☐ Bentonite Slurry	☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

2.75 GALLONS

7g. Provide a brief description of the abandonment procedure:

WELL ABANDONED VIA TREMIE PIPE WITH PORTLAND BENTONITE SLURRY

8. Certification:

Jacob Messick

Signature of Certified Well Contractor or Well Owner

12/08/17

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name (or well owner personally abandoning well on his/her property)

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:

- ☐ Agricultural
- ☐ Municipal/Public
- ☐ Geothermal (Heating/Cooling Supply)
- ☐ Residential Water Supply (single)
- ☐ Industrial/Commercial
- ☐ Residential Water Supply (shared)
- ☐ Irrigation

Non-Water Supply Well:

- ☑ Monitoring
- ☐ Recovery

Injection Well:

- ☐ Aquifer Recharge
- ☐ Groundwater Remediation
- ☐ Aquifer Storage and Recovery
- ☐ Salinity Barrier
- ☐ Aquifer Test
- ☐ Stormwater Drainage
- ☐ Experimental Technology
- ☐ Subsidence Control
- ☐ Geothermal (Closed Loop)
- ☐ Tracer
- ☐ Geothermal (Heating/Cooling Return)
- ☐ Other (explain under 7g)

4. Date well(s) abandoned: 11/29/17

5a. Well location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 32.20" N 82° 30' 24.26" W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

6a. Well ID#: OW-4

6b. Total well depth: 16.0 (ft.)

6c. Borehole diameter: 2.0 (in.)

6d. Water level below ground surface: _____(ft.)

6e. Outer casing length (if known): _____(ft.)

6f. Inner casing/tubing length (if known): _____(ft.)

6g. Screen length (if known): _____(ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1

For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): _____(gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- ☑ Neat Cement Grout
- ☐ Sand Cement Grout
- ☐ Concrete Grout
- ☐ Specialty Grout
- ☐ Bentonite Slurry
- ☐ Bentonite Chips or Pellets
- ☐ Dry Clay
- ☐ Drill Cuttings
- ☐ Gravel
- ☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

2.75 GALLONS

7g. Provide a brief description of the abandonment procedure:

WELL ABANDONED VIA TREMIE PIPE WITH PORTLAND BENTONITE SLURRY

8. Certification:

Josh Messick

Signature of Certified Well Contractor or Well Owner

12/08/17

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name (or well owner personally abandoning well on his/her property)

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:

- ☐ Agricultural
- ☐ Municipal/Public
- ☐ Geothermal (Heating/Cooling Supply)
- ☐ Residential Water Supply (single)
- ☐ Industrial/Commercial
- ☐ Residential Water Supply (shared)
- ☐ Irrigation

Non-Water Supply Well:

- ☑ Monitoring
- ☐ Recovery

Injection Well:

- ☐ Aquifer Recharge
- ☐ Groundwater Remediation
- ☐ Aquifer Storage and Recovery
- ☐ Salinity Barrier
- ☐ Aquifer Test
- ☐ Stormwater Drainage
- ☐ Experimental Technology
- ☐ Subsidence Control
- ☐ Geothermal (Closed Loop)
- ☐ Tracer
- ☐ Geothermal (Heating/Cooling Return)
- ☐ Other (explain under 7g)

4. Date well(s) abandoned: 11/29/17

5a. Well location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 34.14" N 82° 30' 22.72" W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

6a. Well ID#: PZ-1

6b. Total well depth: 12.0 (ft.)

6c. Borehole diameter: 1.0 (in.)

6d. Water level below ground surface: _____ (ft.)

6e. Outer casing length (if known): _____ (ft.)

6f. Inner casing/tubing length (if known): _____ (ft.)

6g. Screen length (if known): _____ (ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1

For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- ☑ Neat Cement Grout
- ☐ Bentonite Chips or Pellets
- ☐ Sand Cement Grout
- ☐ Dry Clay
- ☐ Concrete Grout
- ☐ Drill Cuttings
- ☐ Specialty Grout
- ☐ Gravel
- ☐ Bentonite Slurry
- ☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

0.5 GALLONS

7g. Provide a brief description of the abandonment procedure:

WELL ABANDONED VIA TREMIE PIPE WITH PORTLAND BENTONITE SLURRY

8. Certification:

Jacob Messick

Signature of Certified Well Contractor or Well Owner

12/08/17

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name (or well owner personally abandoning well on his/her property)

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:	
☐Agricultural	☐Municipal/Public
☐Geothermal (Heating/Cooling Supply)	☐Residential Water Supply (single)
☐Industrial/Commercial	☐Residential Water Supply (shared)
☐Irrigation	
Non-Water Supply Well:	
☑Monitoring	☐Recovery
Injection Well:	
☐Aquifer Recharge	☐Groundwater Remediation
☐Aquifer Storage and Recovery	☐Salinity Barrier
☐Aquifer Test	☐Stormwater Drainage
☐Experimental Technology	☐Subsidence Control
☐Geothermal (Closed Loop)	☐Tracer
☐Geothermal (Heating/Cooling Return)	☐Other (explain under 7g)

4. Date well(s) abandoned: 11/29/17

5a. Well location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 34.14" N 82° 30' 22.72" W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

6a. Well ID#: PZ-2

6b. Total well depth: 37.5 (ft.)

6c. Borehole diameter: 1.0 (in.)

6d. Water level below ground surface: 22.0 (ft.)

6e. Outer casing length (if known): _____ (ft.)

6f. Inner casing/tubing length (if known): _____ (ft.)

6g. Screen length (if known): _____ (ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1

For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): 0.5 (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

☑ Neat Cement Grout	☐ Bentonite Chips or Pellets
☐ Sand Cement Grout	☐ Dry Clay
☐ Concrete Grout	☐ Drill Cuttings
☐ Specialty Grout	☐ Gravel
☐ Bentonite Slurry	☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

1.25 GALLONS

7g. Provide a brief description of the abandonment procedure:

WELL ABANDONED VIA TREMIE PIPE WITH PORTLAND BENTONITE SLURRY

8. Certification:

Jacob Messick

Signature of Certified Well Contractor or Well Owner

12/08/17

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name (or well owner personally abandoning well on his/her property)

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:

- ☐ Agricultural
- ☐ Municipal/Public
- ☐ Geothermal (Heating/Cooling Supply)
- ☐ Residential Water Supply (single)
- ☐ Industrial/Commercial
- ☐ Residential Water Supply (shared)
- ☐ Irrigation

Non-Water Supply Well:

- ☑ Monitoring
- ☐ Recovery

Injection Well:

- ☐ Aquifer Recharge
- ☐ Groundwater Remediation
- ☐ Aquifer Storage and Recovery
- ☐ Salinity Barrier
- ☐ Aquifer Test
- ☐ Stormwater Drainage
- ☐ Experimental Technology
- ☐ Subsidence Control
- ☐ Geothermal (Closed Loop)
- ☐ Tracer
- ☐ Geothermal (Heating/Cooling Return)
- ☐ Other (explain under 7g)

4. Date well(s) abandoned: 11/29/17

5a. Well location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 34.14" N 82° 30' 22.72" W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

6a. Well ID#: PZ-3

6b. Total well depth: 16.0 (ft.)

6c. Borehole diameter: 1.0 (in.)

6d. Water level below ground surface: _____ (ft.)

6e. Outer casing length (if known): _____ (ft.)

6f. Inner casing/tubing length (if known): _____ (ft.)

6g. Screen length (if known): _____ (ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1

For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- ☑ Neat Cement Grout
- ☐ Bentonite Chips or Pellets
- ☐ Sand Cement Grout
- ☐ Dry Clay
- ☐ Concrete Grout
- ☐ Drill Cuttings
- ☐ Specialty Grout
- ☐ Gravel
- ☐ Bentonite Slurry
- ☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

0.5 GALLONS

7g. Provide a brief description of the abandonment procedure:

WELL ABANDONED VIA TREMIE PIPE WITH PORTLAND BENTONITE SLURRY

8. Certification:

Jacob Messick

Signature of Certified Well Contractor or Well Owner

12/08/17

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

**Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617**

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

**Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636**

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name (or well owner personally abandoning well on his/her property)

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:	
☐Agricultural	☐Municipal/Public
☐Geothermal (Heating/Cooling Supply)	☐Residential Water Supply (single)
☐Industrial/Commercial	☐Residential Water Supply (shared)
☐Irrigation	
Non-Water Supply Well:	
☑Monitoring	☐Recovery
Injection Well:	
☐Aquifer Recharge	☐Groundwater Remediation
☐Aquifer Storage and Recovery	☐Salinity Barrier
☐Aquifer Test	☐Stormwater Drainage
☐Experimental Technology	☐Subsidence Control
☐Geothermal (Closed Loop)	☐Tracer
☐Geothermal (Heating/Cooling Return)	☐Other (explain under 7g)

4. Date well(s) abandoned: 11/29/17

5a. Well location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 32.85" N 82° 30' 23.46" W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

6a. Well ID#: VE-1

6b. Total well depth: 14.0 (ft.)

6c. Borehole diameter: 2.0 (in.)

6d. Water level below ground surface: _____(ft.)

6e. Outer casing length (if known): _____(ft.)

6f. Inner casing/tubing length (if known): _____(ft.)

6g. Screen length (if known): _____(ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1

For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): _____(gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

☑ Neat Cement Grout	☐ Bentonite Chips or Pellets
☐ Sand Cement Grout	☐ Dry Clay
☐ Concrete Grout	☐ Drill Cuttings
☐ Specialty Grout	☐ Gravel
☐ Bentonite Slurry	☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

2.25 GALLONS

7g. Provide a brief description of the abandonment procedure:

WELL ABANDONED VIA TREMIE PIPE WITH PORTLAND BENTONITE SLURRY

8. Certification:

Jacob Messick

Signature of Certified Well Contractor or Well Owner

12/08/17

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name (or well owner personally abandoning well on his/her property)

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:	
☐Agricultural	☐Municipal/Public
☐Geothermal (Heating/Cooling Supply)	☐Residential Water Supply (single)
☐Industrial/Commercial	☐Residential Water Supply (shared)
☐Irrigation	
Non-Water Supply Well:	
☑Monitoring	☐Recovery
Injection Well:	
☐Aquifer Recharge	☐Groundwater Remediation
☐Aquifer Storage and Recovery	☐Salinity Barrier
☐Aquifer Test	☐Stormwater Drainage
☐Experimental Technology	☐Subsidence Control
☐Geothermal (Closed Loop)	☐Tracer
☐Geothermal (Heating/Cooling Return)	☐Other (explain under 7g)

4. Date well(s) abandoned: 11/29/17

5a. Well location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 32.20" N 82° 30' 24.26" W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

6a. Well ID#: VE-2

6b. Total well depth: 16.0 **(ft.)**

6c. Borehole diameter: 2.0 **(in.)**

6d. Water level below ground surface: _____ **(ft.)**

6e. Outer casing length (if known): _____ **(ft.)**

6f. Inner casing/tubing length (if known): _____ **(ft.)**

6g. Screen length (if known): _____ **(ft.)**

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1

For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): _____ **(gal.)**

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

☑ Neat Cement Grout	☐ Bentonite Chips or Pellets
☐ Sand Cement Grout	☐ Dry Clay
☐ Concrete Grout	☐ Drill Cuttings
☐ Specialty Grout	☐ Gravel
☐ Bentonite Slurry	☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

2.75 GALLONS

7g. Provide a brief description of the abandonment procedure:

WELL ABANDONED VIA TREMIE PIPE WITH PORTLAND BENTONITE SLURRY

8. Certification:

Jacob Messick — 12/08/17

Signature of Certified Well Contractor or Well Owner — Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name (or well owner personally abandoning well on his/her property)

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:	
☐Agricultural	☐Municipal/Public
☐Geothermal (Heating/Cooling Supply)	☐Residential Water Supply (single)
☐Industrial/Commercial	☐Residential Water Supply (shared)
☐Irrigation	
Non-Water Supply Well:	
☑Monitoring	☐Recovery
Injection Well:	
☐Aquifer Recharge	☐Groundwater Remediation
☐Aquifer Storage and Recovery	☐Salinity Barrier
☐Aquifer Test	☐Stormwater Drainage
☐Experimental Technology	☐Subsidence Control
☐Geothermal (Closed Loop)	☐Tracer
☐Geothermal (Heating/Cooling Return)	☐Other (explain under 7g)

4. Date well(s) abandoned: 11/29/17

5a. Well location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 32.31" N 82° 30' 23.82" W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

6a. Well ID#: VE-3

6b. Total well depth: 8.0 (ft.)

6c. Borehole diameter: 2.0 (in.)

6d. Water level below ground surface: _____(ft.)

6e. Outer casing length (if known): _____(ft.)

6f. Inner casing/tubing length (if known): _____(ft.)

6g. Screen length (if known): _____(ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1

For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): _____(gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

☑ Neat Cement Grout	☐ Bentonite Chips or Pellets
☐ Sand Cement Grout	☐ Dry Clay
☐ Concrete Grout	☐ Drill Cuttings
☐ Specialty Grout	☐ Gravel
☐ Bentonite Slurry	☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

1.5 GALLONS

7g. Provide a brief description of the abandonment procedure:

WELL ABANDONED VIA TREMIE PIPE WITH PORTLAND BENTONITE SLURRY

8. Certification:

Josh Messick — 12/08/17

Signature of Certified Well Contractor or Well Owner — Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name (or well owner personally abandoning well on his/her property)

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:	
☐Agricultural	☐Municipal/Public
☐Geothermal (Heating/Cooling Supply)	☐Residential Water Supply (single)
☐Industrial/Commercial	☐Residential Water Supply (shared)
☐Irrigation	
Non-Water Supply Well:	
☑Monitoring	☐Recovery
Injection Well:	
☐Aquifer Recharge	☐Groundwater Remediation
☐Aquifer Storage and Recovery	☐Salinity Barrier
☐Aquifer Test	☐Stormwater Drainage
☐Experimental Technology	☐Subsidence Control
☐Geothermal (Closed Loop)	☐Tracer
☐Geothermal (Heating/Cooling Return)	☐Other (explain under 7g)

4. Date well(s) abandoned: 11/29/17

5a. Well location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 32.53" N 82° 30' 22.96" W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

6a. Well ID#: VE-4

6b. Total well depth: 8.0 **(ft.)**

6c. Borehole diameter: 2.0 **(in.)**

6d. Water level below ground surface: _____ **(ft.)**

6e. Outer casing length (if known): _____ **(ft.)**

6f. Inner casing/tubing length (if known): _____ **(ft.)**

6g. Screen length (if known): _____ **(ft.)**

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1

For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): _____ **(gal.)**

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

☑ Neat Cement Grout	☐ Bentonite Chips or Pellets
☐ Sand Cement Grout	☐ Dry Clay
☐ Concrete Grout	☐ Drill Cuttings
☐ Specialty Grout	☐ Gravel
☐ Bentonite Slurry	☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

1.5 GALLONS

7g. Provide a brief description of the abandonment procedure:

WELL ABANDONED VIA TREMIE PIPE WITH PORTLAND BENTONITE SLURRY

8. Certification:

Jacob Messick 12/08/17

Signature of Certified Well Contractor or Well Owner Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name (or well owner personally abandoning well on his/her property)

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:	
☐Agricultural	☐Municipal/Public
☐Geothermal (Heating/Cooling Supply)	☐Residential Water Supply (single)
☐Industrial/Commercial	☐Residential Water Supply (shared)
☐Irrigation	
Non-Water Supply Well:	
☑Monitoring	☐Recovery
Injection Well:	
☐Aquifer Recharge	☐Groundwater Remediation
☐Aquifer Storage and Recovery	☐Salinity Barrier
☐Aquifer Test	☐Stormwater Drainage
☐Experimental Technology	☐Subsidence Control
☐Geothermal (Closed Loop)	☐Tracer
☐Geothermal (Heating/Cooling Return)	☐Other (explain under 7g)

4. Date well(s) abandoned: 11/29/17

5a. Well location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 32.92" N 82° 30' 22.60" W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

6a. Well ID#: VE-5

6b. Total well depth: 12.0 (ft.)

6c. Borehole diameter: 2.0 (in.)

6d. Water level below ground surface: _____(ft.)

6e. Outer casing length (if known): _____(ft.)

6f. Inner casing/tubing length (if known): _____(ft.)

6g. Screen length (if known): _____(ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1

For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): _____(gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

☑ Neat Cement Grout	☐ Bentonite Chips or Pellets
☐ Sand Cement Grout	☐ Dry Clay
☐ Concrete Grout	☐ Drill Cuttings
☐ Specialty Grout	☐ Gravel
☐ Bentonite Slurry	☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

2.0 GALLONS

7g. Provide a brief description of the abandonment procedure:

WELL ABANDONED VIA TREMIE PIPE WITH PORTLAND BENTONITE SLURRY

8. Certification:

Jacob Messick

Signature of Certified Well Contractor or Well Owner

12/08/17

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name (or well owner personally abandoning well on his/her property)

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:	
☐Agricultural	☐Municipal/Public
☐Geothermal (Heating/Cooling Supply)	☐Residential Water Supply (single)
☐Industrial/Commercial	☐Residential Water Supply (shared)
☐Irrigation	
Non-Water Supply Well:	
☑Monitoring	☐Recovery
Injection Well:	
☐Aquifer Recharge	☐Groundwater Remediation
☐Aquifer Storage and Recovery	☐Salinity Barrier
☐Aquifer Test	☐Stormwater Drainage
☐Experimental Technology	☐Subsidence Control
☐Geothermal (Closed Loop)	☐Tracer
☐Geothermal (Heating/Cooling Return)	☐Other (explain under 7g)

4. Date well(s) abandoned: 11/29/17

5a. Well location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 33.10" N 82° 30' 21.68" W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

6a. Well ID#: VE-6

6b. Total well depth: 14.0 (ft.)

6c. Borehole diameter: 2.0 (in.)

6d. Water level below ground surface: _____(ft.)

6e. Outer casing length (if known): _____(ft.)

6f. Inner casing/tubing length (if known): _____(ft.)

6g. Screen length (if known): _____(ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1

For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): _____(gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

☑ Neat Cement Grout	☐ Bentonite Chips or Pellets
☐ Sand Cement Grout	☐ Dry Clay
☐ Concrete Grout	☐ Drill Cuttings
☐ Specialty Grout	☐ Gravel
☐ Bentonite Slurry	☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

2.25 GALLONS

7g. Provide a brief description of the abandonment procedure:

WELL ABANDONED VIA TREMIE PIPE WITH PORTLAND BENTONITE SLURRY

8. Certification:

Jacob Messick

Signature of Certified Well Contractor or Well Owner

12/08/17

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name (or well owner personally abandoning well on his/her property)

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:	
☐Agricultural	☐Municipal/Public
☐Geothermal (Heating/Cooling Supply)	☐Residential Water Supply (single)
☐Industrial/Commercial	☐Residential Water Supply (shared)
☐Irrigation	
Non-Water Supply Well:	
☑Monitoring	☐Recovery
Injection Well:	
☐Aquifer Recharge	☐Groundwater Remediation
☐Aquifer Storage and Recovery	☐Salinity Barrier
☐Aquifer Test	☐Stormwater Drainage
☐Experimental Technology	☐Subsidence Control
☐Geothermal (Closed Loop)	☐Tracer
☐Geothermal (Heating/Cooling Return)	☐Other (explain under 7g)

4. Date well(s) abandoned: 11/29/17

5a. Well location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 33.52" N 82° 30' 22.42" W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

6a. Well ID#: VE-7

6b. Total well depth: 15.5 (ft.)

6c. Borehole diameter: 2.0 (in.)

6d. Water level below ground surface: _____(ft.)

6e. Outer casing length (if known): _____(ft.)

6f. Inner casing/tubing length (if known): _____(ft.)

6g. Screen length (if known): _____(ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1

For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): _____(gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

☑ Neat Cement Grout	☐ Bentonite Chips or Pellets
☐ Sand Cement Grout	☐ Dry Clay
☐ Concrete Grout	☐ Drill Cuttings
☐ Specialty Grout	☐ Gravel
☐ Bentonite Slurry	☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

2.5 GALLONS

7g. Provide a brief description of the abandonment procedure:

WELL ABANDONED VIA TREMIE PIPE WITH PORTLAND BENTONITE SLURRY

8. Certification:

Jacob Messick

Signature of Certified Well Contractor or Well Owner

12/08/17

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name (or well owner personally abandoning well on his/her property)

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:	
☐Agricultural	☐Municipal/Public
☐Geothermal (Heating/Cooling Supply)	☐Residential Water Supply (single)
☐Industrial/Commercial	☐Residential Water Supply (shared)
☐Irrigation	
Non-Water Supply Well:	
☑Monitoring	☐Recovery
Injection Well:	
☐Aquifer Recharge	☐Groundwater Remediation
☐Aquifer Storage and Recovery	☐Salinity Barrier
☐Aquifer Test	☐Stormwater Drainage
☐Experimental Technology	☐Subsidence Control
☐Geothermal (Closed Loop)	☐Tracer
☐Geothermal (Heating/Cooling Return)	☐Other (explain under 7g)

4. Date well(s) abandoned: 11/29/17

5a. Well location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 33.34" N 82° 30' 23.02" W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

6a. Well ID#: VE-8

6b. Total well depth: 17.0 (ft.)

6c. Borehole diameter: 2.0 (in.)

6d. Water level below ground surface: _____ (ft.)

6e. Outer casing length (if known): _____ (ft.)

6f. Inner casing/tubing length (if known): _____ (ft.)

6g. Screen length (if known): _____ (ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1

For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

☑ Neat Cement Grout	☐ Bentonite Chips or Pellets
☐ Sand Cement Grout	☐ Dry Clay
☐ Concrete Grout	☐ Drill Cuttings
☐ Specialty Grout	☐ Gravel
☐ Bentonite Slurry	☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

2.75 GALLONS

7g. Provide a brief description of the abandonment procedure:

WELL ABANDONED VIA TREMIE PIPE WITH PORTLAND BENTONITE SLURRY

8. Certification:

Josh Messick

Signature of Certified Well Contractor or Well Owner

12/08/17

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name (or well owner personally abandoning well on his/her property)

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:	
☐Agricultural	☐Municipal/Public
☐Geothermal (Heating/Cooling Supply)	☐Residential Water Supply (single)
☐Industrial/Commercial	☐Residential Water Supply (shared)
☐Irrigation	
Non-Water Supply Well:	
☑Monitoring	☐Recovery
Injection Well:	
☐Aquifer Recharge	☐Groundwater Remediation
☐Aquifer Storage and Recovery	☐Salinity Barrier
☐Aquifer Test	☐Stormwater Drainage
☐Experimental Technology	☐Subsidence Control
☐Geothermal (Closed Loop)	☐Tracer
☐Geothermal (Heating/Cooling Return)	☐Other (explain under 7g)

4. Date well(s) abandoned: 11/29/17

5a. Well location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 33.04" N 82° 30' 24.12" W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

6a. Well ID#: VE-9

6b. Total well depth: 15.0 (ft.)

6c. Borehole diameter: 2.0 (in.)

6d. Water level below ground surface: _____(ft.)

6e. Outer casing length (if known): _____(ft.)

6f. Inner casing/tubing length (if known): _____(ft.)

6g. Screen length (if known): _____(ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1

For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): _____(gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

☑ Neat Cement Grout	☐ Bentonite Chips or Pellets
☐ Sand Cement Grout	☐ Dry Clay
☐ Concrete Grout	☐ Drill Cuttings
☐ Specialty Grout	☐ Gravel
☐ Bentonite Slurry	☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

2.5 GALLONS

7g. Provide a brief description of the abandonment procedure:

WELL ABANDONED VIA TREMIE PIPE WITH PORTLAND BENTONITE SLURRY

8. Certification:

Jacob Messick

Signature of Certified Well Contractor or Well Owner

12/08/17

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name (or well owner personally abandoning well on his/her property)

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:	
☐Agricultural	☐Municipal/Public
☐Geothermal (Heating/Cooling Supply)	☐Residential Water Supply (single)
☐Industrial/Commercial	☐Residential Water Supply (shared)
☐Irrigation	
Non-Water Supply Well:	
☑Monitoring	☐Recovery
Injection Well:	
☐Aquifer Recharge	☐Groundwater Remediation
☐Aquifer Storage and Recovery	☐Salinity Barrier
☐Aquifer Test	☐Stormwater Drainage
☐Experimental Technology	☐Subsidence Control
☐Geothermal (Closed Loop)	☐Tracer
☐Geothermal (Heating/Cooling Return)	☐Other (explain under 7g)

4. Date well(s) abandoned: 11/29/17

5a. Well location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 33.47" N 82° 30' 25.36" W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

6a. Well ID#: VE-10

6b. Total well depth: 9.0 (ft.)

6c. Borehole diameter: 2.0 (in.)

6d. Water level below ground surface: _____(ft.)

6e. Outer casing length (if known): _____(ft.)

6f. Inner casing/tubing length (if known): _____(ft.)

6g. Screen length (if known): _____(ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1

For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): _____(gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

☑ Neat Cement Grout	☐ Bentonite Chips or Pellets
☐ Sand Cement Grout	☐ Dry Clay
☐ Concrete Grout	☐ Drill Cuttings
☐ Specialty Grout	☐ Gravel
☐ Bentonite Slurry	☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

1.5 GALLONS

7g. Provide a brief description of the abandonment procedure:

WELL ABANDONED VIA TREMIE PIPE WITH PORTLAND BENTONITE SLURRY

8. Certification:

Jacob Messick

Signature of Certified Well Contractor or Well Owner

12/08/17

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name (or well owner personally abandoning well on his/her property)

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:	
☐Agricultural	☐Municipal/Public
☐Geothermal (Heating/Cooling Supply)	☐Residential Water Supply (single)
☐Industrial/Commercial	☐Residential Water Supply (shared)
☐Irrigation	
Non-Water Supply Well:	
☑Monitoring	☐Recovery
Injection Well:	
☐Aquifer Recharge	☐Groundwater Remediation
☐Aquifer Storage and Recovery	☐Salinity Barrier
☐Aquifer Test	☐Stormwater Drainage
☐Experimental Technology	☐Subsidence Control
☐Geothermal (Closed Loop)	☐Tracer
☐Geothermal (Heating/Cooling Return)	☐Other (explain under 7g)

4. Date well(s) abandoned: 11/29/17

5a. Well location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 33.50" N 82° 30' 24.72" W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

6a. Well ID#: VE-11

6b. Total well depth: 13.5 (ft.)

6c. Borehole diameter: 2.0 (in.)

6d. Water level below ground surface: _____(ft.)

6e. Outer casing length (if known): _____(ft.)

6f. Inner casing/tubing length (if known): _____(ft.)

6g. Screen length (if known): _____(ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1

For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): _____(gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

☑ Neat Cement Grout	☐ Bentonite Chips or Pellets
☐ Sand Cement Grout	☐ Dry Clay
☐ Concrete Grout	☐ Drill Cuttings
☐ Specialty Grout	☐ Gravel
☐ Bentonite Slurry	☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

2.25 GALLONS

7g. Provide a brief description of the abandonment procedure:

WELL ABANDONED VIA TREMIE PIPE WITH PORTLAND BENTONITE SLURRY

8. Certification:

Jacob Messick

Signature of Certified Well Contractor or Well Owner

12/08/17

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name (or well owner personally abandoning well on his/her property)

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:	
☐Agricultural	☐Municipal/Public
☐Geothermal (Heating/Cooling Supply)	☐Residential Water Supply (single)
☐Industrial/Commercial	☐Residential Water Supply (shared)
☐Irrigation	
Non-Water Supply Well:	
☑Monitoring	☐Recovery
Injection Well:	
☐Aquifer Recharge	☐Groundwater Remediation
☐Aquifer Storage and Recovery	☐Salinity Barrier
☐Aquifer Test	☐Stormwater Drainage
☐Experimental Technology	☐Subsidence Control
☐Geothermal (Closed Loop)	☐Tracer
☐Geothermal (Heating/Cooling Return)	☐Other (explain under 7g)

4. Date well(s) abandoned: 11/29/17

5a. Well location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 33.54" N 82° 30' 23.76" W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

6a. Well ID#: VE-13

6b. Total well depth: 13.5 (ft.)

6c. Borehole diameter: 2.0 (in.)

6d. Water level below ground surface: _____(ft.)

6e. Outer casing length (if known): _____(ft.)

6f. Inner casing/tubing length (if known): _____(ft.)

6g. Screen length (if known): _____(ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1

For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): _____(gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

☑ Neat Cement Grout	☐ Bentonite Chips or Pellets
☐ Sand Cement Grout	☐ Dry Clay
☐ Concrete Grout	☐ Drill Cuttings
☐ Specialty Grout	☐ Gravel
☐ Bentonite Slurry	☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

2.25 GALLONS

7g. Provide a brief description of the abandonment procedure:

WELL ABANDONED VIA TREMIE PIPE WITH PORTLAND BENTONITE SLURRY

8. Certification:

Jacob Messick

Signature of Certified Well Contractor or Well Owner

12/08/17

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name (or well owner personally abandoning well on his/her property)

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:	
☐Agricultural	☐Municipal/Public
☐Geothermal (Heating/Cooling Supply)	☐Residential Water Supply (single)
☐Industrial/Commercial	☐Residential Water Supply (shared)
☐Irrigation	
Non-Water Supply Well:	
☑Monitoring	☐Recovery
Injection Well:	
☐Aquifer Recharge	☐Groundwater Remediation
☐Aquifer Storage and Recovery	☐Salinity Barrier
☐Aquifer Test	☐Stormwater Drainage
☐Experimental Technology	☐Subsidence Control
☐Geothermal (Closed Loop)	☐Tracer
☐Geothermal (Heating/Cooling Return)	☐Other (explain under 7g)

4. Date well(s) abandoned: 11/29/17

5a. Well location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 34.04" N 82° 30' 22.88" W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

6a. Well ID#: VE-14

6b. Total well depth: 17.5 (ft.)

6c. Borehole diameter: 2.0 (in.)

6d. Water level below ground surface: _____(ft.)

6e. Outer casing length (if known): _____(ft.)

6f. Inner casing/tubing length (if known): _____(ft.)

6g. Screen length (if known): _____(ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1

For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): _____(gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

☑ Neat Cement Grout	☐ Bentonite Chips or Pellets
☐ Sand Cement Grout	☐ Dry Clay
☐ Concrete Grout	☐ Drill Cuttings
☐ Specialty Grout	☐ Gravel
☐ Bentonite Slurry	☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

2.75 GALLONS

7g. Provide a brief description of the abandonment procedure:

WELL ABANDONED VIA TREMIE PIPE WITH PORTLAND BENTONITE SLURRY

8. Certification:

Jacob Messick

Signature of Certified Well Contractor or Well Owner

12/08/17

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

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Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name (or well owner personally abandoning well on his/her property)

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:

- ☐ Agricultural
- ☐ Municipal/Public
- ☐ Geothermal (Heating/Cooling Supply)
- ☐ Residential Water Supply (single)
- ☐ Industrial/Commercial
- ☐ Residential Water Supply (shared)
- ☐ Irrigation

Non-Water Supply Well:

- ☑ Monitoring
- ☐ Recovery

Injection Well:

- ☐ Aquifer Recharge
- ☐ Groundwater Remediation
- ☐ Aquifer Storage and Recovery
- ☐ Salinity Barrier
- ☐ Aquifer Test
- ☐ Stormwater Drainage
- ☐ Experimental Technology
- ☐ Subsidence Control
- ☐ Geothermal (Closed Loop)
- ☐ Tracer
- ☐ Geothermal (Heating/Cooling Return)
- ☐ Other (explain under 7g)

4. Date well(s) abandoned: 11/29/17

5a. Well location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 34.03" N 82° 30' 21.42" W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

6a. Well ID#: VE-15

6b. Total well depth: 18.0 (ft.)

6c. Borehole diameter: 2.0 (in.)

6d. Water level below ground surface: _____ (ft.)

6e. Outer casing length (if known): _____ (ft.)

6f. Inner casing/tubing length (if known): _____ (ft.)

6g. Screen length (if known): _____ (ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 1

For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form.

7b. Approximate volume of water remaining in well(s): _____ (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

- ☑ Neat Cement Grout
- ☐ Bentonite Chips or Pellets
- ☐ Sand Cement Grout
- ☐ Dry Clay
- ☐ Concrete Grout
- ☐ Drill Cuttings
- ☐ Specialty Grout
- ☐ Gravel
- ☐ Bentonite Slurry
- ☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

3.0 GALLONS

7g. Provide a brief description of the abandonment procedure:

WELL ABANDONED VIA TREMIE PIPE WITH PORTLAND BENTONITE SLURRY

8. Certification

Jacob Messick

Signature of Certified Well Contractor or Well Owner

12/08/17

Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
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SUBMITTAL INSTRUCTIONS

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**Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617**

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

**Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636**

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

APPENDIX B

COPIES OF LOG BOOKS

APPENDIX C

MONITORING WELL CONSTRUCTION DIAGRAMS AND NCDEQ WELL CONSTRUCTION RECORDS

MONITORING WELL CONSTRUCTION DETAIL

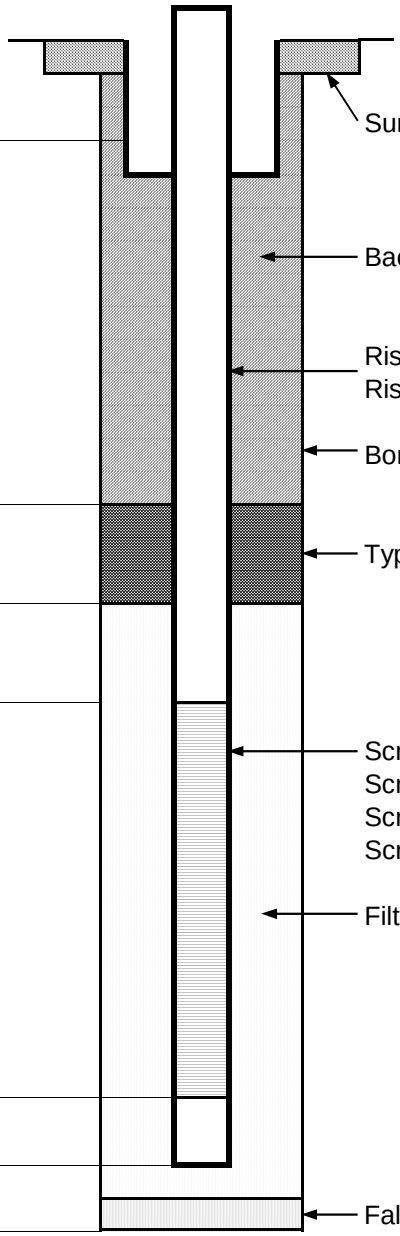
CTS of Asheville, Inc. Superfund Site

Wood Project 6252-16-2012

WELL ID

MW-23

Date of Installation: 2/21/2018	**Depth to Water:**	**Completed By:** Rodney Clark, LG
Drilling Method: 4.25" ID auger	21.99 ft bgs (3/28/18)	**Measuring Point (MP)**
Contractor: Geologic Exploration	**Northing:** 652791.79	**Type:** ground surface
Driller: Jacob Messick (NC #4252)	**Easting:** 956570.55	**Elevation (feet msl):** approx. 2,417



Item	Depth below MP (feet)	Description	
Riser Pipe:	+0.53	Surface Seal Type:	Concrete
		Backfill/Grout Type:	Portland Cement
		Riser Pipe Type:	Stainless Steel
		Riser Pipe ID:	2 inches
		Borehole Diameter:	8 inches
Top of Seal:	26.0		
Top of Filter Pack:	28.0	Type of Seal:	Fine Sand
Top of Screen:	29.8		
		Screen Type:	Stainless Steel
		Screen ID:	2 inch
		Screen Slot Size:	0.010 inch
		Screen Length:	4.8 feet
		Filter Pack Type:	#2 Silica Sand
Bottom of Screen:	34.6		
End Cap:	34.9		
Drilled Depth:	35.0	Fallback/Backfill:	N/A

Notes: Drill rig: Diedrich D50

bgs - below ground surface; msl - mean sea level

MONITORING WELL CONSTRUCTION DETAIL

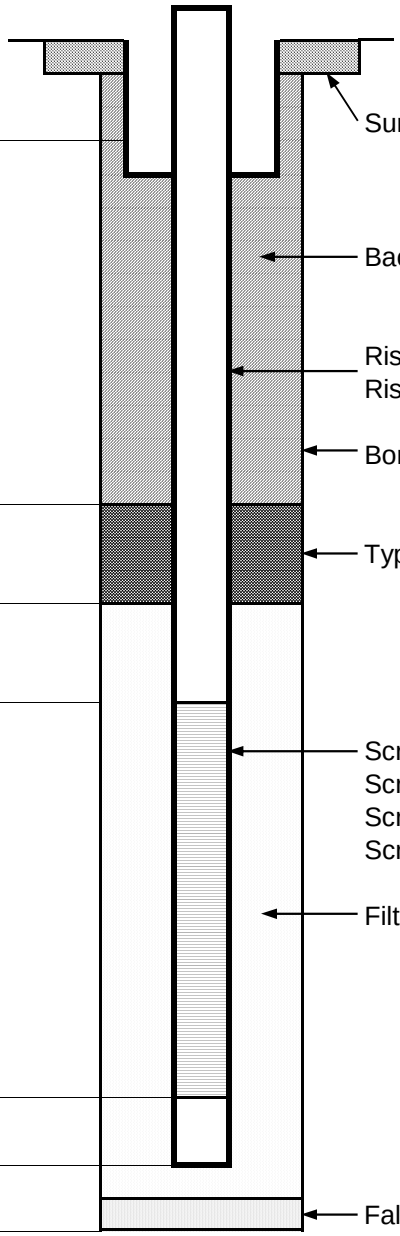
CTS of Asheville, Inc. Superfund Site

Wood Project 6252-16-2012

WELL ID

MW-23A

Date of Installation: 2/21/2018	**Depth to Water:**	**Completed By:** Rodney Clark, LG
Drilling Method: 4.25" ID auger	21.83 ft bgs (3/28/18)	**Measuring Point (MP)**
Contractor: Geologic Exploration	**Northing:** 652791.79	**Type:** ground surface
Driller: Jacob Messick (NC #4252)	**Easting:** 956570.55	**Elevation (feet msl):** approx. 2,417



Item	Depth below MP (feet)	Description	
Riser Pipe:	+0.18	Surface Seal Type:	Concrete
		Backfill/Grout Type:	Portland Cement
		Riser Pipe Type:	Stainless Steel
		Riser Pipe ID:	2 inches
		Borehole Diameter:	8 inches
Top of Seal:	41.0		
Top of Filter Pack:	43.0	Type of Seal:	Fine Sand
Top of Screen:	45.1		
		Screen Type:	Stainless Steel
		Screen ID:	2 inch
		Screen Slot Size:	0.010 inch
		Screen Length:	4.8 feet
		Filter Pack Type:	#2 Silica Sand
Bottom of Screen:	49.9		
End Cap:	50.2		
Drilled Depth:	50.2	Fallback/Backfill:	N/A

Notes: Drill rig: Diedrich D50

bgs - below ground surface; msl - mean sea level

MONITORING WELL CONSTRUCTION DETAIL

CTS of Asheville, Inc. Superfund Site

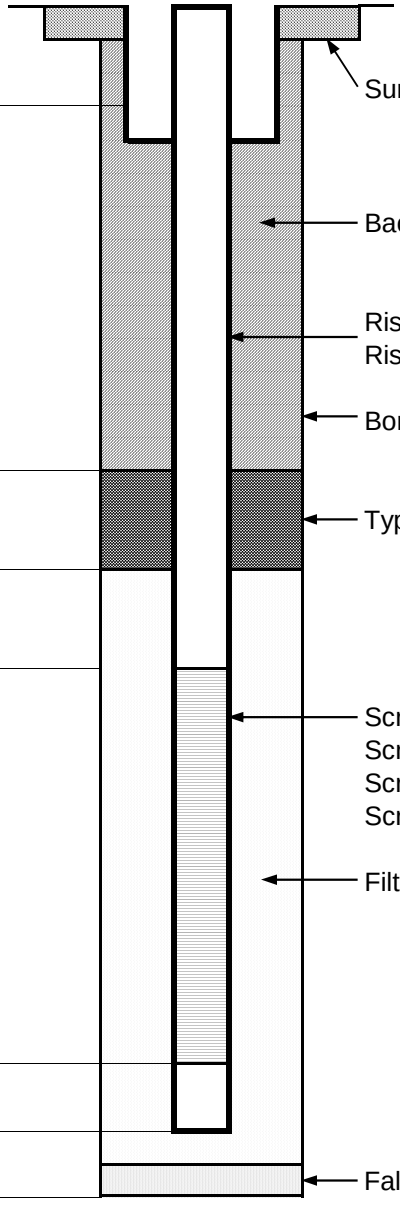
Wood Project 6252-16-2012

WELL ID

MW-24

Date of Installation: 2/22/2018	**Depth to Water:**	**Completed By:** Rodney Clark, LG
Drilling Method: 4.25" ID auger	19.89 ft bgs (3/28/18)	**Measuring Point (MP)**
Contractor: Geologic Exploration	**Northing:** 652718.20	**Type:** ground surface
Driller: Jacob Messick (NC #4252)	**Easting:** 956550.97	**Elevation (feet msl):** approx. 2,417

Item	Depth below MP (feet)	Description	
Riser Pipe:	0.06	Surface Seal Type:	Concrete
		Backfill/Grout Type:	Portland Cement
		Riser Pipe Type:	Stainless Steel
		Riser Pipe ID:	2 inches
		Borehole Diameter:	8 inches
Top of Seal:	16.0		
Top of Filter Pack:	18.4	Type of Seal:	Fine Sand
Top of Screen:	20.4		
		Screen Type:	Stainless Steel
		Screen ID:	2 inch
		Screen Slot Size:	0.010 inch
		Screen Length:	9.8 feet
		Filter Pack Type:	#2 Silica Sand
Bottom of Screen:	30.2		
End Cap:	30.5		
Drilled Depth:	30.5	Fallback/Backfill:	N/A



Notes: Drill rig: Diedrich D50

bgs - below ground surface; msl - mean sea level

MONITORING WELL CONSTRUCTION DETAIL

CTS of Asheville, Inc. Superfund Site

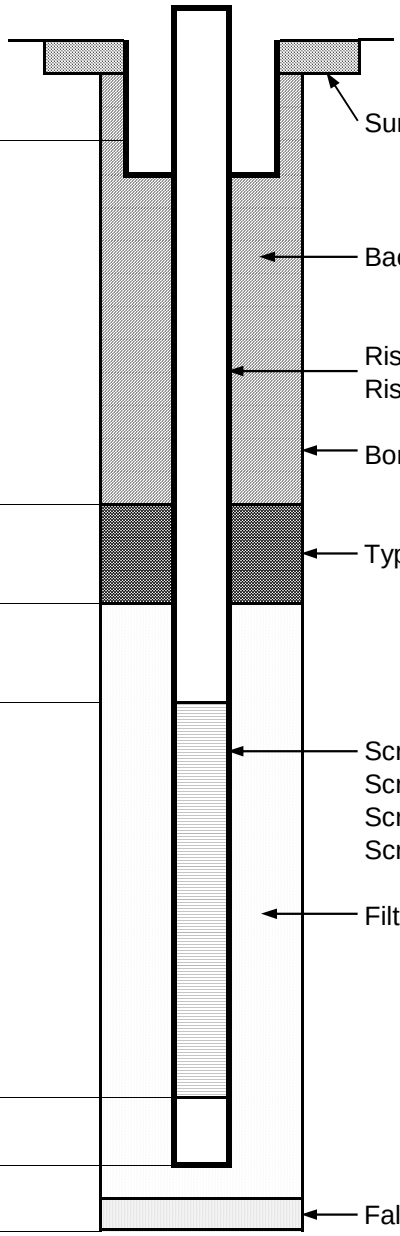
Wood Project 6252-16-2012

WELL ID

MW-24A

Date of Installation: 2/22/2018	**Depth to Water:**	**Completed By:** Rodney Clark, LG
Drilling Method: 4.25" ID auger	20.03 ft bgs (3/28/18)	**Measuring Point (MP)**
Contractor: Geologic Exploration	**Northing:** 652718.20	**Type:** ground surface
Driller: Jacob Messick (NC #4252)	**Easting:** 956550.97	**Elevation (feet msl):** approx. 2,417

Item	Depth below MP (feet)	Description	
Riser Pipe:	+0.22	Surface Seal Type:	Concrete
		Backfill/Grout Type:	Portland Cement
		Riser Pipe Type:	Stainless Steel
		Riser Pipe ID:	2 inches
		Borehole Diameter:	8 inches
Top of Seal:	43.0		
Top of Filter Pack:	48.0	Type of Seal:	Fine Sand
Top of Screen:	50.1		
		Screen Type:	Stainless Steel
		Screen ID:	2 inch
		Screen Slot Size:	0.010 inch
		Screen Length:	4.8 feet
		Filter Pack Type:	#2 Silica Sand
Bottom of Screen:	54.9		
End Cap:	55.2		
Drilled Depth:	55.2	Fallback/Backfill:	N/A



Notes: Drill rig: Diedrich D50; drill chatter at 42 feet and 50 feet

bgs - below ground surface; msl - mean sea level

MONITORING WELL CONSTRUCTION DETAIL

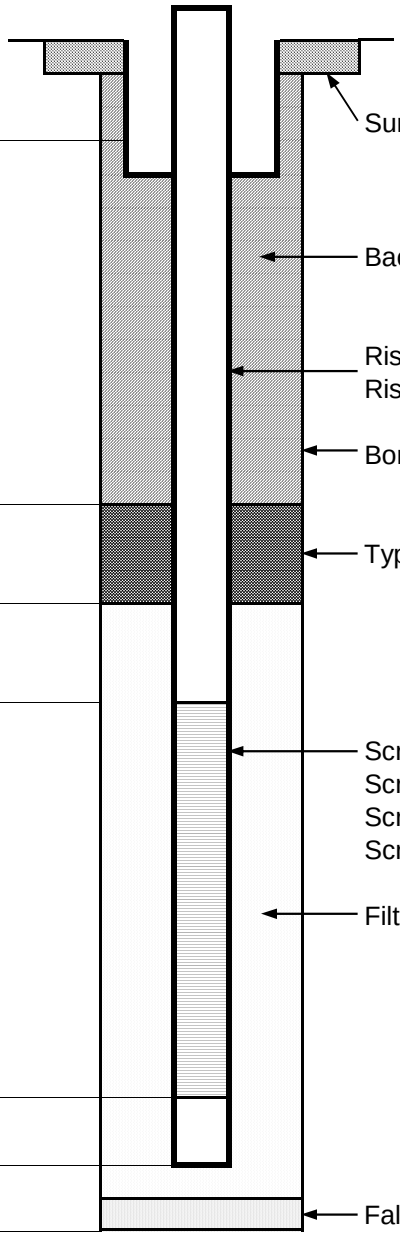
CTS of Asheville, Inc. Superfund Site

Wood Project 6252-16-2012

WELL ID

MW-25

Date of Installation: 2/21/2018	**Depth to Water:**	**Completed By:** Rodney Clark, LG
Drilling Method: 4.25" ID auger	18.20 ft bgs (3/28/18)	**Measuring Point (MP)**
Contractor: Geologic Exploration	**Northing:** 652678.96	**Type:** ground surface
Driller: Jacob Messick (NC #4252)	**Easting:** 956505.75	**Elevation (feet msl):** approx. 2,417



Item	Depth below MP (feet)	Description	
Riser Pipe:	+0.17	Surface Seal Type:	Concrete
		Backfill/Grout Type:	Portland Cement
		Riser Pipe Type:	Stainless Steel
		Riser Pipe ID:	2 inches
		Borehole Diameter:	8 inches
Top of Seal:	26.0		
Top of Filter Pack:	28.0	Type of Seal:	Fine Sand
Top of Screen:	30.2		
		Screen Type:	Stainless Steel
		Screen ID:	2 inch
		Screen Slot Size:	0.010 inch
		Screen Length:	4.8 feet
		Filter Pack Type:	#2 Silica Sand
Bottom of Screen:	35.0		
End Cap:	35.3		
Drilled Depth:	35.3	Fallback/Backfill:	N/A

Notes: Drill rig: Diedrich D50

bgs - below ground surface; msl - mean sea level

MONITORING WELL CONSTRUCTION DETAIL

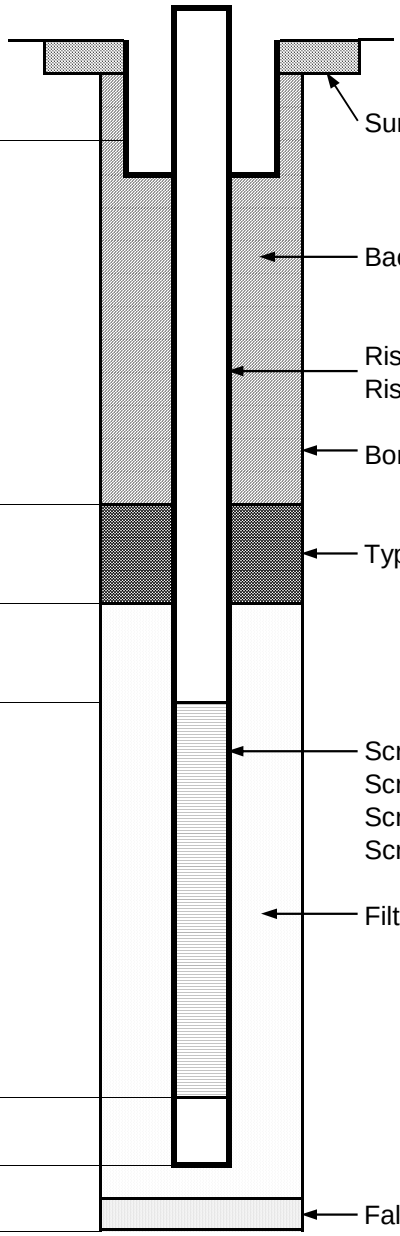
CTS of Asheville, Inc. Superfund Site

Wood Project 6252-16-2012

WELL ID

MW-25A

Date of Installation: 2/21/2018	**Depth to Water:**	**Completed By:** Rodney Clark, LG
Drilling Method: 4.25" ID auger	18.33 ft bgs (3/28/18)	**Measuring Point (MP)**
Contractor: Geologic Exploration	**Northing:** 652678.96	**Type:** ground surface
Driller: Jacob Messick (NC #4252)	**Easting:** 956505.75	**Elevation (feet msl):** approx. 2,417



Item	Depth below MP (feet)	Description	
Riser Pipe:	+0.65	Surface Seal Type:	Concrete
		Backfill/Grout Type:	Portland Cement
		Riser Pipe Type:	Stainless Steel
		Riser Pipe ID:	2 inches
		Borehole Diameter:	8 inches
Top of Seal:	40.5		
Top of Filter Pack:	42.7	Type of Seal:	Fine Sand
Top of Screen:	44.7		
		Screen Type:	Stainless Steel
		Screen ID:	2 inch
		Screen Slot Size:	0.010 inch
		Screen Length:	4.8 feet
		Filter Pack Type:	#2 Silica Sand
Bottom of Screen:	49.5		
End Cap:	49.8		
Drilled Depth:	50.0	Fallback/Backfill:	0.2 feet

Notes: Drill rig: Diedrich D50

bgs - below ground surface; msl - mean sea level

MONITORING WELL CONSTRUCTION DETAIL

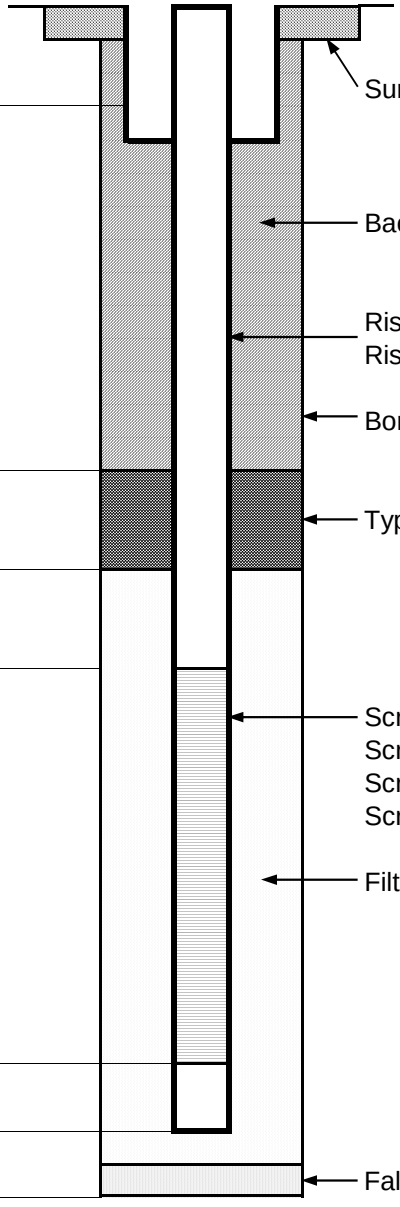
CTS of Asheville, Inc. Superfund Site

Wood Project 6252-16-2012

WELL ID

MW-26

Date of Installation: 2/26/2018	**Depth to Water:**	**Completed By:** Rodney Clark, LG
Drilling Method: 4.25" ID auger	16.95 ft bgs (3/28/18)	**Measuring Point (MP)**
Contractor: Geologic Exploration	**Northing:** 652650.21	**Type:** ground surface
Driller: Jacob Messick (NC #4252)	**Easting:** 956443.38	**Elevation (feet msl):** approx. 2,417



Item	Depth below MP (feet)	Description	
Riser Pipe:	0.0	Surface Seal Type:	Concrete
		Backfill/Grout Type:	Portland Cement
		Riser Pipe Type:	Stainless Steel
		Riser Pipe ID:	2 inches
		Borehole Diameter:	8 inches
Top of Seal:	21.0		
Top of Filter Pack:	23.3	Type of Seal:	Fine Sand
Top of Screen:	25.3		
		Screen Type:	Stainless Steel
		Screen ID:	2 inch
		Screen Slot Size:	0.010 inch
		Screen Length:	4.8 feet
		Filter Pack Type:	#2 Silica Sand
Bottom of Screen:	30.1		
End Cap:	30.4		
Drilled Depth:	30.4	Fallback/Backfill:	N/A

Notes: Drill rig: Diedrich D50

bgs - below ground surface; msl - mean sea level

MONITORING WELL CONSTRUCTION DETAIL

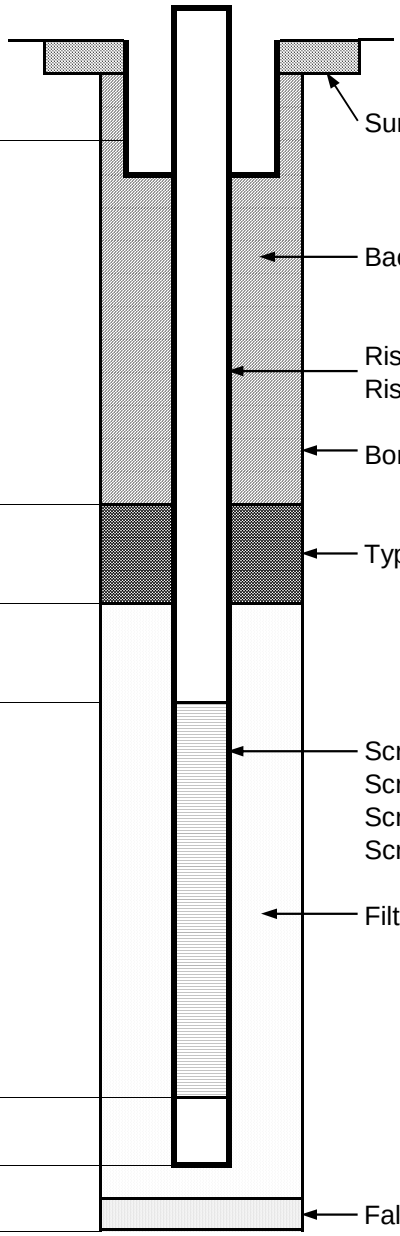
CTS of Asheville, Inc. Superfund Site

Wood Project 6252-16-2012

WELL ID

MW-26A

Date of Installation: 2/26/2018	**Depth to Water:**	**Completed By:** Rodney Clark, LG
Drilling Method: 4.25" ID auger	17.44 ft bgs (3/28/18)	**Measuring Point (MP)**
Contractor: Geologic Exploration	**Northing:** 652650.21	**Type:** ground surface
Driller: Jacob Messick (NC #4252)	**Easting:** 956443.38	**Elevation (feet msl):** approx. 2,417



Item	Depth below MP (feet)	Description	
Riser Pipe:	+2.70	Surface Seal Type:	Concrete
		Backfill/Grout Type:	Portland Cement
		Riser Pipe Type:	Stainless Steel
		Riser Pipe ID:	2 inches
		Borehole Diameter:	8 inches
Top of Seal:	33.0		
Top of Filter Pack:	35.7	Type of Seal:	Fine Sand
Top of Screen:	37.7		
		Screen Type:	Stainless Steel
		Screen ID:	2 inch
		Screen Slot Size:	0.010 inch
		Screen Length:	4.8 feet
		Filter Pack Type:	#2 Silica Sand
Bottom of Screen:	42.5		
End Cap:	42.8		
Drilled Depth:	42.8	Fallback/Backfill:	0.2 feet

Notes: Drill rig: Diedrich D50; drill chatter from 39 to 42 feet

bgs - below ground surface; msl - mean sea level

MONITORING WELL CONSTRUCTION DETAIL

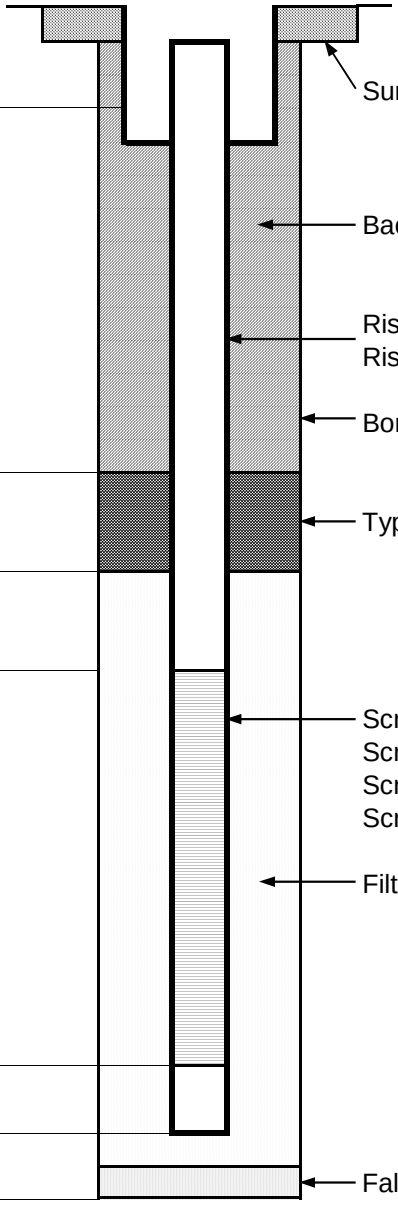
CTS of Asheville, Inc. Superfund Site

Wood Project 6252-16-2012

WELL ID

MW-27

Date of Installation: 2/26/2018	**Depth to Water:**	**Completed By:** Rodney Clark, LG
Drilling Method: 4.25" ID auger	15.03 ft bgs (3/28/18)	**Measuring Point (MP)**
Contractor: Geologic Exploration	**Northing:** 652621.57	**Type:** ground surface
Driller: Jacob Messick (NC #4252)	**Easting:** 956387.22	**Elevation (feet msl):** approx. 2,417



Item	Depth below MP (feet)	Description	
Riser Pipe:	0.21	Surface Seal Type:	Concrete
		Backfill/Grout Type:	Portland Cement
		Riser Pipe Type:	Stainless Steel
		Riser Pipe ID:	2 inches
		Borehole Diameter:	8 inches
Top of Seal:	11.0		
Top of Filter Pack:	13.6	Type of Seal:	Fine Sand
Top of Screen:	15.6		
		Screen Type:	Stainless Steel
		Screen ID:	2 inch
		Screen Slot Size:	0.010 inch
		Screen Length:	9.8
		Filter Pack Type:	#2 Silica Sand
Bottom of Screen:	25.4		
End Cap:	25.7		
Drilled Depth:	25.7	Fallback/Backfill:	N/A

Notes: Drill rig: Diedrich D50

bgs - below ground surface; msl - mean sea level

MONITORING WELL CONSTRUCTION DETAIL

CTS of Asheville, Inc. Superfund Site

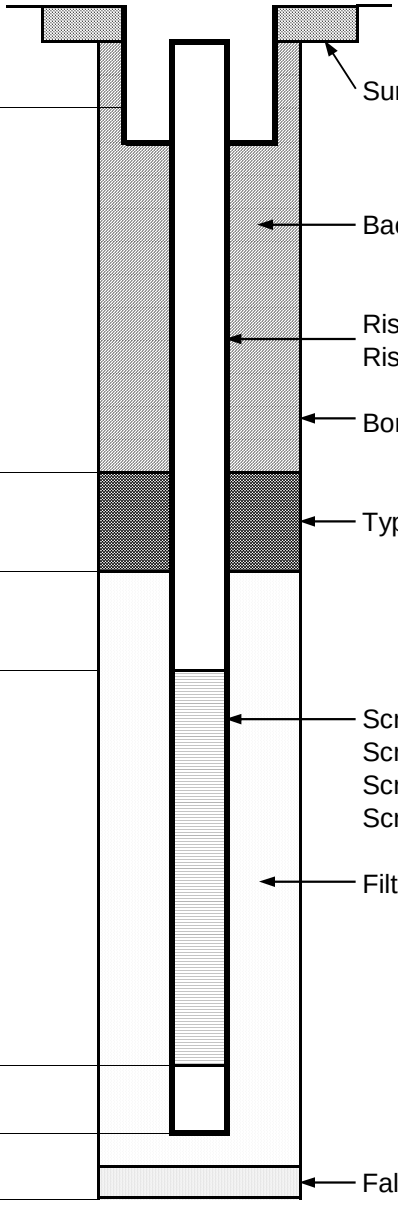
Wood Project 6252-16-2012

WELL ID

MW-28

Date of Installation: 2/22/2018	**Depth to Water:**	**Completed By:** Rodney Clark, LG
Drilling Method: 4.25" ID auger	17.42 ft bgs (3/28/18)	**Measuring Point (MP)**
Contractor: Geologic Exploration	**Northing:** 652628.34	**Type:** ground surface
Driller: Jacob Messick (NC #4252)	**Easting:** 956498.53	**Elevation (feet msl):** approx. 2,417

Item	Depth below MP (feet)	Description	
Riser Pipe:	0.30	Surface Seal Type:	Concrete
		Backfill/Grout Type:	Portland Cement
		Riser Pipe Type:	Stainless Steel
		Riser Pipe ID:	2 inches
		Borehole Diameter:	8 inches
Top of Seal:	21.0		
Top of Filter Pack:	23.5	Type of Seal:	Fine Sand
Top of Screen:	25.6		
		Screen Type:	Stainless Steel
		Screen ID:	2 inch
		Screen Slot Size:	0.010 inch
		Screen Length:	4.8
		Filter Pack Type:	#2 Silica Sand
Bottom of Screen:	30.4		
End Cap:	30.7		
Drilled Depth:	30.7	Fallback/Backfill:	N/A



Notes: Drill rig: Diedrich D50

bgs - below ground surface; msl - mean sea level

MONITORING WELL CONSTRUCTION DETAIL

CTS of Asheville, Inc. Superfund Site

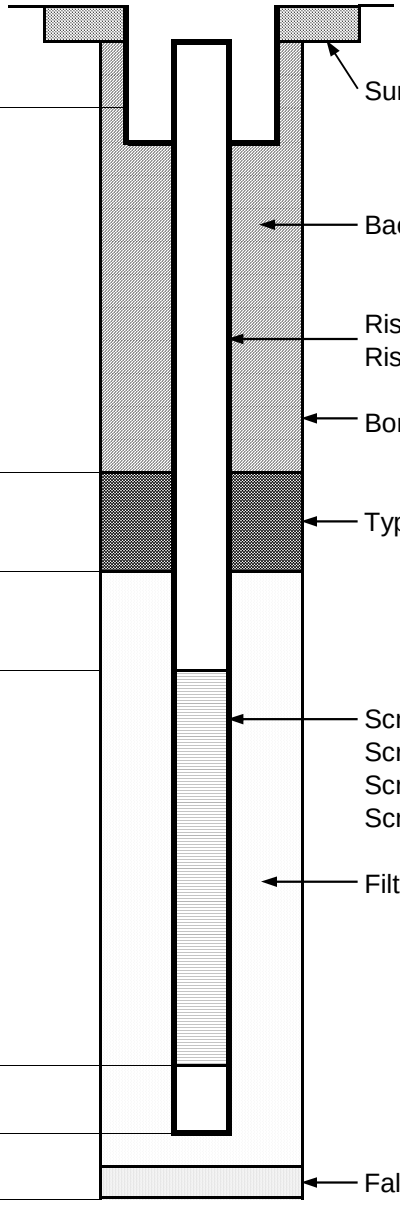
Wood Project 6252-16-2012

WELL ID

MW-28A

Date of Installation: 2/22/2018	**Depth to Water:**	**Completed By:** Rodney Clark, LG
Drilling Method: 4.25" ID auger	17.47 ft bgs (3/28/18)	**Measuring Point (MP)**
Contractor: Geologic Exploration	**Northing:** 652628.34	**Type:** ground surface
Driller: Jacob Messick (NC #4252)	**Easting:** 956498.53	**Elevation (feet msl):** approx. 2,417

Item	Depth below MP (feet)	Description	
Riser Pipe:	0.19	Surface Seal Type:	Concrete
		Backfill/Grout Type:	Portland Cement
		Riser Pipe Type:	Stainless Steel
		Riser Pipe ID:	2 inches
		Borehole Diameter:	8 inches
Top of Seal:	36.0		
Top of Filter Pack:	38.5	Type of Seal:	Fine Sand
Top of Screen:	40.5		
		Screen Type:	Stainless Steel
		Screen ID:	2 inch
		Screen Slot Size:	0.010 inch
		Screen Length:	4.8
		Filter Pack Type:	#2 Silica Sand
Bottom of Screen:	45.3		
End Cap:	45.6		
Drilled Depth:	45.6	Fallback/Backfill:	N/A



Notes: Drill rig: Diedrich D50; drill chatter from 42 to 45 feet

bgs - below ground surface; msl - mean sea level

MONITORING WELL CONSTRUCTION DETAIL

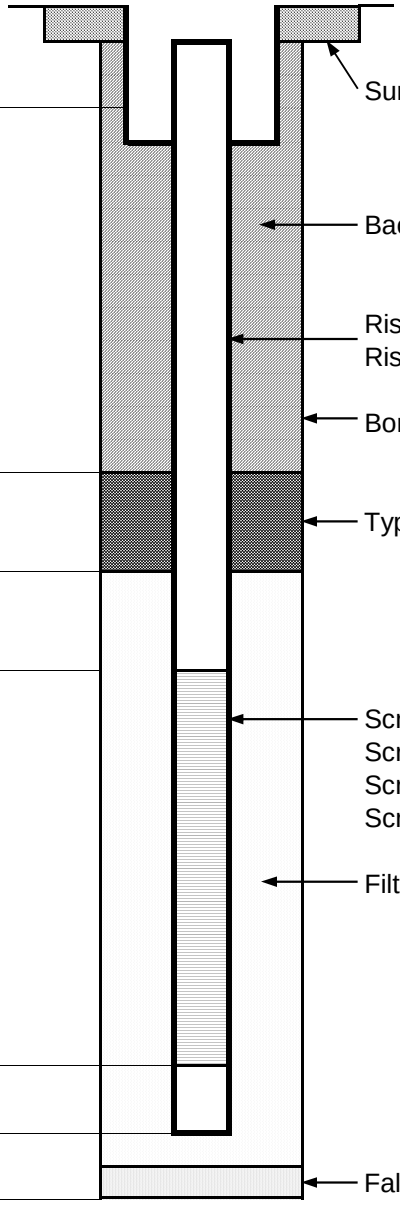
CTS of Asheville, Inc. Superfund Site

Wood Project 6252-16-2012

WELL ID

MW-29

Date of Installation: 2/20/2018	**Depth to Water:**	**Completed By:** Rodney Clark, LG
Drilling Method: 4.25" ID auger	16.34 ft bgs (3/28/18)	**Measuring Point (MP)**
Contractor: Geologic Exploration	**Northing:** 652596.25	**Type:** ground surface
Driller: Jacob Messick (NC #4252)	**Easting:** 956461.42	**Elevation (feet msl):** approx. 2,417



Item	Depth below MP (feet)	Description	
Riser Pipe:	0.56	Surface Seal Type:	Concrete
		Backfill/Grout Type:	Portland Cement
		Riser Pipe Type:	Stainless Steel
		Riser Pipe ID:	2 inches
		Borehole Diameter:	8 inches
Top of Seal:	11.0		
Top of Filter Pack:	14.0	Type of Seal:	Fine Sand
Top of Screen:	15.9		
		Screen Type:	Stainless Steel
		Screen ID:	2 inch
		Screen Slot Size:	0.010 inch
		Screen Length:	9.8
		Filter Pack Type:	#2 Silica Sand
Bottom of Screen:	25.7		
End Cap:	26.0		
Drilled Depth:	26.0	Fallback/Backfill:	N/A

Notes: Drill rig: Diedrich D50

bgs - below ground surface; msl - mean sea level

MONITORING WELL CONSTRUCTION DETAIL

CTS of Asheville, Inc. Superfund Site

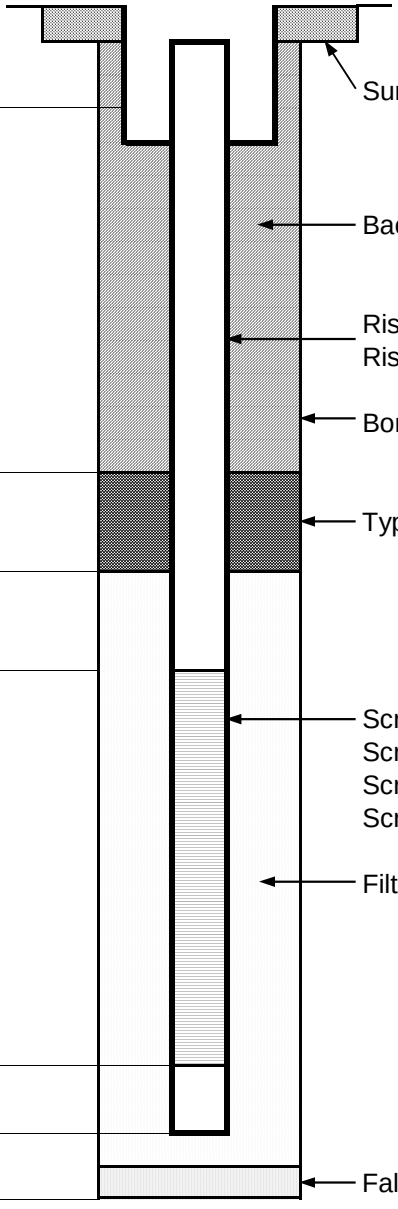
Wood Project 6252-16-2012

WELL ID

MW-29A

Date of Installation: 2/20/2018	**Depth to Water:**	**Completed By:** Rodney Clark, LG
Drilling Method: 4.25" ID auger	16.36 ft bgs (3/28/18)	**Measuring Point (MP)**
Contractor: Geologic Exploration	**Northing:** 652596.25	**Type:** ground surface
Driller: Jacob Messick (NC #4252)	**Easting:** 956461.42	**Elevation (feet msl):** approx. 2,417

Item	Depth below MP (feet)	Description	
Riser Pipe:	0.58	Surface Seal Type:	Concrete
		Backfill/Grout Type:	Portland Cement
		Riser Pipe Type:	Stainless Steel
		Riser Pipe ID:	2 inches
		Borehole Diameter:	8 inches
Top of Seal:	26.0		
Top of Filter Pack:	28.8	Type of Seal:	Fine Sand
Top of Screen:	30.8		
		Screen Type:	Stainless Steel
		Screen ID:	2 inch
		Screen Slot Size:	0.010 inch
		Screen Length:	4.8
		Filter Pack Type:	#2 Silica Sand
Bottom of Screen:	35.6		
End Cap:	35.9		
Drilled Depth:	35.9	Fallback/Backfill:	N/A



Notes: Drill rig: Diedrich D50; drill chatter from 32 to 36 feet

bgs - below ground surface; msl - mean sea level

MONITORING WELL CONSTRUCTION DETAIL

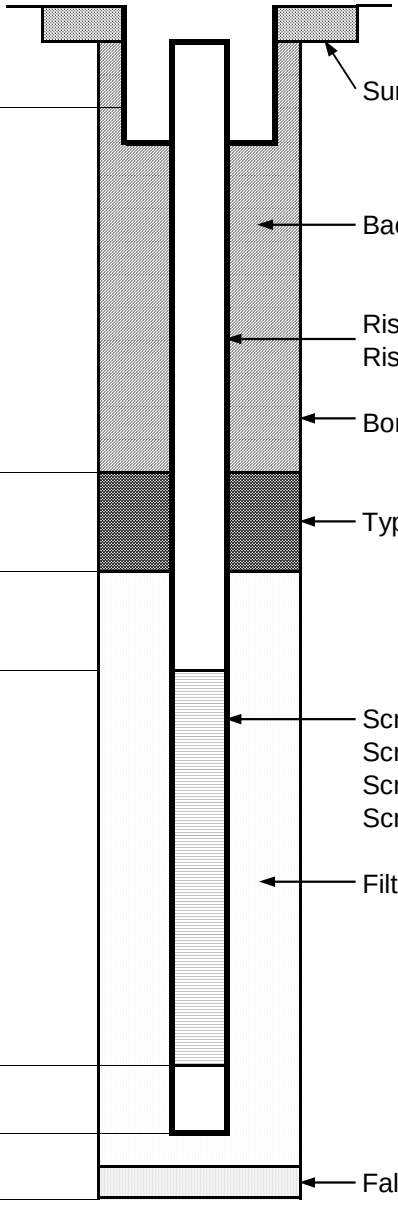
CTS of Asheville, Inc. Superfund Site

Wood Project 6252-16-2012

WELL ID

MW-30

Date of Installation: 2/23/2018	**Depth to Water:**	**Completed By:** Rodney Clark, LG
Drilling Method: 4.25" ID auger	17.68 ft bgs (3/28/18)	**Measuring Point (MP)**
Contractor: Geologic Exploration	**Northing:** 652567.96	**Type:** ground surface
Driller: Jacob Messick (NC #4252)	**Easting:** 956507.99	**Elevation (feet msl):** approx. 2,417



Item	Depth below MP (feet)	Description	
Riser Pipe:	0.36	Surface Seal Type:	Concrete
		Backfill/Grout Type:	Portland Cement
		Riser Pipe Type:	Stainless Steel
		Riser Pipe ID:	2 inches
		Borehole Diameter:	8 inches
Top of Seal:	16.0		
Top of Filter Pack:	18.7	Type of Seal:	Fine Sand
Top of Screen:	20.7		
		Screen Type:	Stainless Steel
		Screen ID:	2 inch
		Screen Slot Size:	0.010 inch
		Screen Length:	4.8
		Filter Pack Type:	#2 Silica Sand
Bottom of Screen:	25.5		
End Cap:	25.8		
Drilled Depth:	25.8	Fallback/Backfill:	N/A

Notes: Drill rig: Diedrich D50; drill chatter at 23 feet

bgs - below ground surface; msl - mean sea level

MONITORING WELL CONSTRUCTION DETAIL

CTS of Asheville, Inc. Superfund Site

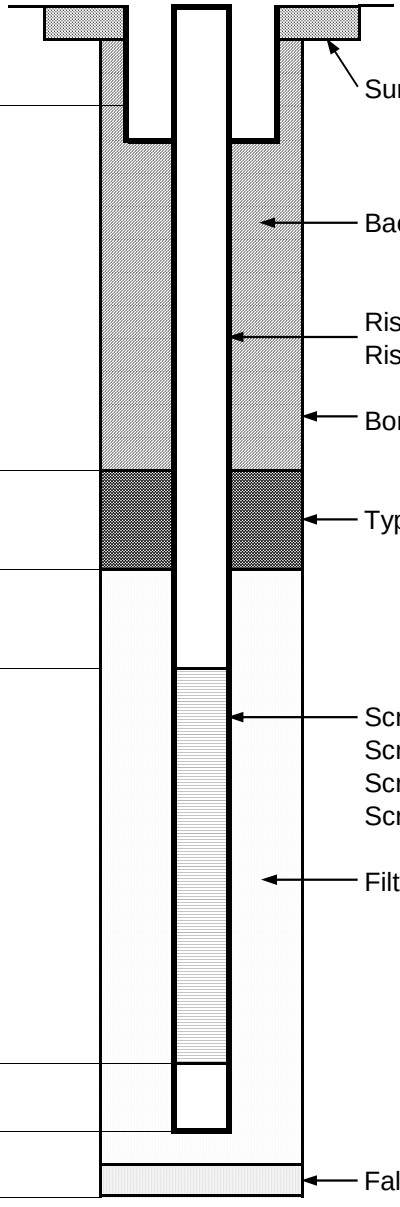
Wood Project 6252-16-2012

WELL ID

MW-30A

Date of Installation: 2/23/2018	**Depth to Water:**	**Completed By:** Rodney Clark, LG
Drilling Method: 4.25" ID auger	17.63 ft bgs (3/28/18)	**Measuring Point (MP)**
Contractor: Geologic Exploration	**Northing:** 652567.96	**Type:** ground surface
Driller: Jacob Messick (NC #4252)	**Easting:** 956507.99	**Elevation (feet msl):** approx. 2,417

Item	Depth below MP (feet)	Description	
Riser Pipe:	0.07	Surface Seal Type:	Concrete
		Backfill/Grout Type:	Portland Cement
		Riser Pipe Type:	Stainless Steel
		Riser Pipe ID:	2 inches
		Borehole Diameter:	8 inches
Top of Seal:	26.0		
Top of Filter Pack:	28.4	Type of Seal:	Fine Sand
Top of Screen:	30.4		
		Screen Type:	Stainless Steel
		Screen ID:	2 inch
		Screen Slot Size:	0.010 inch
		Screen Length:	4.8
		Filter Pack Type:	#2 Silica Sand
Bottom of Screen:	35.2		
End Cap:	35.5		
Drilled Depth:	35.5	Fallback/Backfill:	N/A



Notes: Drill rig: Diedrich D50; drill chatter at 23 feet and 32 feet

bgs - below ground surface; msl - mean sea level

MONITORING WELL CONSTRUCTION DETAIL

CTS of Asheville, Inc. Superfund Site

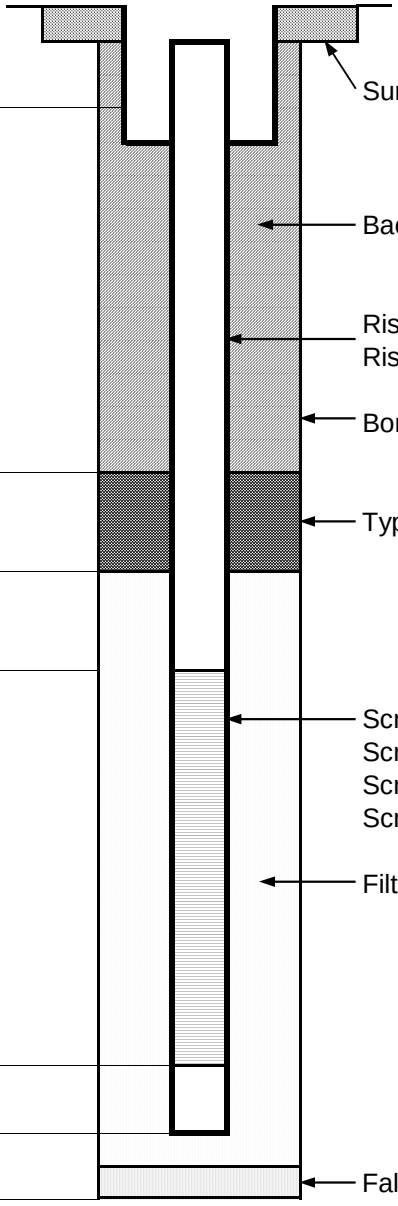
Wood Project 6252-16-2012

WELL ID

MW-31

Date of Installation: 3/22/2018	**Depth to Water:**	**Completed By:** Rodney Clark, LG
Drilling Method: 4.25" ID auger	33.20 ft bgs (3/28/18)	**Measuring Point (MP)**
Contractor: Geologic Exploration	**Northing:** 652628.45	**Type:** ground surface
Driller: Brian Thomas (NC #2581)	**Easting:** 956653.93	**Elevation (feet msl):** approx. 2,418

Item	Depth below MP (feet)	Description	
Riser Pipe:	0.15	Surface Seal Type:	Concrete
		Backfill/Grout Type:	Portland Cement
		Riser Pipe Type:	Stainless Steel
		Riser Pipe ID:	2 inches
		Borehole Diameter:	8 inches
Top of Seal:	26.5		
Top of Filter Pack:	28.0	Type of Seal:	Fine Sand
Top of Screen:	30.4		
		Screen Type:	Stainless Steel
		Screen ID:	2 inch
		Screen Slot Size:	0.010 inch
		Screen Length:	4.8
		Filter Pack Type:	#2 Silica Sand
Bottom of Screen:	35.2		
End Cap:	35.5		
Drilled Depth:	35.5	Fallback/Backfill:	N/A



Notes: Drill rig: Diedrich D120

bgs - below ground surface; msl - mean sea level

MONITORING WELL CONSTRUCTION DETAIL

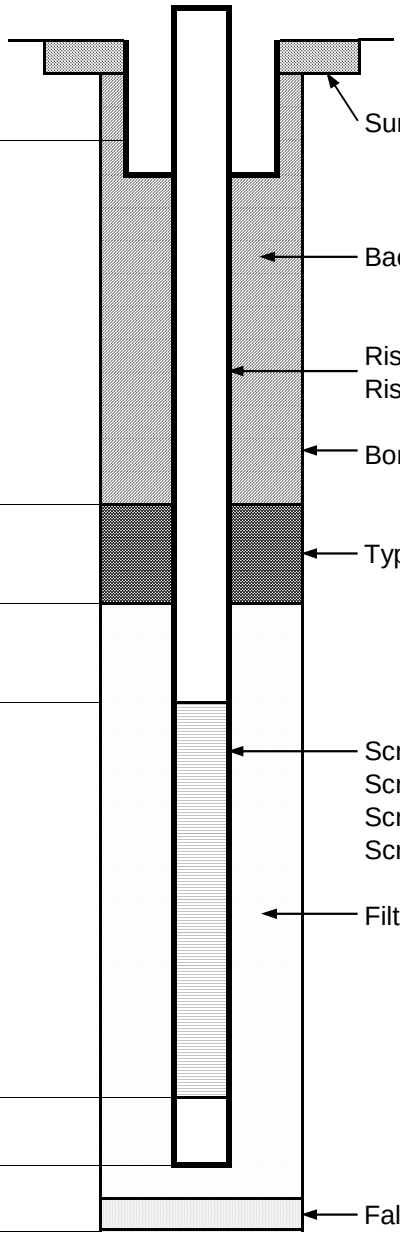
CTS of Asheville, Inc. Superfund Site

Wood Project 6252-16-2012

WELL ID

MW-31A

Date of Installation: 3/22/2018	**Depth to Water:**	**Completed By:** Rodney Clark, LG
Drilling Method: 4.25" ID auger	24.98 ft bgs (3/28/18)	**Measuring Point (MP)**
Contractor: Geologic Exploration	**Northing:** 652628.45	**Type:** ground surface
Driller: Brian Thomas (NC #2581)	**Easting:** 956653.93	**Elevation (feet msl):** approx. 2,418



Item	Depth below MP (feet)	Description	
Riser Pipe:	+1.02	Surface Seal Type:	Concrete
		Backfill/Grout Type:	Portland Cement
		Riser Pipe Type:	Stainless Steel
		Riser Pipe ID:	2 inches
		Borehole Diameter:	8 inches
Top of Seal:	44.5		
Top of Filter Pack:	47.0	Type of Seal:	Fine Sand
Top of Screen:	49.3		
		Screen Type:	Stainless Steel
		Screen ID:	2 inch
		Screen Slot Size:	0.010 inch
		Screen Length:	4.8
		Filter Pack Type:	#2 Silica Sand
Bottom of Screen:	54.1		
End Cap:	54.4		
Drilled Depth:	54.4	Fallback/Backfill:	N/A

Notes: Drill rig: Diedrich D120

bgs - below ground surface; msl - mean sea level

MONITORING WELL CONSTRUCTION DETAIL

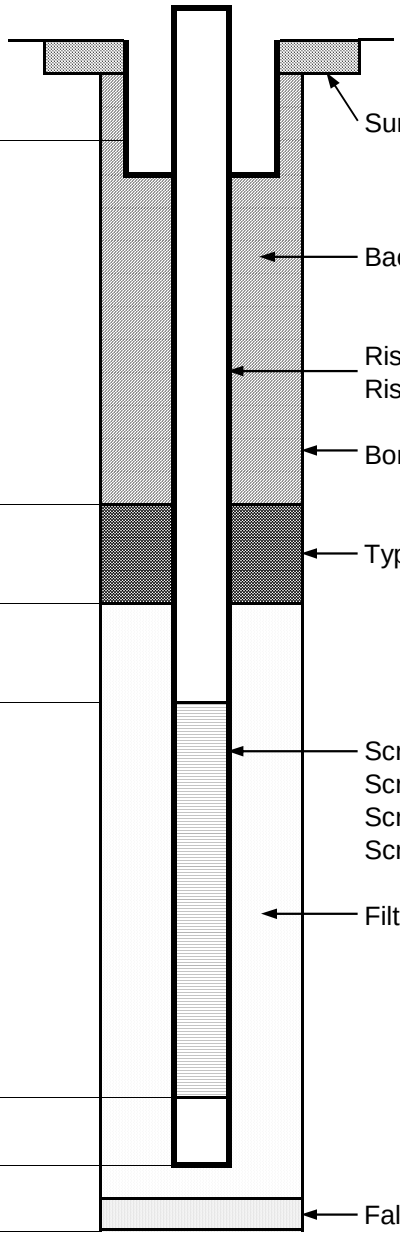
CTS of Asheville, Inc. Superfund Site

Wood Project 6252-16-2012

WELL ID

MW-32

Date of Installation: 3/23/2018	**Depth to Water:**	**Completed By:** Rodney Clark, LG
Drilling Method: 4.25" ID auger	27.43 ft bgs (3/28/18)	**Measuring Point (MP)**
Contractor: Geologic Exploration	**Northing:** 652551.08	**Type:** ground surface
Driller: Brian Thomas (NC #2581)	**Easting:** 956556.69	**Elevation (feet msl):** approx. 2,418



Item	Depth below MP (feet)	Description	
Riser Pipe:	+2.97	Surface Seal Type:	Concrete
		Backfill/Grout Type:	Portland Cement
		Riser Pipe Type:	Stainless Steel
		Riser Pipe ID:	2 inches
		Borehole Diameter:	8 inches
Top of Seal:	22.5		
Top of Filter Pack:	25.0	Type of Seal:	Fine Sand
Top of Screen:	27.4		
		Screen Type:	Stainless Steel
		Screen ID:	2 inch
		Screen Slot Size:	0.010 inch
		Screen Length:	9.8
		Filter Pack Type:	#2 Silica Sand
Bottom of Screen:	37.2		
End Cap:	37.5		
Drilled Depth:	37.5	Fallback/Backfill:	N/A

Notes: Drill rig: Diedrich D120

bgs - below ground surface; msl - mean sea level

WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

For Internal Use ONLY:

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

☐Agricultural ☐Municipal/Public

☐Geothermal (Heating/Cooling Supply) ☐Residential Water Supply (single)

☐Industrial/Commercial ☐Residential Water Supply (shared)

☐Irrigation

Non-Water Supply Well:

☑Monitoring ☐Recovery

Injection Well:

☐Aquifer Recharge ☐Groundwater Remediation

☐Aquifer Storage and Recovery ☐Salinity Barrier

☐Aquifer Test ☐Stormwater Drainage

☐Experimental Technology ☐Subsidence Control

☐Geothermal (Closed Loop) ☐Tracer

☐Geothermal (Heating/Cooling Return) ☐Other (explain under #21 Remarks)

4. Date Well(s) Completed: 02/21/18 **Well ID#** MW-23

5a. Well Location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and Longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 36.69" N 82° 30' 34.46" W

6. Is (are) the well(s): ☑**Permanent** or ☐**Temporary**

7. Is this a repair to an existing well: ☐**Yes** or ☑**No**

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: 1

For multiple injection or non-water supply wells ONLY with the same construction, you can submit one form.

9. Total well depth below land surface: 35.0 **(ft.)**

For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: 20.0 **(ft.)**

If water level is above casing, use "+"

11. Borehole diameter: 8.0 **(in.)**

12. Well construction method: AUGER

(i.e auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ **Method of test:** _____

13b. Disinfection type: _____ **Amount:** _____

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0.0 ft.	30.0 ft.	2.0 in.	SCH 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
30.0 ft.	35.0 ft.	2.0 in.	.010	SCH 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0.0 ft.	26.0 ft.	PORTLAND BENTONITE	SLURRY
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
28.0 ft.	35.0 ft.	20-40	FINE SILICA SAND
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0.0 ft.	10.0 ft.	BROWN/TAN SILT
10.0 ft.	35.0 ft.	BROWN/TAN SANDY SILT
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

FINE SAND SEAL FROM 26.0 TO 28.0 FEET

22. Certification:

Jacob Messick

Signature of Certified Well Contractor

04/10/18

Date

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C .0100 or 15A NCAC 02C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

☐Agricultural ☐Municipal/Public

☐Geothermal (Heating/Cooling Supply) ☐Residential Water Supply (single)

☐Industrial/Commercial ☐Residential Water Supply (shared)

☐Irrigation

Non-Water Supply Well:

☑Monitoring ☐Recovery

Injection Well:

☐Aquifer Recharge ☐Groundwater Remediation

☐Aquifer Storage and Recovery ☐Salinity Barrier

☐Aquifer Test ☐Stormwater Drainage

☐Experimental Technology ☐Subsidence Control

☐Geothermal (Closed Loop) ☐Tracer

☐Geothermal (Heating/Cooling Return) ☐Other (explain under #21 Remarks)

4. Date Well(s) Completed: 02/21/18 **Well ID#** MW-23A

5a. Well Location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and Longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 36.69" N 82° 30' 34.46" W

6. Is (are) the well(s): ☑**Permanent** or ☐**Temporary**

7. Is this a repair to an existing well: ☐**Yes** or ☑**No**

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: 1

For multiple injection or non-water supply wells ONLY with the same construction, you can submit one form.

9. Total well depth below land surface: 50.0 **(ft.)**

For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: 20.0 **(ft.)**

If water level is above casing, use "+"

11. Borehole diameter: 8.0 **(in.)**

12. Well construction method: AUGER

(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ **Method of test:** _____

13b. Disinfection type: _____ **Amount:** _____

For Internal Use ONLY:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0.0 ft.	45.0 ft.	2.0 in.	SCH 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
45.0 ft.	50.0 ft.	2.0 in.	.010	SCH 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0.0 ft.	40.0 ft.	PORTLAND BENTONITE	SLURRY
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
43.0 ft.	50.0 ft.	20-40	FINE SILICA SAND
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0.0 ft.	10.0 ft.	BROWN SILT
10.0 ft.	50.0 ft.	BROWN/TAN SANDY SILT
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

FINE SAND SEAL FROM 40.0 TO 43.0 FEET

22. Certification

Jacob Messick

Signature of Certified Well Contractor

04/10/18

Date

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C .0100 or 15A NCAC 02C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

For Internal Use ONLY:

1. Well Contractor Information:

JACOB MESSICK
Well Contractor Name

A - 4252
NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC
Company Name

2. Well Construction Permit #: _____
List all applicable well construction permits (i.e. County, State, Variance, etc.)

3. Well Use (check well use):

Water Supply Well:
☐Agricultural ☐Municipal/Public
☐Geothermal (Heating/Cooling Supply) ☐Residential Water Supply (single)
☐Industrial/Commercial ☐Residential Water Supply (shared)
☐Irrigation

Non-Water Supply Well:
☑Monitoring ☐Recovery

Injection Well:
☐Aquifer Recharge ☐Groundwater Remediation
☐Aquifer Storage and Recovery ☐Salinity Barrier
☐Aquifer Test ☐Stormwater Drainage
☐Experimental Technology ☐Subsidence Control
☐Geothermal (Closed Loop) ☐Tracer
☐Geothermal (Heating/Cooling Return) ☐Other (explain under #21 Remarks)

4. Date Well(s) Completed: 02/22/18 **Well ID#** MW-24

5a. Well Location:

CTS FACILITY
Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803
Physical Address, City, and Zip

BUNCOMBE
County

Parcel Identification No. (PIN)

5b. Latitude and Longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 36.69" N 82° 30' 34.46" W

6. Is (are) the well(s): ☑**Permanent** or ☐**Temporary**

7. Is this a repair to an existing well: ☐**Yes** or ☑**No**
If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: 1
For multiple injection or non-water supply wells ONLY with the same construction, you can submit one form.

9. Total well depth below land surface: 30.0 **(ft.)**
For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: 20.0 **(ft.)**
If water level is above casing, use "+"

11. Borehole diameter: 8.0 **(in.)**

12. Well construction method: AUGER
(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ **Method of test:** _____

13b. Disinfection type: _____ **Amount:** _____

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0.0 ft.	20.0 ft.	2.0 in.	SCH 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
20.0 ft.	30.0 ft.	2.0 in.	.010	SCH 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0.0 ft.	16.0 ft.	PORTLAND BENTONITE	SLURRY
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
18.0 ft.	30.0 ft.	20-40	FINE SILICA SAND
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0.0 ft.	10.0 ft.	BROWN SILT
10.0 ft.	30.0 ft.	BROWN/TAN SANDY SILT
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

FINE SAND SEAL FROM 16.0 TO 18.0 FEET

22. Certification:

Jacob Messick
Signature of Certified Well Contractor

04/10/18
Date

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C .0100 or 15A NCAC 02C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

23. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

☐Agricultural ☐Municipal/Public

☐Geothermal (Heating/Cooling Supply) ☐Residential Water Supply (single)

☐Industrial/Commercial ☐Residential Water Supply (shared)

☐Irrigation

Non-Water Supply Well:

☑Monitoring ☐Recovery

Injection Well:

☐Aquifer Recharge ☐Groundwater Remediation

☐Aquifer Storage and Recovery ☐Salinity Barrier

☐Aquifer Test ☐Stormwater Drainage

☐Experimental Technology ☐Subsidence Control

☐Geothermal (Closed Loop) ☐Tracer

☐Geothermal (Heating/Cooling Return) ☐Other (explain under #21 Remarks)

4. Date Well(s) Completed: 02/22/18 **Well ID#** MW-24A

5a. Well Location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and Longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 36.69" N 82° 30' 34.46" W

6. Is (are) the well(s): ☑**Permanent** or ☐**Temporary**

7. Is this a repair to an existing well: ☐Yes or ☑No

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: 1

*For multiple injection or non-water supply wells **ONLY** with the **same construction**, you can submit one form.*

9. Total well depth below land surface: 55.0 **(ft.)**

For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: 20.0 **(ft.)**

If water level is above casing, use "+"

11. Borehole diameter: 8.0 **(in.)**

12. Well construction method: AUGER

(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ **Method of test:** _____

13b. Disinfection type: _____ **Amount:** _____

For Internal Use ONLY:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0.0 ft.	50.0 ft.	2.0 in.	SCH 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
50.0 ft.	55.0 ft.	2.0 in.	.010	SCH 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0.0 ft.	46.0 ft.	PORTLAND BENTONITE	SLURRY
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
48.0 ft.	55.0 ft.	20-40	FINE SILICA SAND
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0.0 ft.	10.0 ft.	BROWN SILT
10.0 ft.	55.0 ft.	BROWN/TAN SANDY SILT
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

FINE SAND SEAL FROM 46.0 TO 48.0 FEET

22. Certification:

Jacob Messick

Signature of Certified Well Contractor

04/10/18

Date

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C .0100 or 15A NCAC 02C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

☐Agricultural ☐Municipal/Public

☐Geothermal (Heating/Cooling Supply) ☐Residential Water Supply (single)

☐Industrial/Commercial ☐Residential Water Supply (shared)

☐Irrigation

Non-Water Supply Well:

☑Monitoring ☐Recovery

Injection Well:

☐Aquifer Recharge ☐Groundwater Remediation

☐Aquifer Storage and Recovery ☐Salinity Barrier

☐Aquifer Test ☐Stormwater Drainage

☐Experimental Technology ☐Subsidence Control

☐Geothermal (Closed Loop) ☐Tracer

☐Geothermal (Heating/Cooling Return) ☐Other (explain under #21 Remarks)

4. Date Well(s) Completed: 02/21/18 **Well ID#** MW-25

5a. Well Location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and Longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 36.69" N 82° 30' 34.46" W

6. Is (are) the well(s): ☑**Permanent** or ☐**Temporary**

7. Is this a repair to an existing well: ☐Yes or ☑No

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: 1

For multiple injection or non-water supply wells ONLY with the same construction, you can submit one form.

9. Total well depth below land surface: 35.0 **(ft.)**

For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: 20.0 **(ft.)**

If water level is above casing, use "+"

11. Borehole diameter: 8.0 **(in.)**

12. Well construction method: AUGER

(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ **Method of test:** _____

13b. Disinfection type: _____ **Amount:** _____

For Internal Use ONLY:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0.0 ft.	30.0 ft.	2.0 in.	SCH 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
30.0 ft.	35.0 ft.	2.0 in.	.010	SCH 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0.0 ft.	26.0 ft.	PORTLAND BENTONITE	SLURRY
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
28.0 ft.	35.0 ft.	20-40	FINE SILICA SAND
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0.0 ft.	10.0 ft.	BROWN SILT
10.0 ft.	35.0 ft.	BROWN/TAN SANDY SILT
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

FINE SAND SEAL FROM 26.0 TO 28.0 FEET

22. Certification:

Jacob Messick

Signature of Certified Well Contractor

04/10/18

Date

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C .0100 or 15A NCAC 02C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

☐Agricultural ☐Municipal/Public

☐Geothermal (Heating/Cooling Supply) ☐Residential Water Supply (single)

☐Industrial/Commercial ☐Residential Water Supply (shared)

☐Irrigation

Non-Water Supply Well:

☑Monitoring ☐Recovery

Injection Well:

☐Aquifer Recharge ☐Groundwater Remediation

☐Aquifer Storage and Recovery ☐Salinity Barrier

☐Aquifer Test ☐Stormwater Drainage

☐Experimental Technology ☐Subsidence Control

☐Geothermal (Closed Loop) ☐Tracer

☐Geothermal (Heating/Cooling Return) ☐Other (explain under #21 Remarks)

4. Date Well(s) Completed: 02/21/18 **Well ID#** MW-25A

5a. Well Location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and Longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 36.69" N 82° 30' 34.46" W

6. Is (are) the well(s): ☑**Permanent** or ☐**Temporary**

7. Is this a repair to an existing well: ☐Yes or ☑No

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: 1

For multiple injection or non-water supply wells ONLY with the same construction, you can submit one form.

9. Total well depth below land surface: 50.0 **(ft.)**

For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: 20.0 **(ft.)**

If water level is above casing, use "+"

11. Borehole diameter: 8.0 **(in.)**

12. Well construction method: AUGER

(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ **Method of test:** _____

13b. Disinfection type: _____ **Amount:** _____

For Internal Use ONLY:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0.0 ft.	45.0 ft.	2.0 in.	SCH 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
45.0 ft.	50.0 ft.	2.0 in.	.010	SCH 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0.0 ft.	40.0 ft.	PORTLAND BENTONITE	SLURRY
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
43.0 ft.	50.0 ft.	20-40	FINE SILICA SAND
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0.0 ft.	10.0 ft.	BROWN SILT
10.0 ft.	50.0 ft.	BROWN/TAN SANDY SILT
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

FINE SAND SEAL FROM 40.0 TO 43.0 FEET

22. Certification

Josh Messick

Signature of Certified Well Contractor

04/10/18

Date

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C .0100 or 15A NCAC 02C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

☐Agricultural ☐Municipal/Public

☐Geothermal (Heating/Cooling Supply) ☐Residential Water Supply (single)

☐Industrial/Commercial ☐Residential Water Supply (shared)

☐Irrigation

Non-Water Supply Well:

☑Monitoring ☐Recovery

Injection Well:

☐Aquifer Recharge ☐Groundwater Remediation

☐Aquifer Storage and Recovery ☐Salinity Barrier

☐Aquifer Test ☐Stormwater Drainage

☐Experimental Technology ☐Subsidence Control

☐Geothermal (Closed Loop) ☐Tracer

☐Geothermal (Heating/Cooling Return) ☐Other (explain under #21 Remarks)

4. Date Well(s) Completed: 02/26/18 **Well ID#** MW-26

5a. Well Location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and Longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 36.69" N 82° 30' 34.46" W

6. Is (are) the well(s): ☑**Permanent** or ☐**Temporary**

7. Is this a repair to an existing well: ☐Yes or ☑No

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: 1

For multiple injection or non-water supply wells ONLY with the same construction, you can submit one form.

9. Total well depth below land surface: 30.0 **(ft.)**

For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: 20.0 **(ft.)**

If water level is above casing, use "+"

11. Borehole diameter: 8.0 **(in.)**

12. Well construction method: AUGER

(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ **Method of test:** _____

13b. Disinfection type: _____ **Amount:** _____

For Internal Use ONLY:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0.0 ft.	25.0 ft.	2.0 in.	SCH 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
25.0 ft.	30.0 ft.	2.0 in.	.010	SCH 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0.0 ft.	21.0 ft.	PORTLAND BENTONITE	SLURRY
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
23.0 ft.	30.0 ft.	20-40	FINE SILICA SAND
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0.0 ft.	10.0 ft.	BROWN SILT
10.0 ft.	30.0 ft.	BROWN/TAN SANDY SILT
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

FINE SAND SEAL FROM 21.0 TO 23.0 FEET

22. Certification:

Jacob Messick 04/10/18

Signature of Certified Well Contractor Date

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C .0100 or 15A NCAC 02C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

☐Agricultural ☐Municipal/Public

☐Geothermal (Heating/Cooling Supply) ☐Residential Water Supply (single)

☐Industrial/Commercial ☐Residential Water Supply (shared)

☐Irrigation

Non-Water Supply Well:

☑Monitoring ☐Recovery

Injection Well:

☐Aquifer Recharge ☐Groundwater Remediation

☐Aquifer Storage and Recovery ☐Salinity Barrier

☐Aquifer Test ☐Stormwater Drainage

☐Experimental Technology ☐Subsidence Control

☐Geothermal (Closed Loop) ☐Tracer

☐Geothermal (Heating/Cooling Return) ☐Other (explain under #21 Remarks)

4. Date Well(s) Completed: 02/26/18 **Well ID#** MW-26A

5a. Well Location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and Longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 36.69" N 82° 30' 34.46" W

6. Is (are) the well(s): ☑**Permanent** or ☐**Temporary**

7. Is this a repair to an existing well: ☐**Yes** or ☑**No**

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: 1

For multiple injection or non-water supply wells ONLY with the same construction, you can submit one form.

9. Total well depth below land surface: 42.0 **(ft.)**

For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: 20.0 **(ft.)**

If water level is above casing, use "+"

11. Borehole diameter: 8.0 **(in.)**

12. Well construction method: AUGER

(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ **Method of test:** _____

13b. Disinfection type: _____ **Amount:** _____

For Internal Use ONLY:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0.0 ft.	37.0 ft.	2.0 in.	SCH 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
37.0 ft.	42.0 ft.	2.0 in.	.010	SCH 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0.0 ft.	33.0 ft.	PORTLAND BENTONITE	SLURRY
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
35.0 ft.	42.0 ft.	20-40	FINE SILICA SAND
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0.0 ft.	10.0 ft.	BROWN SILT
10.0 ft.	42.0 ft.	BROWN/TAN SANDY SILT
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

FINE SAND SEAL FROM 33.0 TO 35.0 FEET

22. Certification:

Jacob Messick

Signature of Certified Well Contractor

04/10/18

Date

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C .0100 or 15A NCAC 02C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

☐Agricultural ☐Municipal/Public

☐Geothermal (Heating/Cooling Supply) ☐Residential Water Supply (single)

☐Industrial/Commercial ☐Residential Water Supply (shared)

☐Irrigation

Non-Water Supply Well:

☑Monitoring ☐Recovery

Injection Well:

☐Aquifer Recharge ☐Groundwater Remediation

☐Aquifer Storage and Recovery ☐Salinity Barrier

☐Aquifer Test ☐Stormwater Drainage

☐Experimental Technology ☐Subsidence Control

☐Geothermal (Closed Loop) ☐Tracer

☐Geothermal (Heating/Cooling Return) ☐Other (explain under #21 Remarks)

4. Date Well(s) Completed: 02/20/18 **Well ID#** MW-27

5a. Well Location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and Longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 36.69" N 82° 30' 34.46" W

6. Is (are) the well(s): ☑**Permanent** or ☐**Temporary**

7. Is this a repair to an existing well: ☐Yes or ☑No

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: 1

For multiple injection or non-water supply wells ONLY with the same construction, you can submit one form.

9. Total well depth below land surface: 25.0 (ft.)

For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: 20.0 (ft.)

If water level is above casing, use "+"

11. Borehole diameter: 8.0 (in.)

12. Well construction method: AUGER

(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ **Method of test:** _____

13b. Disinfection type: _____ **Amount:** _____

For Internal Use ONLY:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0.0 ft.	15.0 ft.	2.0 in.	SCH 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
15.0 ft.	25.0 ft.	2.0 in.	.010	SCH 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0.0 ft.	11.0 ft.	PORTLAND BENTONITE	SLURRY
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
13.0 ft.	25.0 ft.	20-40	FINE SILICA SAND
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0.0 ft.	10.0 ft.	BROWN SILT
10.0 ft.	25.0 ft.	BROWN/TAN SANDY SILT
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

FINE SAND SEAL FROM 11.0 TO 13.0 FEET

22. Certification:

Josh Messick

Signature of Certified Well Contractor

04/10/18

Date

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C .0100 or 15A NCAC 02C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

☐Agricultural ☐Municipal/Public

☐Geothermal (Heating/Cooling Supply) ☐Residential Water Supply (single)

☐Industrial/Commercial ☐Residential Water Supply (shared)

☐Irrigation

Non-Water Supply Well:

☑Monitoring ☐Recovery

Injection Well:

☐Aquifer Recharge ☐Groundwater Remediation

☐Aquifer Storage and Recovery ☐Salinity Barrier

☐Aquifer Test ☐Stormwater Drainage

☐Experimental Technology ☐Subsidence Control

☐Geothermal (Closed Loop) ☐Tracer

☐Geothermal (Heating/Cooling Return) ☐Other (explain under #21 Remarks)

4. Date Well(s) Completed: 02/22/18 **Well ID#** MW-28

5a. Well Location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and Longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 36.69" N 82° 30' 34.46" W

6. Is (are) the well(s): ☑Permanent or ☐Temporary

7. Is this a repair to an existing well: ☐Yes or ☑No

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: 1

For multiple injection or non-water supply wells ONLY with the same construction, you can submit one form.

9. Total well depth below land surface: 30.0 (ft.)

For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: 20.0 (ft.)

If water level is above casing, use "+"

11. Borehole diameter: 8.0 (in.)

12. Well construction method: AUGER

(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ **Method of test:** _____

13b. Disinfection type: _____ **Amount:** _____

For Internal Use ONLY:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0.0 ft.	25.0 ft.	2.0 in.	SCH 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
25.0 ft.	30.0 ft.	2.0 in.	.010	SCH 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0.0 ft.	20.0 ft.	PORTLAND BENTONITE	SLURRY
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
23.0 ft.	30.0 ft.	20-40	FINE SILICA SAND
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0.0 ft.	10.0 ft.	BROWN SILT
10.0 ft.	30.0 ft.	BROWN/TAN SANDY SILT
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

FINE SAND SEAL FROM 20.0 TO 23.0 FEET

22. Certification:

Jacob Messick

Signature of Certified Well Contractor

04/10/18

Date

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C .0100 or 15A NCAC 02C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

☐Agricultural ☐Municipal/Public

☐Geothermal (Heating/Cooling Supply) ☐Residential Water Supply (single)

☐Industrial/Commercial ☐Residential Water Supply (shared)

☐Irrigation

Non-Water Supply Well:

☑Monitoring ☐Recovery

Injection Well:

☐Aquifer Recharge ☐Groundwater Remediation

☐Aquifer Storage and Recovery ☐Salinity Barrier

☐Aquifer Test ☐Stormwater Drainage

☐Experimental Technology ☐Subsidence Control

☐Geothermal (Closed Loop) ☐Tracer

☐Geothermal (Heating/Cooling Return) ☐Other (explain under #21 Remarks)

4. Date Well(s) Completed: 02/22/18 **Well ID#** MW-28A

5a. Well Location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and Longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 36.69" N 82° 30' 34.46" W

6. Is (are) the well(s): ☑**Permanent** or ☐**Temporary**

7. Is this a repair to an existing well: ☐**Yes** or ☑**No**

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: 1

*For multiple injection or non-water supply wells **ONLY** with the **same construction**, you can submit one form.*

9. Total well depth below land surface: 45.0 **(ft.)**

For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: 20.0 **(ft.)**

If water level is above casing, use "+"

11. Borehole diameter: 8.0 **(in.)**

12. Well construction method: AUGER

(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ **Method of test:** _____

13b. Disinfection type: _____ **Amount:** _____

For Internal Use ONLY:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0.0 ft.	40.0 ft.	2.0 in.	SCH 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
40.0 ft.	45.0 ft.	2.0 in.	.010	SCH 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0.0 ft.	36.0 ft.	PORTLAND BENTONITE	SLURRY
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
38.0 ft.	45.0 ft.	20-40	FINE SILICA SAND
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0.0 ft.	10.0 ft.	BROWN SILT
10.0 ft.	45.0 ft.	BROWN/TAN SANDY SILT
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

FINE SAND SEAL FROM 36.0 TO 38.0 FEET

22. Certification:

Jacob Messick

Signature of Certified Well Contractor

04/10/18

Date

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C .0100 or 15A NCAC 02C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

For Internal Use ONLY:

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

☐Agricultural ☐Municipal/Public

☐Geothermal (Heating/Cooling Supply) ☐Residential Water Supply (single)

☐Industrial/Commercial ☐Residential Water Supply (shared)

☐Irrigation

Non-Water Supply Well:

☑Monitoring ☐Recovery

Injection Well:

☐Aquifer Recharge ☐Groundwater Remediation

☐Aquifer Storage and Recovery ☐Salinity Barrier

☐Aquifer Test ☐Stormwater Drainage

☐Experimental Technology ☐Subsidence Control

☐Geothermal (Closed Loop) ☐Tracer

☐Geothermal (Heating/Cooling Return) ☐Other (explain under #21 Remarks)

4. Date Well(s) Completed: 02/20/18 **Well ID#** MW-29

5a. Well Location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and Longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 36.69" N 82° 30' 34.46" W

6. Is (are) the well(s): ☑**Permanent** or ☐**Temporary**

7. Is this a repair to an existing well: ☐Yes or ☑No

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: 1

For multiple injection or non-water supply wells ONLY with the same construction, you can submit one form.

9. Total well depth below land surface: 25.0 **(ft.)**

For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: 20.0 **(ft.)**

If water level is above casing, use "+"

11. Borehole diameter: 8.0 **(in.)**

12. Well construction method: AUGER

(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ **Method of test:** _____

13b. Disinfection type: _____ **Amount:** _____

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0.0 ft.	15.0 ft.	2.0 in.	SCH 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
15.0 ft.	25.0 ft.	2.0 in.	.010	SCH 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0.0 ft.	10.0 ft.	PORTLAND BENTONITE	SLURRY
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
13.0 ft.	25.0 ft.	20-40	FINE SILICA SAND
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0.0 ft.	10.0 ft.	BROWN SILT
10.0 ft.	25.0 ft.	BROWN/TAN/GRAY SANDY SILT
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

FINE SAND SEAL FROM 10.0 TO 13.0 FEET

22. Certification:

Jacob Messick

Signature of Certified Well Contractor

04/10/18

Date

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C .0100 or 15A NCAC 02C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

☐Agricultural ☐Municipal/Public

☐Geothermal (Heating/Cooling Supply) ☐Residential Water Supply (single)

☐Industrial/Commercial ☐Residential Water Supply (shared)

☐Irrigation

Non-Water Supply Well:

☑Monitoring ☐Recovery

Injection Well:

☐Aquifer Recharge ☐Groundwater Remediation

☐Aquifer Storage and Recovery ☐Salinity Barrier

☐Aquifer Test ☐Stormwater Drainage

☐Experimental Technology ☐Subsidence Control

☐Geothermal (Closed Loop) ☐Tracer

☐Geothermal (Heating/Cooling Return) ☐Other (explain under #21 Remarks)

4. Date Well(s) Completed: 02/20/18 **Well ID#** MW-29A

5a. Well Location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and Longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 36.69" N 82° 30' 34.46" W

6. Is (are) the well(s): ☑**Permanent** or ☐**Temporary**

7. Is this a repair to an existing well: ☐Yes or ☑No

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: 1

For multiple injection or non-water supply wells ONLY with the same construction, you can submit one form.

9. Total well depth below land surface: 35.0 **(ft.)**

For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: 20.0 **(ft.)**

If water level is above casing, use "+"

11. Borehole diameter: 8.0 **(in.)**

12. Well construction method: AUGER

(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ **Method of test:** _____

13b. Disinfection type: _____ **Amount:** _____

For Internal Use ONLY:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0.0 ft.	30.0 ft.	2.0 in.	SCH 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
30.0 ft.	35.0 ft.	2.0 in.	.010	SCH 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0.0 ft.	26.0 ft.	PORTLAND BENTONITE	SLURRY
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
28.0 ft.	35.0 ft.	20-40	FINE SILICA SAND
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0.0 ft.	10.0 ft.	BROWN SILT
10.0 ft.	35.0 ft.	BROWN/GRAY SANDY SILT
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

FINE SAND SEAL FROM 26.0 TO 28.0 FEET

22. Certification:

Jacob Messick 04/10/18

Signature of Certified Well Contractor Date

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C .0100 or 15A NCAC 02C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

☐Agricultural ☐Municipal/Public

☐Geothermal (Heating/Cooling Supply) ☐Residential Water Supply (single)

☐Industrial/Commercial ☐Residential Water Supply (shared)

☐Irrigation

Non-Water Supply Well:

☑Monitoring ☐Recovery

Injection Well:

☐Aquifer Recharge ☐Groundwater Remediation

☐Aquifer Storage and Recovery ☐Salinity Barrier

☐Aquifer Test ☐Stormwater Drainage

☐Experimental Technology ☐Subsidence Control

☐Geothermal (Closed Loop) ☐Tracer

☐Geothermal (Heating/Cooling Return) ☐Other (explain under #21 Remarks)

4. Date Well(s) Completed: 02/23/18 **Well ID#** MW-30

5a. Well Location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and Longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 36.69" N 82° 30' 34.46" W

6. Is (are) the well(s): ☑**Permanent** or ☐**Temporary**

7. Is this a repair to an existing well: ☐Yes or ☑No

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: 1

For multiple injection or non-water supply wells ONLY with the same construction, you can submit one form.

9. Total well depth below land surface: 25.0 **(ft.)**

For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: 20.0 **(ft.)**

If water level is above casing, use "+"

11. Borehole diameter: 8.0 **(in.)**

12. Well construction method: AUGER

(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ **Method of test:** _____

13b. Disinfection type: _____ **Amount:** _____

For Internal Use ONLY:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0.0 ft.	20.0 ft.	2.0 in.	SCH 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
20.0 ft.	25.0 ft.	2.0 in.	.010	SCH 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0.0 ft.	16.0 ft.	PORTLAND BENTONITE	SLURRY
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
18.0 ft.	25.0 ft.	20-40	FINE SILICA SAND
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0.0 ft.	10.0 ft.	BROWN SILT
10.0 ft.	25.0 ft.	BROWN/TAN SANDY SILT
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

FINE SAND SEAL FROM 16.0 TO 18.0 FEET

22. Certification:

Josh Messick 04/10/18

Signature of Certified Well Contractor Date

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C .0100 or 15A NCAC 02C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

JACOB MESSICK

Well Contractor Name

A - 4252

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

☐Agricultural ☐Municipal/Public

☐Geothermal (Heating/Cooling Supply) ☐Residential Water Supply (single)

☐Industrial/Commercial ☐Residential Water Supply (shared)

☐Irrigation

Non-Water Supply Well:

☑Monitoring ☐Recovery

Injection Well:

☐Aquifer Recharge ☐Groundwater Remediation

☐Aquifer Storage and Recovery ☐Salinity Barrier

☐Aquifer Test ☐Stormwater Drainage

☐Experimental Technology ☐Subsidence Control

☐Geothermal (Closed Loop) ☐Tracer

☐Geothermal (Heating/Cooling Return) ☐Other (explain under #21 Remarks)

4. Date Well(s) Completed: 02/23/18 **Well ID#** MW-30A

5a. Well Location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and Longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 36.69" N 82° 30' 34.46" W

6. Is (are) the well(s): ☑**Permanent** or ☐**Temporary**

7. Is this a repair to an existing well: ☐**Yes** or ☑**No**

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: 1

For multiple injection or non-water supply wells ONLY with the same construction, you can submit one form.

9. Total well depth below land surface: 35.0 **(ft.)**

For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: 20.0 **(ft.)**

If water level is above casing, use "+"

11. Borehole diameter: 8.0 **(in.)**

12. Well construction method: AUGER

(i.e. auger, rotary, cable, direct push, etc)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ **Method of test:** _____

13b. Disinfection type: _____ **Amount:** _____

For Internal Use ONLY:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0.0 ft.	30.0 ft.	2.0 in.	SCH 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
30.0 ft.	35.0 ft.	2.0 in.	.010	SCH 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0.0 ft.	26.0 ft.	PORTLAND BENTONITE	SLURRY
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
28.0 ft.	35.0 ft.	20-40	FINE SILICA SAND
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0.0 ft.	10.0 ft.	BROWN SILT
10.0 ft.	35.0 ft.	BROWN/TAN SANDY SILT
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

FINE SAND SEAL FROM 26.0 TO 28.0 FEET

22. Certification:

Jacob Messick

Signature of Certified Well Contractor

04/10/18

Date

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C .0100 or 15A NCAC 02C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

For Internal Use ONLY:

1. Well Contractor Information:

BRIAN THOMAS

Well Contractor Name

A - 2581

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

☐Agricultural ☐Municipal/Public

☐Geothermal (Heating/Cooling Supply) ☐Residential Water Supply (single)

☐Industrial/Commercial ☐Residential Water Supply (shared)

☐Irrigation

Non-Water Supply Well:

☑Monitoring ☐Recovery

Injection Well:

☐Aquifer Recharge ☐Groundwater Remediation

☐Aquifer Storage and Recovery ☐Salinity Barrier

☐Aquifer Test ☐Stormwater Drainage

☐Experimental Technology ☐Subsidence Control

☐Geothermal (Closed Loop) ☐Tracer

☐Geothermal (Heating/Cooling Return) ☐Other (explain under #21 Remarks)

4. Date Well(s) Completed: 03/22/18 **Well ID#** MW-31

5a. Well Location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and Longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 36.69" N 82° 30' 34.46" W

6. Is (are) the well(s): ☑**Permanent** or ☐**Temporary**

7. Is this a repair to an existing well: ☐**Yes** or ☑**No**

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: 1

For multiple injection or non-water supply wells ONLY with the same construction, you can submit one form.

9. Total well depth below land surface: 35.0 **(ft.)**

For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: 32.0 **(ft.)**

If water level is above casing, use "+"

11. Borehole diameter: 8.0 **(in.)**

12. Well construction method: AUGER

(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ **Method of test:** _____

13b. Disinfection type: _____ **Amount:** _____

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0.0 ft.	30.0 ft.	2.0 in.	SCH 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
30.0 ft.	35.0 ft.	2.0 in.	.010	SCH 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0.0 ft.	25.0 ft.	PORTLAND BENTONITE	SLURRY
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
28.0 ft.	35.0 ft.	20-40	FINE SILICA SAND
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0.0 ft.	2.0 ft.	ASPHALT/GRAVEL
2.0 ft.	8.0 ft.	RED SILTY SAND
8.0 ft.	32.0 ft.	BROWN SILTY SAND
32.0 ft.	35.0 ft.	TAN SILTY SAND
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

FINE SAND SEAL FROM 25.0 TO 28.0 FEET

22. Certification:

Signature of Certified Well Contractor

04/10/18

Date

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C .0100 or 15A NCAC 02C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

BRIAN THOMAS

Well Contractor Name

A - 2581

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

☐Agricultural ☐Municipal/Public

☐Geothermal (Heating/Cooling Supply) ☐Residential Water Supply (single)

☐Industrial/Commercial ☐Residential Water Supply (shared)

☐Irrigation

Non-Water Supply Well:

☑Monitoring ☐Recovery

Injection Well:

☐Aquifer Recharge ☐Groundwater Remediation

☐Aquifer Storage and Recovery ☐Salinity Barrier

☐Aquifer Test ☐Stormwater Drainage

☐Experimental Technology ☐Subsidence Control

☐Geothermal (Closed Loop) ☐Tracer

☐Geothermal (Heating/Cooling Return) ☐Other (explain under #21 Remarks)

4. Date Well(s) Completed: 03/22/18 **Well ID#** MW-31A

5a. Well Location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and Longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 36.69" N 82° 30' 34.46" W

6. Is (are) the well(s): ☑**Permanent** or ☐**Temporary**

7. Is this a repair to an existing well: ☐Yes or ☑No

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: 1

For multiple injection or non-water supply wells ONLY with the same construction, you can submit one form.

9. Total well depth below land surface: 54.0 **(ft.)**

For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: 22.0 **(ft.)**

If water level is above casing, use "+"

11. Borehole diameter: 8.0 **(in.)**

12. Well construction method: AUGER

(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ **Method of test:** _____

13b. Disinfection type: _____ **Amount:** _____

For Internal Use ONLY:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0.0 ft.	49.0 ft.	2.0 in.	SCH 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
49.0 ft.	54.0 ft.	2.0 in.	.010	SCH 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0.0 ft.	44.0 ft.	PORTLAND BENTONITE	SLURRY
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
47.0 ft.	54.0 ft.	20-40	FINE SILICA SAND
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0.0 ft.	2.0 ft.	ASPHALT/GRAVEL
2.0 ft.	8.0 ft.	RED SILTY SAND
8.0 ft.	32.0 ft.	BROWN SILTY SAND
32.0 ft.	54.0 ft.	TAN SILTY SAND
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

FINE SAND SEAL FROM 44.0 TO 47.0 FEET

22. Certification:

Signature of Certified Well Contractor

04/10/18

Date

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C .0100 or 15A NCAC 02C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

BRIAN THOMAS

Well Contractor Name

A - 2581

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #: _____

List all applicable well construction permits (i.e. County, State, Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

☐Agricultural ☐Municipal/Public

☐Geothermal (Heating/Cooling Supply) ☐Residential Water Supply (single)

☐Industrial/Commercial ☐Residential Water Supply (shared)

☐Irrigation

Non-Water Supply Well:

☑Monitoring ☐Recovery

Injection Well:

☐Aquifer Recharge ☐Groundwater Remediation

☐Aquifer Storage and Recovery ☐Salinity Barrier

☐Aquifer Test ☐Stormwater Drainage

☐Experimental Technology ☐Subsidence Control

☐Geothermal (Closed Loop) ☐Tracer

☐Geothermal (Heating/Cooling Return) ☐Other (explain under #21 Remarks)

4. Date Well(s) Completed: 03/23/18 **Well ID#** MW-32

5a. Well Location:

CTS FACILITY

Facility/Owner Name

Facility ID# (if applicable)

235 MILLS GAP ROAD ASHEVILLE 28803

Physical Address, City, and Zip

BUNCOMBE

County

Parcel Identification No. (PIN)

5b. Latitude and Longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35° 29' 36.69" N 82° 30' 34.46" W

6. Is (are) the well(s): ☑**Permanent** or ☐**Temporary**

7. Is this a repair to an existing well: ☐**Yes** or ☑**No**

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: 1

For multiple injection or non-water supply wells ONLY with the same construction, you can submit one form.

9. Total well depth below land surface: 37.0 **(ft.)**

For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: 31.0 **(ft.)**

If water level is above casing, use "+"

11. Borehole diameter: 8.0 **(in.)**

12. Well construction method: AUGER

(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ **Method of test:** _____

13b. Disinfection type: _____ **Amount:** _____

For Internal Use ONLY:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0.0 ft.	27.0 ft.	2.0 in.	SCH 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
27.0 ft.	37.0 ft.	2.0 in.	.010	SCH 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0.0 ft.	22.0 ft.	PORTLAND BENTONITE	SLURRY
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
25.0 ft.	37.0 ft.	20-40	FINE SILICA SAND
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0.0 ft.	11.0 ft.	RED SILTY SAND
11.0 ft.	28.0 ft.	BROWN SILTY SAND
28.0 ft.	37.0 ft.	TAN SILTY SAND
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

FINE SAND SEAL FROM 22.0 TO 25.0 FEET

22. Certification:

Signature of Certified Well Contractor — Date: 04/10/18

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C .0100 or 15A NCAC 02C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

APPENDIX D

ANALYTICAL REPORTS FOR WASTE CHARACTERIZATION OF SOIL CUTTINGS

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

December 28, 2017

Susan Avritt
Amec Foster Wheeler
1308 Patton Avenue
Asheville, NC 28806

RE: Project: CTS ASHEVILLE
Pace Project No.: 92366828

Dear Susan Avritt:
Enclosed are the analytical results for sample(s) received by the laboratory on December 13, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Taylor Ezell
taylor.ezell@pacelabs.com
(704)875-9092
Project Manager

Enclosures

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

CERTIFICATIONS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
Louisiana/NELAP Certification # LA170028
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
Virginia/VELAP Certification #: 460221

Asheville Certification IDs

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

Pace Analytical Services, LLC
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Huntersville, NC 28078
(704)875-9092

SAMPLE SUMMARY

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92366828001	**IDW-Z1-1**	Solid	12/12/17 09:00	12/13/17 10:20
92366828002	**IDW-Z1-2**	Solid	12/12/17 09:05	12/13/17 10:20
92366828003	**IDW-Z1-3**	Solid	12/12/17 09:10	12/13/17 10:20
92366828004	**IDW-Z1-4**	Solid	12/12/17 09:20	12/13/17 10:20
92366828005	**IDW-Z1-5**	Solid	12/12/17 09:35	12/13/17 10:20
92366828006	**IDW-Z1-6**	Solid	12/12/17 09:45	12/13/17 10:20
92366828007	**IDW-Z2-1**	Solid	12/12/17 09:15	12/13/17 10:20
92366828008	**IDW-Z2-2**	Solid	12/12/17 09:30	12/13/17 10:20
92366828009	**IDW-Z2-3**	Solid	12/12/17 09:50	12/13/17 10:20
92366828010	**IDW-Z2-4**	Solid	12/12/17 10:15	12/13/17 10:20
92366828011	**IDW-Z3-1**	Solid	12/12/17 10:10	12/13/17 10:20
92366828012	**IDW-Z3-2**	Solid	12/12/17 10:35	12/13/17 10:20
92366828013	**IDW-Z3-3**	Solid	12/12/17 10:50	12/13/17 10:20

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SAMPLE ANALYTE COUNT

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92366828001	**IDW-Z1-1**	EPA 6010	SER	7	PASI-A
		EPA 7470	SER	1	PASI-A
		EPA 8270	BPJ	75	PASI-C
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92366828002	**IDW-Z1-2**	EPA 6010	SER	7	PASI-A
		EPA 7470	SER	1	PASI-A
		EPA 8270	BPJ	75	PASI-C
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92366828003	**IDW-Z1-3**	EPA 6010	SER	7	PASI-A
		EPA 7470	SER	1	PASI-A
		EPA 8270	BPJ	75	PASI-C
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92366828004	**IDW-Z1-4**	EPA 6010	SER	7	PASI-A
		EPA 7470	SER	1	PASI-A
		EPA 8270	BPJ	75	PASI-C
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92366828005	**IDW-Z1-5**	EPA 6010	SER	7	PASI-A
		EPA 7470	SER	1	PASI-A
		EPA 8270	BPJ	75	PASI-C
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92366828006	**IDW-Z1-6**	EPA 6010	SER	7	PASI-A
		EPA 7470	SER	1	PASI-A
		EPA 8270	BPJ	75	PASI-C
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92366828007	**IDW-Z2-1**	EPA 8270	BPJ	75	PASI-C
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92366828008	**IDW-Z2-2**	EPA 8270	BPJ	75	PASI-C
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92366828009	**IDW-Z2-3**	EPA 6010	SER	7	PASI-A

Pace Analytical Services, LLC
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SAMPLE ANALYTE COUNT

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8270	BPJ	75	PASI-C
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92366828010	**IDW-Z2-4**	EPA 6010	SER	7	PASI-A
		EPA 8270	BPJ	75	PASI-C
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92366828011	**IDW-Z3-1**	EPA 8270	BPJ	75	PASI-C
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92366828012	**IDW-Z3-2**	EPA 8270	BPJ	75	PASI-C
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92366828013	**IDW-Z3-3**	EPA 8270	BPJ	75	PASI-C
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	KDF	1	PASI-C

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SUMMARY OF DETECTION

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92366828001	**IDW-Z1-1**					
EPA 6010	Barium	0.56	mg/L	0.25	12/24/17 17:37	
EPA 6010	Selenium	0.034J	mg/L	0.10	12/24/17 17:37	
EPA 8270	Benzo(a)anthracene	167J	ug/kg	381	12/18/17 10:01	
EPA 8270	Benzo(a)pyrene	116J	ug/kg	381	12/18/17 10:01	
EPA 8270	Benzo(b)fluoranthene	165J	ug/kg	381	12/18/17 10:01	
EPA 8270	Chrysene	131J	ug/kg	381	12/18/17 10:01	
EPA 8270	Fluoranthene	400	ug/kg	381	12/18/17 10:01	
EPA 8270	Phenanthrene	329J	ug/kg	381	12/18/17 10:01	
EPA 8270	Pyrene	318J	ug/kg	381	12/18/17 10:01	
EPA 8260	Acetone	11.3J	ug/kg	101	12/14/17 15:33	
EPA 8260	Naphthalene	7.6	ug/kg	5.1	12/14/17 15:33	
EPA 8260	1,2,4-Trimethylbenzene	7.3	ug/kg	5.1	12/14/17 15:33	
EPA 8260	1,3,5-Trimethylbenzene	2.4J	ug/kg	5.1	12/14/17 15:33	
ASTM D2974-87	Percent Moisture	12.7	%	0.10	12/14/17 11:34	
92366828002	**IDW-Z1-2**					
EPA 6010	Barium	0.66	mg/L	0.25	12/24/17 17:51	
EPA 6010	Selenium	0.031J	mg/L	0.10	12/24/17 17:51	
ASTM D2974-87	Percent Moisture	16.9	%	0.10	12/14/17 11:35	
92366828003	**IDW-Z1-3**					
EPA 6010	Barium	0.71	mg/L	0.25	12/24/17 17:54	
EPA 6010	Selenium	0.026J	mg/L	0.10	12/24/17 17:54	
ASTM D2974-87	Percent Moisture	10.9	%	0.10	12/14/17 11:35	
92366828004	**IDW-Z1-4**					
EPA 6010	Arsenic	0.039J	mg/L	0.050	12/24/17 17:58	
EPA 6010	Barium	1.1	mg/L	0.25	12/24/17 17:58	
EPA 6010	Chromium	0.0055J	mg/L	0.050	12/24/17 17:58	
EPA 6010	Selenium	0.025J	mg/L	0.10	12/24/17 17:58	
ASTM D2974-87	Percent Moisture	12.7	%	0.10	12/14/17 11:35	
92366828005	**IDW-Z1-5**					
EPA 6010	Barium	1.1	mg/L	0.25	12/24/17 18:01	
ASTM D2974-87	Percent Moisture	11.0	%	0.10	12/14/17 11:35	
92366828006	**IDW-Z1-6**					
EPA 6010	Arsenic	0.022J	mg/L	0.050	12/24/17 18:06	
EPA 6010	Barium	0.88	mg/L	0.25	12/24/17 18:06	
EPA 6010	Chromium	0.0031J	mg/L	0.050	12/24/17 18:06	
ASTM D2974-87	Percent Moisture	10.4	%	0.10	12/14/17 11:36	
92366828007	**IDW-Z2-1**					
EPA 8270	1-Methylnaphthalene	329J	ug/kg	381	12/14/17 18:23	
EPA 8270	2-Methylnaphthalene	285J	ug/kg	381	12/14/17 18:23	
EPA 8270	Phenanthrene	202J	ug/kg	381	12/14/17 18:23	
EPA 8260	p-Isopropyltoluene	185	ug/kg	126	12/14/17 17:33	
EPA 8260	1,3,5-Trimethylbenzene	169	ug/kg	126	12/14/17 17:33	
ASTM D2974-87	Percent Moisture	14.0	%	0.10	12/14/17 11:36	

REPORT OF LABORATORY ANALYSIS

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

SUMMARY OF DETECTION

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92366828008	**IDW-Z2-2**					
EPA 8270	Fluorene	3570J	ug/kg	4130	12/15/17 13:32	
EPA 8270	1-Methylnaphthalene	49600	ug/kg	20600	12/15/17 14:59	
EPA 8270	2-Methylnaphthalene	86400	ug/kg	20600	12/15/17 14:59	
EPA 8270	Naphthalene	17100	ug/kg	4130	12/15/17 13:32	
EPA 8270	Phenanthrene	12100	ug/kg	4130	12/15/17 13:32	
EPA 8270	Pyrene	857J	ug/kg	4130	12/15/17 13:32	
EPA 8260	Benzene	824	ug/kg	240	12/14/17 17:53	
EPA 8260	n-Butylbenzene	4180	ug/kg	240	12/14/17 17:53	
EPA 8260	sec-Butylbenzene	3900	ug/kg	240	12/14/17 17:53	
EPA 8260	tert-Butylbenzene	324	ug/kg	240	12/14/17 17:53	
EPA 8260	Ethylbenzene	6630	ug/kg	240	12/14/17 17:53	
EPA 8260	Isopropylbenzene (Cumene)	3240	ug/kg	240	12/14/17 17:53	
EPA 8260	p-Isopropyltoluene	7780	ug/kg	240	12/14/17 17:53	
EPA 8260	Naphthalene	34400	ug/kg	2400	12/15/17 14:34	
EPA 8260	n-Propylbenzene	6610	ug/kg	240	12/14/17 17:53	
EPA 8260	Toluene	3340	ug/kg	240	12/14/17 17:53	
EPA 8260	1,1,1-Trichloroethane	1110	ug/kg	240	12/14/17 17:53	
EPA 8260	Trichloroethene	45700	ug/kg	2400	12/15/17 14:34	
EPA 8260	1,2,4-Trimethylbenzene	37500	ug/kg	2400	12/15/17 14:34	
EPA 8260	1,3,5-Trimethylbenzene	12900	ug/kg	2400	12/15/17 14:34	
EPA 8260	Xylene (Total)	35200	ug/kg	4810	12/15/17 14:34	
EPA 8260	m&p-Xylene	24000	ug/kg	4810	12/15/17 14:34	
EPA 8260	o-Xylene	11200	ug/kg	2400	12/15/17 14:34	
ASTM D2974-87	Percent Moisture	20.0	%	0.10	12/14/17 11:36	
92366828009	**IDW-Z2-3**					
EPA 6010	Barium	189	mg/kg	17.2	12/18/17 15:46	
EPA 6010	Chromium	48.9	mg/kg	17.2	12/18/17 15:46	
EPA 6010	Lead	14.8J	mg/kg	17.2	12/18/17 15:46	D3
EPA 8270	Fluorene	2160J	ug/kg	4030	12/15/17 14:01	
EPA 8270	1-Methylnaphthalene	13700	ug/kg	4030	12/15/17 14:01	
EPA 8270	2-Methylnaphthalene	19600	ug/kg	4030	12/15/17 14:01	
EPA 8270	Naphthalene	1130J	ug/kg	4030	12/15/17 14:01	
EPA 8270	Pyrene	848J	ug/kg	4030	12/15/17 14:01	
EPA 8260	n-Butylbenzene	1530	ug/kg	139	12/14/17 18:13	
EPA 8260	sec-Butylbenzene	1380	ug/kg	139	12/14/17 18:13	
EPA 8260	tert-Butylbenzene	177	ug/kg	139	12/14/17 18:13	
EPA 8260	Ethylbenzene	1260	ug/kg	139	12/14/17 18:13	
EPA 8260	Isopropylbenzene (Cumene)	884	ug/kg	139	12/14/17 18:13	
EPA 8260	p-Isopropyltoluene	4870	ug/kg	139	12/14/17 18:13	
EPA 8260	Naphthalene	2490	ug/kg	139	12/14/17 18:13	
EPA 8260	n-Propylbenzene	1610	ug/kg	139	12/14/17 18:13	
EPA 8260	Toluene	69.6J	ug/kg	139	12/14/17 18:13	
EPA 8260	1,1,1-Trichloroethane	470	ug/kg	139	12/14/17 18:13	
EPA 8260	Trichloroethene	5150	ug/kg	139	12/14/17 18:13	
EPA 8260	1,2,4-Trimethylbenzene	3890	ug/kg	139	12/14/17 18:13	
EPA 8260	1,3,5-Trimethylbenzene	1210	ug/kg	139	12/14/17 18:13	
EPA 8260	Xylene (Total)	3170	ug/kg	278	12/14/17 18:13	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
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(704)875-9092

SUMMARY OF DETECTION

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92366828009	**IDW-Z2-3**					
EPA 8260	m&p-Xylene	516	ug/kg	278	12/14/17 18:13	
EPA 8260	o-Xylene	2650	ug/kg	139	12/14/17 18:13	
ASTM D2974-87	Percent Moisture	17.6	%	0.10	12/14/17 11:36	
92366828010	**IDW-Z2-4**					
EPA 6010	Arsenic	16.5	mg/kg		12/17/17 20:24	D3
EPA 6010	Barium	221	mg/kg		12/17/17 20:24	
EPA 6010	Cadmium	0.13	mg/kg		12/17/17 20:24	D3
EPA 6010	Chromium	32.6	mg/kg		12/17/17 20:24	
EPA 6010	Lead	12.2	mg/kg		12/17/17 20:24	D3
EPA 6010	Selenium	3.1	mg/kg		12/17/17 20:24	D3
EPA 6010	Silver	0.0	mg/kg		12/17/17 20:24	D3
EPA 8270	1-Methylnaphthalene	51200	ug/kg	21800	12/15/17 15:29	
EPA 8270	2-Methylnaphthalene	87300	ug/kg	21800	12/15/17 15:29	
EPA 8270	Naphthalene	21400	ug/kg	4360	12/15/17 14:30	
EPA 8270	Phenanthrene	14000	ug/kg	4360	12/15/17 14:30	
EPA 8270	Pyrene	1570J	ug/kg	4360	12/15/17 14:30	
EPA 8260	Benzene	319	ug/kg	124	12/14/17 18:33	
EPA 8260	n-Butylbenzene	2840	ug/kg	124	12/14/17 18:33	
EPA 8260	sec-Butylbenzene	2690	ug/kg	124	12/14/17 18:33	
EPA 8260	tert-Butylbenzene	169	ug/kg	124	12/14/17 18:33	
EPA 8260	cis-1,2-Dichloroethene	66.7J	ug/kg	124	12/14/17 18:33	
EPA 8260	Ethylbenzene	949	ug/kg	124	12/14/17 18:33	
EPA 8260	Isopropylbenzene (Cumene)	2300	ug/kg	124	12/14/17 18:33	
EPA 8260	p-Isopropyltoluene	7870	ug/kg	1240	12/15/17 14:54	
EPA 8260	Naphthalene	27500	ug/kg	1240	12/15/17 14:54	
EPA 8260	n-Propylbenzene	4010	ug/kg	124	12/14/17 18:33	
EPA 8260	Toluene	132	ug/kg	124	12/14/17 18:33	
EPA 8260	1,1,1-Trichloroethane	2150	ug/kg	124	12/14/17 18:33	
EPA 8260	Trichloroethene	18000	ug/kg	1240	12/15/17 14:54	
EPA 8260	1,2,4-Trimethylbenzene	28500	ug/kg	1240	12/15/17 14:54	
EPA 8260	1,3,5-Trimethylbenzene	5950	ug/kg	1240	12/15/17 14:54	
EPA 8260	Xylene (Total)	14600	ug/kg	2480	12/15/17 14:54	
EPA 8260	m&p-Xylene	4980	ug/kg	248	12/14/17 18:33	
EPA 8260	o-Xylene	9610	ug/kg	1240	12/15/17 14:54	
ASTM D2974-87	Percent Moisture	24.0	%	0.10	12/14/17 11:36	
92366828011	**IDW-Z3-1**					
EPA 8270	1-Methylnaphthalene	12200	ug/kg	4060	12/15/17 12:03	
EPA 8270	2-Methylnaphthalene	21900	ug/kg	4060	12/15/17 12:03	
EPA 8270	Naphthalene	4370	ug/kg	4060	12/15/17 12:03	
EPA 8270	Phenanthrene	2950	ug/kg	406	12/14/17 20:16	
EPA 8270	Pyrene	145J	ug/kg	406	12/14/17 20:16	
EPA 8260	Benzene	61.5J	ug/kg	123	12/14/17 18:53	
EPA 8260	n-Butylbenzene	1180	ug/kg	123	12/14/17 18:53	
EPA 8260	sec-Butylbenzene	922	ug/kg	123	12/14/17 18:53	
EPA 8260	tert-Butylbenzene	67.4J	ug/kg	123	12/14/17 18:53	
EPA 8260	Ethylbenzene	1040	ug/kg	123	12/14/17 18:53	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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SUMMARY OF DETECTION

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92366828011	**IDW-Z3-1**					
EPA 8260	Isopropylbenzene (Cumene)	625	ug/kg	123	12/14/17 18:53	
EPA 8260	p-Isopropyltoluene	1910	ug/kg	123	12/14/17 18:53	
EPA 8260	Naphthalene	7560	ug/kg	492	12/15/17 15:14	
EPA 8260	n-Propylbenzene	1280	ug/kg	123	12/14/17 18:53	
EPA 8260	Toluene	298	ug/kg	123	12/14/17 18:53	
EPA 8260	1,1,1-Trichloroethane	76.2J	ug/kg	123	12/14/17 18:53	
EPA 8260	Trichloroethene	5510	ug/kg	492	12/15/17 15:14	
EPA 8260	1,2,4-Trimethylbenzene	8170	ug/kg	492	12/15/17 15:14	
EPA 8260	1,3,5-Trimethylbenzene	2550	ug/kg	123	12/14/17 18:53	
EPA 8260	Xylene (Total)	5640	ug/kg	246	12/14/17 18:53	
EPA 8260	m&p-Xylene	3800	ug/kg	246	12/14/17 18:53	
EPA 8260	o-Xylene	1840	ug/kg	123	12/14/17 18:53	
ASTM D2974-87	Percent Moisture	18.5	%	0.10	12/14/17 11:36	
92366828012	**IDW-Z3-2**					
EPA 8270	Fluorene	1630	ug/kg	441	12/15/17 13:02	
EPA 8270	1-Methylnaphthalene	19000	ug/kg	4410	12/15/17 14:31	
EPA 8270	2-Methylnaphthalene	29800	ug/kg	4410	12/15/17 14:31	
EPA 8270	Naphthalene	7830	ug/kg	4410	12/15/17 14:31	
EPA 8270	Phenanthrene	3790	ug/kg	441	12/15/17 13:02	
EPA 8270	Pyrene	430J	ug/kg	441	12/15/17 13:02	
EPA 8260	Benzene	68.3	ug/kg	5.2	12/14/17 19:13	
EPA 8260	n-Butylbenzene	2960	ug/kg	1310	12/15/17 15:34	
EPA 8260	sec-Butylbenzene	2530	ug/kg	1310	12/15/17 15:34	
EPA 8260	tert-Butylbenzene	19.4	ug/kg	5.2	12/14/17 19:13	
EPA 8260	1,1-Dichloroethane	5.3	ug/kg	5.2	12/14/17 19:13	
EPA 8260	1,1-Dichloroethene	8.6	ug/kg	5.2	12/14/17 19:13	
EPA 8260	cis-1,2-Dichloroethene	16.5	ug/kg	5.2	12/14/17 19:13	
EPA 8260	Ethylbenzene	100	ug/kg	5.2	12/14/17 19:13	
EPA 8260	Isopropylbenzene (Cumene)	1790	ug/kg	1310	12/15/17 15:34	
EPA 8260	p-Isopropyltoluene	5300	ug/kg	1310	12/15/17 15:34	
EPA 8260	Naphthalene	17700	ug/kg	1310	12/15/17 15:34	
EPA 8260	n-Propylbenzene	2850	ug/kg	1310	12/15/17 15:34	
EPA 8260	Toluene	15.3	ug/kg	5.2	12/14/17 19:13	
EPA 8260	1,1,1-Trichloroethane	1150J	ug/kg	1310	12/15/17 15:34	
EPA 8260	Trichloroethene	20400	ug/kg	1310	12/15/17 15:34	
EPA 8260	1,2,4-Trimethylbenzene	18800	ug/kg	1310	12/15/17 15:34	
EPA 8260	1,3,5-Trimethylbenzene	3620	ug/kg	1310	12/15/17 15:34	
EPA 8260	Xylene (Total)	9500	ug/kg	2620	12/15/17 15:34	
EPA 8260	m&p-Xylene	3370	ug/kg	2620	12/15/17 15:34	
EPA 8260	o-Xylene	6130	ug/kg	1310	12/15/17 15:34	
ASTM D2974-87	Percent Moisture	26.1	%	0.10	12/14/17 11:36	
92366828013	**IDW-Z3-3**					
EPA 8270	1-Methylnaphthalene	4440	ug/kg	451	12/15/17 10:35	
EPA 8270	2-Methylnaphthalene	7900	ug/kg	902	12/15/17 11:34	
EPA 8270	Naphthalene	1740	ug/kg	451	12/15/17 10:35	
EPA 8270	Phenanthrene	1020	ug/kg	451	12/15/17 10:35	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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SUMMARY OF DETECTION

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92366828013	**IDW-Z3-3**					
EPA 8270	Pyrene	77.9J	ug/kg	451	12/15/17 10:35	
EPA 8260	Benzene	78.6J	ug/kg	129	12/14/17 19:33	
EPA 8260	n-Butylbenzene	727	ug/kg	129	12/14/17 19:33	
EPA 8260	sec-Butylbenzene	589	ug/kg	129	12/14/17 19:33	
EPA 8260	Ethylbenzene	696	ug/kg	129	12/14/17 19:33	
EPA 8260	Isopropylbenzene (Cumene)	397	ug/kg	129	12/14/17 19:33	
EPA 8260	p-Isopropyltoluene	1200	ug/kg	129	12/14/17 19:33	
EPA 8260	Naphthalene	4340	ug/kg	129	12/14/17 19:33	
EPA 8260	n-Propylbenzene	811	ug/kg	129	12/14/17 19:33	
EPA 8260	Toluene	258	ug/kg	129	12/14/17 19:33	
EPA 8260	1,1,1-Trichloroethane	116J	ug/kg	129	12/14/17 19:33	
EPA 8260	Trichloroethene	9210	ug/kg	1030	12/15/17 15:54	
EPA 8260	1,2,4-Trimethylbenzene	4250	ug/kg	129	12/14/17 19:33	
EPA 8260	1,3,5-Trimethylbenzene	1550	ug/kg	129	12/14/17 19:33	
EPA 8260	Xylene (Total)	3600	ug/kg	258	12/14/17 19:33	
EPA 8260	m&p-Xylene	2380	ug/kg	258	12/14/17 19:33	
EPA 8260	o-Xylene	1210	ug/kg	129	12/14/17 19:33	
ASTM D2974-87	Percent Moisture	26.5	%	0.10	12/14/17 11:36	

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PROJECT NARRATIVE

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Amec Foster Wheeler, Asheville
Date: December 28, 2017

General Information:
2 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3050 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 390896

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92366828001

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

- MS (Lab ID: 2168757)
  - Barium

QC Batch: 390896

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92366828001

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

- MS (Lab ID: 2168757)
  - Barium

Additional Comments:

Analyte Comments:

QC Batch: 390896

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- IDW-Z2-3 (Lab ID: 92366828009)
  - Silver

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Amec Foster Wheeler, Asheville
Date: December 28, 2017

Analyte Comments:

QC Batch: 390896

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- IDW-Z2-3 (Lab ID: 92366828009)
  - Arsenic
  - Cadmium
  - Lead
  - Selenium

QC Batch: 390982

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- IDW-Z2-4 (Lab ID: 92366828010)
  - Silver
  - Arsenic
  - Cadmium
  - Lead
  - Selenium

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PROJECT NARRATIVE

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Method: **EPA 6010**
Description: 6010 MET ICP, TCLP
Client: Amec Foster Wheeler, Asheville
Date: December 28, 2017

General Information:
6 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Method: **EPA 7470**
Description: 7470 Mercury, TCLP
Client: Amec Foster Wheeler, Asheville
Date: December 28, 2017

General Information:
6 samples were analyzed for EPA 7470. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Method: **EPA 8270**
Description: 8270 MSSV Microwave
Client: Amec Foster Wheeler, Asheville
Date: December 28, 2017

General Information:
13 samples were analyzed for EPA 8270. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

QC Batch: 390794

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

- IDW-Z2-2 (Lab ID: 92366828008)
  - 2,4,6-Tribromophenol (S)
  - 2-Fluorobiphenyl (S)
  - 2-Fluorophenol (S)
  - Nitrobenzene-d5 (S)
  - Phenol-d6 (S)
  - Terphenyl-d14 (S)
- IDW-Z2-3 (Lab ID: 92366828009)
  - 2,4,6-Tribromophenol (S)
  - 2-Fluorobiphenyl (S)
  - 2-Fluorophenol (S)
  - Nitrobenzene-d5 (S)
  - Phenol-d6 (S)
  - Terphenyl-d14 (S)
- IDW-Z2-4 (Lab ID: 92366828010)
  - 2,4,6-Tribromophenol (S)
  - 2-Fluorobiphenyl (S)
  - 2-Fluorophenol (S)
  - Nitrobenzene-d5 (S)
  - Phenol-d6 (S)
  - Terphenyl-d14 (S)

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PROJECT NARRATIVE

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Method: **EPA 8270**
Description: 8270 MSSV Microwave
Client: Amec Foster Wheeler, Asheville
Date: December 28, 2017

QC Batch: 390928

S2: Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).

- IDW-Z1-1 (Lab ID: 92366828001)
  - 2,4,6-Tribromophenol (S)
  - 2-Fluorobiphenyl (S)
  - 2-Fluorophenol (S)
  - Phenol-d6 (S)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 390794

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92366933001

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

- MS (Lab ID: 2168370)
  - 2,2'-Oxybis(1-chloropropane)

QC Batch: 390928

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92367006002

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

- MS (Lab ID: 2169023)
  - 2,2'-Oxybis(1-chloropropane)
- MSD (Lab ID: 2169024)
  - 2,2'-Oxybis(1-chloropropane)
  - Di-n-octylphthalate

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 390794

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- IDW-Z2-2 (Lab ID: 92366828008)
  - Nitrobenzene-d5 (S)
- IDW-Z2-3 (Lab ID: 92366828009)
  - Nitrobenzene-d5 (S)

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PROJECT NARRATIVE

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Method: **EPA 8270**
Description: 8270 MSSV Microwave
Client: Amec Foster Wheeler, Asheville
Date: December 28, 2017

Analyte Comments:

QC Batch: 390794

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- IDW-Z2-4 (Lab ID: 92366828010)
  - Nitrobenzene-d5 (S)

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PROJECT NARRATIVE

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Method: **EPA 8260**
Description: 8260/5035A Volatile Organics
Client: Amec Foster Wheeler, Asheville
Date: December 28, 2017

General Information:
13 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

QC Batch: 390935

S1: Surrogate recovery outside laboratory control limits (confirmed by re-analysis).
- IDW-Z2-2 (Lab ID: 92366828008)
  - 4-Bromofluorobenzene (S)
- IDW-Z2-4 (Lab ID: 92366828010)
  - 4-Bromofluorobenzene (S)
- IDW-Z3-1 (Lab ID: 92366828011)
  - 4-Bromofluorobenzene (S)
- IDW-Z3-2 (Lab ID: 92366828012)
  - 4-Bromofluorobenzene (S)

S5: Surrogate recovery outside control limits due to matrix interferences (not confirmed by re-analysis).
- IDW-Z2-3 (Lab ID: 92366828009)
  - 4-Bromofluorobenzene (S)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

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PROJECT NARRATIVE

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Method: **EPA 8260**
Description: 8260/5035A Volatile Organics
Client: Amec Foster Wheeler, Asheville
Date: December 28, 2017

QC Batch: 390935

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92367006002

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

- MS (Lab ID: 2169715)
  - Acetone

QC Batch: 391378

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92367069001

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

- MS (Lab ID: 2172185)
  - Acetone
  - Chloroethane
  - Methylene Chloride
  - Vinyl acetate

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 390935

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- IDW-Z2-1 (Lab ID: 92366828007)
  - Toluene-d8 (S)

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z1-1 **Lab ID: 92366828001** Collected: 12/12/17 09:00 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, TCLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010A								
	Leachate Method/Date: EPA 1311; 12/20/17 17:45 Initial pH: 10.38; Final pH: 5								
Arsenic	ND	mg/L	0.050	0.014	1	12/21/17 22:00	12/24/17 17:37	7440-38-2	
Barium	**0.56**	mg/L	0.25	0.0050	1	12/21/17 22:00	12/24/17 17:37	7440-39-3	
Cadmium	ND	mg/L	0.0050	0.0025	1	12/21/17 22:00	12/24/17 17:37	7440-43-9	
Chromium	ND	mg/L	0.050	0.0020	1	12/21/17 22:00	12/24/17 17:37	7440-47-3	
Lead	ND	mg/L	0.025	0.020	1	12/21/17 22:00	12/24/17 17:37	7439-92-1	
Selenium	**0.034J**	mg/L	0.10	0.019	1	12/21/17 22:00	12/24/17 17:37	7782-49-2	
Silver	ND	mg/L	0.025	0.00050	1	12/21/17 22:00	12/24/17 17:37	7440-22-4	
7470 Mercury, TCLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
	Leachate Method/Date: EPA 1311; 12/20/17 17:45 Initial pH: 10.38; Final pH: 5								
Mercury	ND	mg/L	0.00020	0.000090	1	12/21/17 23:54	12/26/17 13:05	7439-97-6	
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Acenaphthene	ND	ug/kg	381	87.7	1	12/15/17 11:04	12/18/17 10:01	83-32-9	
Acenaphthylene	ND	ug/kg	381	90.0	1	12/15/17 11:04	12/18/17 10:01	208-96-8	
Aniline	ND	ug/kg	381	103	1	12/15/17 11:04	12/18/17 10:01	62-53-3	
Anthracene	ND	ug/kg	381	85.3	1	12/15/17 11:04	12/18/17 10:01	120-12-7	
Benzo(a)anthracene	**167J**	ug/kg	381	70.4	1	12/15/17 11:04	12/18/17 10:01	56-55-3	
Benzo(a)pyrene	**116J**	ug/kg	381	72.7	1	12/15/17 11:04	12/18/17 10:01	50-32-8	
Benzo(b)fluoranthene	**165J**	ug/kg	381	65.7	1	12/15/17 11:04	12/18/17 10:01	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	381	96.9	1	12/15/17 11:04	12/18/17 10:01	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	381	75.0	1	12/15/17 11:04	12/18/17 10:01	207-08-9	
Benzoic Acid	ND	ug/kg	1900	69.2	1	12/15/17 11:04	12/18/17 10:01	65-85-0	
Benzyl alcohol	ND	ug/kg	761	76.1	1	12/15/17 11:04	12/18/17 10:01	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	381	69.2	1	12/15/17 11:04	12/18/17 10:01	101-55-3	
Butylbenzylphthalate	ND	ug/kg	381	80.7	1	12/15/17 11:04	12/18/17 10:01	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	761	78.4	1	12/15/17 11:04	12/18/17 10:01	59-50-7	
4-Chloroaniline	ND	ug/kg	1900	106	1	12/15/17 11:04	12/18/17 10:01	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	381	88.8	1	12/15/17 11:04	12/18/17 10:01	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	381	96.9	1	12/15/17 11:04	12/18/17 10:01	111-44-4	
2-Chloronaphthalene	ND	ug/kg	381	75.0	1	12/15/17 11:04	12/18/17 10:01	91-58-7	
2-Chlorophenol	ND	ug/kg	381	104	1	12/15/17 11:04	12/18/17 10:01	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	381	78.4	1	12/15/17 11:04	12/18/17 10:01	7005-72-3	
Chrysene	**131J**	ug/kg	381	50.7	1	12/15/17 11:04	12/18/17 10:01	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	381	80.7	1	12/15/17 11:04	12/18/17 10:01	53-70-3	
Dibenzofuran	ND	ug/kg	381	62.3	1	12/15/17 11:04	12/18/17 10:01	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	381	101	1	12/15/17 11:04	12/18/17 10:01	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	381	86.5	1	12/15/17 11:04	12/18/17 10:01	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	381	107	1	12/15/17 11:04	12/18/17 10:01	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	1900	83.0	1	12/15/17 11:04	12/18/17 10:01	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	381	83.0	1	12/15/17 11:04	12/18/17 10:01	120-83-2	
Diethylphthalate	ND	ug/kg	381	58.8	1	12/15/17 11:04	12/18/17 10:01	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	381	150	1	12/15/17 11:04	12/18/17 10:01	105-67-9	
Dimethylphthalate	ND	ug/kg	381	77.3	1	12/15/17 11:04	12/18/17 10:01	131-11-3	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z1-1 **Lab ID: 92366828001** Collected: 12/12/17 09:00 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Di-n-butylphthalate	ND	ug/kg	381	62.3	1	12/15/17 11:04	12/18/17 10:01	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	761	76.1	1	12/15/17 11:04	12/18/17 10:01	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	1900	62.3	1	12/15/17 11:04	12/18/17 10:01	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	381	71.5	1	12/15/17 11:04	12/18/17 10:01	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	381	79.6	1	12/15/17 11:04	12/18/17 10:01	606-20-2	
Di-n-octylphthalate	ND	ug/kg	381	79.6	1	12/15/17 11:04	12/18/17 10:01	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	381	104	1	12/15/17 11:04	12/18/17 10:01	117-81-7	
Fluoranthene	**400**	ug/kg	381	55.4	1	12/15/17 11:04	12/18/17 10:01	206-44-0	
Fluorene	ND	ug/kg	381	78.4	1	12/15/17 11:04	12/18/17 10:01	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	381	65.7	1	12/15/17 11:04	12/18/17 10:01	87-68-3	
Hexachlorobenzene	ND	ug/kg	381	48.4	1	12/15/17 11:04	12/18/17 10:01	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	381	70.4	1	12/15/17 11:04	12/18/17 10:01	77-47-4	
Hexachloroethane	ND	ug/kg	381	100	1	12/15/17 11:04	12/18/17 10:01	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	381	78.4	1	12/15/17 11:04	12/18/17 10:01	193-39-5	
Isophorone	ND	ug/kg	381	85.3	1	12/15/17 11:04	12/18/17 10:01	78-59-1	
1-Methylnaphthalene	ND	ug/kg	381	99.2	1	12/15/17 11:04	12/18/17 10:01	90-12-0	
2-Methylnaphthalene	ND	ug/kg	381	81.9	1	12/15/17 11:04	12/18/17 10:01	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	381	115	1	12/15/17 11:04	12/18/17 10:01	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	381	150	1	12/15/17 11:04	12/18/17 10:01	15831-10-4	
Naphthalene	ND	ug/kg	381	93.4	1	12/15/17 11:04	12/18/17 10:01	91-20-3	
2-Nitroaniline	ND	ug/kg	1900	118	1	12/15/17 11:04	12/18/17 10:01	88-74-4	
3-Nitroaniline	ND	ug/kg	1900	104	1	12/15/17 11:04	12/18/17 10:01	99-09-2	
4-Nitroaniline	ND	ug/kg	761	107	1	12/15/17 11:04	12/18/17 10:01	100-01-6	
Nitrobenzene	ND	ug/kg	381	104	1	12/15/17 11:04	12/18/17 10:01	98-95-3	
2-Nitrophenol	ND	ug/kg	381	92.3	1	12/15/17 11:04	12/18/17 10:01	88-75-5	
4-Nitrophenol	ND	ug/kg	1900	68.0	1	12/15/17 11:04	12/18/17 10:01	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	381	123	1	12/15/17 11:04	12/18/17 10:01	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	381	72.7	1	12/15/17 11:04	12/18/17 10:01	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	381	113	1	12/15/17 11:04	12/18/17 10:01	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/kg	381	101	1	12/15/17 11:04	12/18/17 10:01	108-60-1	
Pentachlorophenol	ND	ug/kg	1900	69.2	1	12/15/17 11:04	12/18/17 10:01	87-86-5	
Phenanthrene	**329J**	ug/kg	381	63.4	1	12/15/17 11:04	12/18/17 10:01	85-01-8	
Phenol	ND	ug/kg	381	114	1	12/15/17 11:04	12/18/17 10:01	108-95-2	
Pyrene	**318J**	ug/kg	381	64.6	1	12/15/17 11:04	12/18/17 10:01	129-00-0	
Pyridine	ND	ug/kg	381	84.2	1	12/15/17 11:04	12/18/17 10:01	110-86-1	
1,2,4-Trichlorobenzene	ND	ug/kg	381	73.8	1	12/15/17 11:04	12/18/17 10:01	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	381	118	1	12/15/17 11:04	12/18/17 10:01	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	381	84.2	1	12/15/17 11:04	12/18/17 10:01	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	30	%	23-110		1	12/15/17 11:04	12/18/17 10:01	4165-60-0	
2-Fluorobiphenyl (S)	28	%	30-110		1	12/15/17 11:04	12/18/17 10:01	321-60-8	S2
Terphenyl-d14 (S)	33	%	28-110		1	12/15/17 11:04	12/18/17 10:01	1718-51-0	
Phenol-d6 (S)	20	%	22-110		1	12/15/17 11:04	12/18/17 10:01	13127-88-3	S2
2-Fluorophenol (S)	6	%	13-110		1	12/15/17 11:04	12/18/17 10:01	367-12-4	S2
2,4,6-Tribromophenol (S)	4	%	27-110		1	12/15/17 11:04	12/18/17 10:01	118-79-6	S2

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z1-1 **Lab ID: 92366828001** Collected: 12/12/17 09:00 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Acetone	**11.3J**	ug/kg	101	10.1	1		12/14/17 15:33	67-64-1	
Benzene	ND	ug/kg	5.1	1.6	1		12/14/17 15:33	71-43-2	
Bromobenzene	ND	ug/kg	5.1	2.0	1		12/14/17 15:33	108-86-1	
Bromochloromethane	ND	ug/kg	5.1	1.7	1		12/14/17 15:33	74-97-5	
Bromodichloromethane	ND	ug/kg	5.1	1.9	1		12/14/17 15:33	75-27-4	
Bromoform	ND	ug/kg	5.1	2.3	1		12/14/17 15:33	75-25-2	
Bromomethane	ND	ug/kg	10.1	2.5	1		12/14/17 15:33	74-83-9	
2-Butanone (MEK)	ND	ug/kg	101	2.9	1		12/14/17 15:33	78-93-3	
n-Butylbenzene	ND	ug/kg	5.1	1.8	1		12/14/17 15:33	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.1	1.6	1		12/14/17 15:33	135-98-8	
tert-Butylbenzene	ND	ug/kg	5.1	2.0	1		12/14/17 15:33	98-06-6	
Carbon tetrachloride	ND	ug/kg	5.1	2.6	1		12/14/17 15:33	56-23-5	
Chlorobenzene	ND	ug/kg	5.1	1.9	1		12/14/17 15:33	108-90-7	
Chloroethane	ND	ug/kg	10.1	2.4	1		12/14/17 15:33	75-00-3	
Chloroform	ND	ug/kg	5.1	1.6	1		12/14/17 15:33	67-66-3	
Chloromethane	ND	ug/kg	10.1	2.4	1		12/14/17 15:33	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.1	1.7	1		12/14/17 15:33	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.1	1.8	1		12/14/17 15:33	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.1	3.6	1		12/14/17 15:33	96-12-8	
Dibromochloromethane	ND	ug/kg	5.1	1.8	1		12/14/17 15:33	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.1	1.8	1		12/14/17 15:33	106-93-4	
Dibromomethane	ND	ug/kg	5.1	2.5	1		12/14/17 15:33	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.1	1.9	1		12/14/17 15:33	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.1	2.0	1		12/14/17 15:33	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.1	1.7	1		12/14/17 15:33	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	10.1	3.6	1		12/14/17 15:33	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.1	1.5	1		12/14/17 15:33	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.1	2.2	1		12/14/17 15:33	107-06-2	
1,1-Dichloroethene	ND	ug/kg	5.1	1.8	1		12/14/17 15:33	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.1	1.4	1		12/14/17 15:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.1	1.9	1		12/14/17 15:33	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.1	1.7	1		12/14/17 15:33	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.1	1.9	1		12/14/17 15:33	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.1	1.7	1		12/14/17 15:33	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.1	1.5	1		12/14/17 15:33	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.1	1.8	1		12/14/17 15:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.1	1.5	1		12/14/17 15:33	10061-02-6	
Diisopropyl ether	ND	ug/kg	5.1	1.7	1		12/14/17 15:33	108-20-3	
Ethylbenzene	ND	ug/kg	5.1	1.8	1		12/14/17 15:33	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.1	2.0	1		12/14/17 15:33	87-68-3	
2-Hexanone	ND	ug/kg	50.5	3.9	1		12/14/17 15:33	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.1	1.9	1		12/14/17 15:33	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.1	1.7	1		12/14/17 15:33	99-87-6	
Methylene Chloride	ND	ug/kg	20.2	3.0	1		12/14/17 15:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	50.5	3.7	1		12/14/17 15:33	108-10-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z1-1 **Lab ID: 92366828001** Collected: 12/12/17 09:00 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Methyl-tert-butyl ether	ND	ug/kg	5.1	1.5	1		12/14/17 15:33	1634-04-4	
Naphthalene	**7.6**	ug/kg	5.1	1.2	1		12/14/17 15:33	91-20-3	
n-Propylbenzene	ND	ug/kg	5.1	1.7	1		12/14/17 15:33	103-65-1	
Styrene	ND	ug/kg	5.1	1.8	1		12/14/17 15:33	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.1	2.1	1		12/14/17 15:33	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.1	1.9	1		12/14/17 15:33	79-34-5	
Tetrachloroethene	ND	ug/kg	5.1	1.7	1		12/14/17 15:33	127-18-4	
Toluene	ND	ug/kg	5.1	1.8	1		12/14/17 15:33	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.1	2.2	1		12/14/17 15:33	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.1	1.6	1		12/14/17 15:33	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.1	1.8	1		12/14/17 15:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.1	2.1	1		12/14/17 15:33	79-00-5	
Trichloroethene	ND	ug/kg	5.1	2.1	1		12/14/17 15:33	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.1	2.2	1		12/14/17 15:33	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.1	1.6	1		12/14/17 15:33	96-18-4	
1,2,4-Trimethylbenzene	**7.3**	ug/kg	5.1	2.0	1		12/14/17 15:33	95-63-6	
1,3,5-Trimethylbenzene	**2.4J**	ug/kg	5.1	1.8	1		12/14/17 15:33	108-67-8	
Vinyl acetate	ND	ug/kg	50.5	8.9	1		12/14/17 15:33	108-05-4	
Vinyl chloride	ND	ug/kg	10.1	1.8	1		12/14/17 15:33	75-01-4	
Xylene (Total)	ND	ug/kg	10.1	3.6	1		12/14/17 15:33	1330-20-7	
m&p-Xylene	ND	ug/kg	10.1	3.6	1		12/14/17 15:33	179601-23-1	
o-Xylene	ND	ug/kg	5.1	1.9	1		12/14/17 15:33	95-47-6	
Surrogates									
Toluene-d8 (S)	101	%	70-130		1		12/14/17 15:33	2037-26-5	
4-Bromofluorobenzene (S)	104	%	70-130		1		12/14/17 15:33	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	70-132		1		12/14/17 15:33	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**12.7**	%	0.10	0.10	1		12/14/17 11:34		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z1-2 **Lab ID: 92366828002** Collected: 12/12/17 09:05 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, TCLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010A								
	Leachate Method/Date: EPA 1311; 12/20/17 17:45 Initial pH: 6.59; Final pH: 4.5								
Arsenic	ND	mg/L	0.050	0.014	1	12/21/17 22:00	12/24/17 17:51	7440-38-2	
Barium	**0.66**	mg/L	0.25	0.0050	1	12/21/17 22:00	12/24/17 17:51	7440-39-3	
Cadmium	ND	mg/L	0.0050	0.0025	1	12/21/17 22:00	12/24/17 17:51	7440-43-9	
Chromium	ND	mg/L	0.050	0.0020	1	12/21/17 22:00	12/24/17 17:51	7440-47-3	
Lead	ND	mg/L	0.025	0.020	1	12/21/17 22:00	12/24/17 17:51	7439-92-1	
Selenium	**0.031J**	mg/L	0.10	0.019	1	12/21/17 22:00	12/24/17 17:51	7782-49-2	
Silver	ND	mg/L	0.025	0.00050	1	12/21/17 22:00	12/24/17 17:51	7440-22-4	
7470 Mercury, TCLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
	Leachate Method/Date: EPA 1311; 12/20/17 17:45 Initial pH: 6.59; Final pH: 4.5								
Mercury	ND	mg/L	0.00020	0.000090	1	12/21/17 23:54	12/26/17 13:07	7439-97-6	
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Acenaphthene	ND	ug/kg	396	91.2	1	12/13/17 20:56	12/14/17 16:01	83-32-9	
Acenaphthylene	ND	ug/kg	396	93.6	1	12/13/17 20:56	12/14/17 16:01	208-96-8	
Aniline	ND	ug/kg	396	107	1	12/13/17 20:56	12/14/17 16:01	62-53-3	
Anthracene	ND	ug/kg	396	88.8	1	12/13/17 20:56	12/14/17 16:01	120-12-7	
Benzo(a)anthracene	ND	ug/kg	396	73.2	1	12/13/17 20:56	12/14/17 16:01	56-55-3	
Benzo(a)pyrene	ND	ug/kg	396	75.6	1	12/13/17 20:56	12/14/17 16:01	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	396	68.4	1	12/13/17 20:56	12/14/17 16:01	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	396	101	1	12/13/17 20:56	12/14/17 16:01	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	396	78.0	1	12/13/17 20:56	12/14/17 16:01	207-08-9	
Benzoic Acid	ND	ug/kg	1980	72.0	1	12/13/17 20:56	12/14/17 16:01	65-85-0	
Benzyl alcohol	ND	ug/kg	792	79.2	1	12/13/17 20:56	12/14/17 16:01	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	396	72.0	1	12/13/17 20:56	12/14/17 16:01	101-55-3	
Butylbenzylphthalate	ND	ug/kg	396	84.0	1	12/13/17 20:56	12/14/17 16:01	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	792	81.6	1	12/13/17 20:56	12/14/17 16:01	59-50-7	
4-Chloroaniline	ND	ug/kg	1980	110	1	12/13/17 20:56	12/14/17 16:01	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	396	92.4	1	12/13/17 20:56	12/14/17 16:01	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	396	101	1	12/13/17 20:56	12/14/17 16:01	111-44-4	
2-Chloronaphthalene	ND	ug/kg	396	78.0	1	12/13/17 20:56	12/14/17 16:01	91-58-7	
2-Chlorophenol	ND	ug/kg	396	108	1	12/13/17 20:56	12/14/17 16:01	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	396	81.6	1	12/13/17 20:56	12/14/17 16:01	7005-72-3	
Chrysene	ND	ug/kg	396	52.8	1	12/13/17 20:56	12/14/17 16:01	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	396	84.0	1	12/13/17 20:56	12/14/17 16:01	53-70-3	
Dibenzofuran	ND	ug/kg	396	64.8	1	12/13/17 20:56	12/14/17 16:01	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	396	106	1	12/13/17 20:56	12/14/17 16:01	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	396	90.0	1	12/13/17 20:56	12/14/17 16:01	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	396	112	1	12/13/17 20:56	12/14/17 16:01	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	1980	86.4	1	12/13/17 20:56	12/14/17 16:01	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	396	86.4	1	12/13/17 20:56	12/14/17 16:01	120-83-2	
Diethylphthalate	ND	ug/kg	396	61.2	1	12/13/17 20:56	12/14/17 16:01	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	396	156	1	12/13/17 20:56	12/14/17 16:01	105-67-9	
Dimethylphthalate	ND	ug/kg	396	80.4	1	12/13/17 20:56	12/14/17 16:01	131-11-3	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z1-2 **Lab ID: 92366828002** Collected: 12/12/17 09:05 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Di-n-butylphthalate	ND	ug/kg	396	64.8	1	12/13/17 20:56	12/14/17 16:01	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	792	79.2	1	12/13/17 20:56	12/14/17 16:01	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	1980	64.8	1	12/13/17 20:56	12/14/17 16:01	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	396	74.4	1	12/13/17 20:56	12/14/17 16:01	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	396	82.8	1	12/13/17 20:56	12/14/17 16:01	606-20-2	
Di-n-octylphthalate	ND	ug/kg	396	82.8	1	12/13/17 20:56	12/14/17 16:01	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	396	108	1	12/13/17 20:56	12/14/17 16:01	117-81-7	
Fluoranthene	ND	ug/kg	396	57.6	1	12/13/17 20:56	12/14/17 16:01	206-44-0	
Fluorene	ND	ug/kg	396	81.6	1	12/13/17 20:56	12/14/17 16:01	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	396	68.4	1	12/13/17 20:56	12/14/17 16:01	87-68-3	
Hexachlorobenzene	ND	ug/kg	396	50.4	1	12/13/17 20:56	12/14/17 16:01	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	396	73.2	1	12/13/17 20:56	12/14/17 16:01	77-47-4	
Hexachloroethane	ND	ug/kg	396	104	1	12/13/17 20:56	12/14/17 16:01	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	396	81.6	1	12/13/17 20:56	12/14/17 16:01	193-39-5	
Isophorone	ND	ug/kg	396	88.8	1	12/13/17 20:56	12/14/17 16:01	78-59-1	
1-Methylnaphthalene	ND	ug/kg	396	103	1	12/13/17 20:56	12/14/17 16:01	90-12-0	
2-Methylnaphthalene	ND	ug/kg	396	85.2	1	12/13/17 20:56	12/14/17 16:01	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	396	120	1	12/13/17 20:56	12/14/17 16:01	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	396	156	1	12/13/17 20:56	12/14/17 16:01	15831-10-4	
Naphthalene	ND	ug/kg	396	97.2	1	12/13/17 20:56	12/14/17 16:01	91-20-3	
2-Nitroaniline	ND	ug/kg	1980	122	1	12/13/17 20:56	12/14/17 16:01	88-74-4	
3-Nitroaniline	ND	ug/kg	1980	108	1	12/13/17 20:56	12/14/17 16:01	99-09-2	
4-Nitroaniline	ND	ug/kg	792	112	1	12/13/17 20:56	12/14/17 16:01	100-01-6	
Nitrobenzene	ND	ug/kg	396	108	1	12/13/17 20:56	12/14/17 16:01	98-95-3	
2-Nitrophenol	ND	ug/kg	396	96.0	1	12/13/17 20:56	12/14/17 16:01	88-75-5	
4-Nitrophenol	ND	ug/kg	1980	70.8	1	12/13/17 20:56	12/14/17 16:01	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	396	128	1	12/13/17 20:56	12/14/17 16:01	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	396	75.6	1	12/13/17 20:56	12/14/17 16:01	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	396	118	1	12/13/17 20:56	12/14/17 16:01	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/kg	396	106	1	12/13/17 20:56	12/14/17 16:01	108-60-1	
Pentachlorophenol	ND	ug/kg	1980	72.0	1	12/13/17 20:56	12/14/17 16:01	87-86-5	
Phenanthrene	ND	ug/kg	396	66.0	1	12/13/17 20:56	12/14/17 16:01	85-01-8	
Phenol	ND	ug/kg	396	119	1	12/13/17 20:56	12/14/17 16:01	108-95-2	
Pyrene	ND	ug/kg	396	67.2	1	12/13/17 20:56	12/14/17 16:01	129-00-0	
Pyridine	ND	ug/kg	396	87.6	1	12/13/17 20:56	12/14/17 16:01	110-86-1	
1,2,4-Trichlorobenzene	ND	ug/kg	396	76.8	1	12/13/17 20:56	12/14/17 16:01	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	396	122	1	12/13/17 20:56	12/14/17 16:01	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	396	87.6	1	12/13/17 20:56	12/14/17 16:01	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	37	%	23-110		1	12/13/17 20:56	12/14/17 16:01	4165-60-0	
2-Fluorobiphenyl (S)	37	%	30-110		1	12/13/17 20:56	12/14/17 16:01	321-60-8	
Terphenyl-d14 (S)	58	%	28-110		1	12/13/17 20:56	12/14/17 16:01	1718-51-0	
Phenol-d6 (S)	39	%	22-110		1	12/13/17 20:56	12/14/17 16:01	13127-88-3	
2-Fluorophenol (S)	38	%	13-110		1	12/13/17 20:56	12/14/17 16:01	367-12-4	
2,4,6-Tribromophenol (S)	31	%	27-110		1	12/13/17 20:56	12/14/17 16:01	118-79-6	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z1-2 **Lab ID: 92366828002** Collected: 12/12/17 09:05 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Acetone	ND	ug/kg	96.2	9.6	1		12/14/17 15:53	67-64-1	
Benzene	ND	ug/kg	4.8	1.5	1		12/14/17 15:53	71-43-2	
Bromobenzene	ND	ug/kg	4.8	1.9	1		12/14/17 15:53	108-86-1	
Bromochloromethane	ND	ug/kg	4.8	1.6	1		12/14/17 15:53	74-97-5	
Bromodichloromethane	ND	ug/kg	4.8	1.8	1		12/14/17 15:53	75-27-4	
Bromoform	ND	ug/kg	4.8	2.2	1		12/14/17 15:53	75-25-2	
Bromomethane	ND	ug/kg	9.6	2.4	1		12/14/17 15:53	74-83-9	
2-Butanone (MEK)	ND	ug/kg	96.2	2.8	1		12/14/17 15:53	78-93-3	
n-Butylbenzene	ND	ug/kg	4.8	1.7	1		12/14/17 15:53	104-51-8	
sec-Butylbenzene	ND	ug/kg	4.8	1.5	1		12/14/17 15:53	135-98-8	
tert-Butylbenzene	ND	ug/kg	4.8	1.9	1		12/14/17 15:53	98-06-6	
Carbon tetrachloride	ND	ug/kg	4.8	2.5	1		12/14/17 15:53	56-23-5	
Chlorobenzene	ND	ug/kg	4.8	1.8	1		12/14/17 15:53	108-90-7	
Chloroethane	ND	ug/kg	9.6	2.3	1		12/14/17 15:53	75-00-3	
Chloroform	ND	ug/kg	4.8	1.5	1		12/14/17 15:53	67-66-3	
Chloromethane	ND	ug/kg	9.6	2.3	1		12/14/17 15:53	74-87-3	
2-Chlorotoluene	ND	ug/kg	4.8	1.6	1		12/14/17 15:53	95-49-8	
4-Chlorotoluene	ND	ug/kg	4.8	1.7	1		12/14/17 15:53	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	4.8	3.5	1		12/14/17 15:53	96-12-8	
Dibromochloromethane	ND	ug/kg	4.8	1.7	1		12/14/17 15:53	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	4.8	1.7	1		12/14/17 15:53	106-93-4	
Dibromomethane	ND	ug/kg	4.8	2.4	1		12/14/17 15:53	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	4.8	1.8	1		12/14/17 15:53	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	4.8	1.9	1		12/14/17 15:53	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	4.8	1.6	1		12/14/17 15:53	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	9.6	3.5	1		12/14/17 15:53	75-71-8	
1,1-Dichloroethane	ND	ug/kg	4.8	1.4	1		12/14/17 15:53	75-34-3	
1,2-Dichloroethane	ND	ug/kg	4.8	2.1	1		12/14/17 15:53	107-06-2	
1,1-Dichloroethene	ND	ug/kg	4.8	1.7	1		12/14/17 15:53	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	4.8	1.3	1		12/14/17 15:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	4.8	1.8	1		12/14/17 15:53	156-60-5	
1,2-Dichloropropane	ND	ug/kg	4.8	1.6	1		12/14/17 15:53	78-87-5	
1,3-Dichloropropane	ND	ug/kg	4.8	1.8	1		12/14/17 15:53	142-28-9	
2,2-Dichloropropane	ND	ug/kg	4.8	1.6	1		12/14/17 15:53	594-20-7	
1,1-Dichloropropene	ND	ug/kg	4.8	1.4	1		12/14/17 15:53	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	4.8	1.7	1		12/14/17 15:53	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	4.8	1.4	1		12/14/17 15:53	10061-02-6	
Diisopropyl ether	ND	ug/kg	4.8	1.6	1		12/14/17 15:53	108-20-3	
Ethylbenzene	ND	ug/kg	4.8	1.7	1		12/14/17 15:53	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	4.8	1.9	1		12/14/17 15:53	87-68-3	
2-Hexanone	ND	ug/kg	48.1	3.8	1		12/14/17 15:53	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	4.8	1.8	1		12/14/17 15:53	98-82-8	
p-Isopropyltoluene	ND	ug/kg	4.8	1.6	1		12/14/17 15:53	99-87-6	
Methylene Chloride	ND	ug/kg	19.2	2.9	1		12/14/17 15:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	48.1	3.6	1		12/14/17 15:53	108-10-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z1-2 **Lab ID: 92366828002** Collected: 12/12/17 09:05 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Methyl-tert-butyl ether	ND	ug/kg	4.8	1.4	1		12/14/17 15:53	1634-04-4	
Naphthalene	ND	ug/kg	4.8	1.2	1		12/14/17 15:53	91-20-3	
n-Propylbenzene	ND	ug/kg	4.8	1.6	1		12/14/17 15:53	103-65-1	
Styrene	ND	ug/kg	4.8	1.7	1		12/14/17 15:53	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	4.8	2.0	1		12/14/17 15:53	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.8	1.8	1		12/14/17 15:53	79-34-5	
Tetrachloroethene	ND	ug/kg	4.8	1.6	1		12/14/17 15:53	127-18-4	
Toluene	ND	ug/kg	4.8	1.7	1		12/14/17 15:53	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	4.8	2.1	1		12/14/17 15:53	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	4.8	1.5	1		12/14/17 15:53	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	4.8	1.7	1		12/14/17 15:53	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	4.8	2.0	1		12/14/17 15:53	79-00-5	
Trichloroethene	ND	ug/kg	4.8	2.0	1		12/14/17 15:53	79-01-6	
Trichlorofluoromethane	ND	ug/kg	4.8	2.1	1		12/14/17 15:53	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	4.8	1.5	1		12/14/17 15:53	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	4.8	1.9	1		12/14/17 15:53	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	4.8	1.7	1		12/14/17 15:53	108-67-8	
Vinyl acetate	ND	ug/kg	48.1	8.5	1		12/14/17 15:53	108-05-4	
Vinyl chloride	ND	ug/kg	9.6	1.7	1		12/14/17 15:53	75-01-4	
Xylene (Total)	ND	ug/kg	9.6	3.5	1		12/14/17 15:53	1330-20-7	
m&p-Xylene	ND	ug/kg	9.6	3.5	1		12/14/17 15:53	179601-23-1	
o-Xylene	ND	ug/kg	4.8	1.8	1		12/14/17 15:53	95-47-6	
Surrogates									
Toluene-d8 (S)	101	%	70-130		1		12/14/17 15:53	2037-26-5	
4-Bromofluorobenzene (S)	104	%	70-130		1		12/14/17 15:53	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	70-132		1		12/14/17 15:53	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**16.9**	%	0.10	0.10	1		12/14/17 11:35		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z1-3 **Lab ID: 92366828003** Collected: 12/12/17 09:10 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, TCLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010A								
	Leachate Method/Date: EPA 1311; 12/20/17 17:45 Initial pH: 6.18; Final pH: 4.5								
Arsenic	ND	mg/L	0.050	0.014	1	12/21/17 22:00	12/24/17 17:54	7440-38-2	
Barium	**0.71**	mg/L	0.25	0.0050	1	12/21/17 22:00	12/24/17 17:54	7440-39-3	
Cadmium	ND	mg/L	0.0050	0.0025	1	12/21/17 22:00	12/24/17 17:54	7440-43-9	
Chromium	ND	mg/L	0.050	0.0020	1	12/21/17 22:00	12/24/17 17:54	7440-47-3	
Lead	ND	mg/L	0.025	0.020	1	12/21/17 22:00	12/24/17 17:54	7439-92-1	
Selenium	**0.026J**	mg/L	0.10	0.019	1	12/21/17 22:00	12/24/17 17:54	7782-49-2	
Silver	ND	mg/L	0.025	0.00050	1	12/21/17 22:00	12/24/17 17:54	7440-22-4	
7470 Mercury, TCLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
	Leachate Method/Date: EPA 1311; 12/20/17 17:45 Initial pH: 6.18; Final pH: 4.5								
Mercury	ND	mg/L	0.00020	0.000090	1	12/21/17 23:54	12/26/17 13:14	7439-97-6	
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Acenaphthene	ND	ug/kg	370	85.3	1	12/13/17 20:56	12/14/17 16:29	83-32-9	
Acenaphthylene	ND	ug/kg	370	87.5	1	12/13/17 20:56	12/14/17 16:29	208-96-8	
Aniline	ND	ug/kg	370	99.9	1	12/13/17 20:56	12/14/17 16:29	62-53-3	
Anthracene	ND	ug/kg	370	83.1	1	12/13/17 20:56	12/14/17 16:29	120-12-7	
Benzo(a)anthracene	ND	ug/kg	370	68.5	1	12/13/17 20:56	12/14/17 16:29	56-55-3	
Benzo(a)pyrene	ND	ug/kg	370	70.7	1	12/13/17 20:56	12/14/17 16:29	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	370	64.0	1	12/13/17 20:56	12/14/17 16:29	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	370	94.3	1	12/13/17 20:56	12/14/17 16:29	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	370	73.0	1	12/13/17 20:56	12/14/17 16:29	207-08-9	
Benzoic Acid	ND	ug/kg	1850	67.3	1	12/13/17 20:56	12/14/17 16:29	65-85-0	
Benzyl alcohol	ND	ug/kg	741	74.1	1	12/13/17 20:56	12/14/17 16:29	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	370	67.3	1	12/13/17 20:56	12/14/17 16:29	101-55-3	
Butylbenzylphthalate	ND	ug/kg	370	78.6	1	12/13/17 20:56	12/14/17 16:29	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	741	76.3	1	12/13/17 20:56	12/14/17 16:29	59-50-7	
4-Chloroaniline	ND	ug/kg	1850	103	1	12/13/17 20:56	12/14/17 16:29	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	370	86.4	1	12/13/17 20:56	12/14/17 16:29	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	370	94.3	1	12/13/17 20:56	12/14/17 16:29	111-44-4	
2-Chloronaphthalene	ND	ug/kg	370	73.0	1	12/13/17 20:56	12/14/17 16:29	91-58-7	
2-Chlorophenol	ND	ug/kg	370	101	1	12/13/17 20:56	12/14/17 16:29	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	370	76.3	1	12/13/17 20:56	12/14/17 16:29	7005-72-3	
Chrysene	ND	ug/kg	370	49.4	1	12/13/17 20:56	12/14/17 16:29	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	370	78.6	1	12/13/17 20:56	12/14/17 16:29	53-70-3	
Dibenzofuran	ND	ug/kg	370	60.6	1	12/13/17 20:56	12/14/17 16:29	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	370	98.8	1	12/13/17 20:56	12/14/17 16:29	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	370	84.2	1	12/13/17 20:56	12/14/17 16:29	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	370	104	1	12/13/17 20:56	12/14/17 16:29	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	1850	80.8	1	12/13/17 20:56	12/14/17 16:29	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	370	80.8	1	12/13/17 20:56	12/14/17 16:29	120-83-2	
Diethylphthalate	ND	ug/kg	370	57.2	1	12/13/17 20:56	12/14/17 16:29	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	370	146	1	12/13/17 20:56	12/14/17 16:29	105-67-9	
Dimethylphthalate	ND	ug/kg	370	75.2	1	12/13/17 20:56	12/14/17 16:29	131-11-3	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z1-3 **Lab ID: 92366828003** Collected: 12/12/17 09:10 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Di-n-butylphthalate	ND	ug/kg	370	60.6	1	12/13/17 20:56	12/14/17 16:29	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	741	74.1	1	12/13/17 20:56	12/14/17 16:29	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	1850	60.6	1	12/13/17 20:56	12/14/17 16:29	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	370	69.6	1	12/13/17 20:56	12/14/17 16:29	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	370	77.4	1	12/13/17 20:56	12/14/17 16:29	606-20-2	
Di-n-octylphthalate	ND	ug/kg	370	77.4	1	12/13/17 20:56	12/14/17 16:29	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	370	101	1	12/13/17 20:56	12/14/17 16:29	117-81-7	
Fluoranthene	ND	ug/kg	370	53.9	1	12/13/17 20:56	12/14/17 16:29	206-44-0	
Fluorene	ND	ug/kg	370	76.3	1	12/13/17 20:56	12/14/17 16:29	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	370	64.0	1	12/13/17 20:56	12/14/17 16:29	87-68-3	
Hexachlorobenzene	ND	ug/kg	370	47.1	1	12/13/17 20:56	12/14/17 16:29	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	370	68.5	1	12/13/17 20:56	12/14/17 16:29	77-47-4	
Hexachloroethane	ND	ug/kg	370	97.6	1	12/13/17 20:56	12/14/17 16:29	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	370	76.3	1	12/13/17 20:56	12/14/17 16:29	193-39-5	
Isophorone	ND	ug/kg	370	83.1	1	12/13/17 20:56	12/14/17 16:29	78-59-1	
1-Methylnaphthalene	ND	ug/kg	370	96.5	1	12/13/17 20:56	12/14/17 16:29	90-12-0	
2-Methylnaphthalene	ND	ug/kg	370	79.7	1	12/13/17 20:56	12/14/17 16:29	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	370	112	1	12/13/17 20:56	12/14/17 16:29	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	370	146	1	12/13/17 20:56	12/14/17 16:29	15831-10-4	
Naphthalene	ND	ug/kg	370	90.9	1	12/13/17 20:56	12/14/17 16:29	91-20-3	
2-Nitroaniline	ND	ug/kg	1850	114	1	12/13/17 20:56	12/14/17 16:29	88-74-4	
3-Nitroaniline	ND	ug/kg	1850	101	1	12/13/17 20:56	12/14/17 16:29	99-09-2	
4-Nitroaniline	ND	ug/kg	741	104	1	12/13/17 20:56	12/14/17 16:29	100-01-6	
Nitrobenzene	ND	ug/kg	370	101	1	12/13/17 20:56	12/14/17 16:29	98-95-3	
2-Nitrophenol	ND	ug/kg	370	89.8	1	12/13/17 20:56	12/14/17 16:29	88-75-5	
4-Nitrophenol	ND	ug/kg	1850	66.2	1	12/13/17 20:56	12/14/17 16:29	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	370	120	1	12/13/17 20:56	12/14/17 16:29	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	370	70.7	1	12/13/17 20:56	12/14/17 16:29	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	370	110	1	12/13/17 20:56	12/14/17 16:29	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/kg	370	98.8	1	12/13/17 20:56	12/14/17 16:29	108-60-1	
Pentachlorophenol	ND	ug/kg	1850	67.3	1	12/13/17 20:56	12/14/17 16:29	87-86-5	
Phenanthrene	ND	ug/kg	370	61.7	1	12/13/17 20:56	12/14/17 16:29	85-01-8	
Phenol	ND	ug/kg	370	111	1	12/13/17 20:56	12/14/17 16:29	108-95-2	
Pyrene	ND	ug/kg	370	62.9	1	12/13/17 20:56	12/14/17 16:29	129-00-0	
Pyridine	ND	ug/kg	370	81.9	1	12/13/17 20:56	12/14/17 16:29	110-86-1	
1,2,4-Trichlorobenzene	ND	ug/kg	370	71.8	1	12/13/17 20:56	12/14/17 16:29	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	370	114	1	12/13/17 20:56	12/14/17 16:29	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	370	81.9	1	12/13/17 20:56	12/14/17 16:29	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	37	%	23-110		1	12/13/17 20:56	12/14/17 16:29	4165-60-0	
2-Fluorobiphenyl (S)	40	%	30-110		1	12/13/17 20:56	12/14/17 16:29	321-60-8	
Terphenyl-d14 (S)	51	%	28-110		1	12/13/17 20:56	12/14/17 16:29	1718-51-0	
Phenol-d6 (S)	41	%	22-110		1	12/13/17 20:56	12/14/17 16:29	13127-88-3	
2-Fluorophenol (S)	39	%	13-110		1	12/13/17 20:56	12/14/17 16:29	367-12-4	
2,4,6-Tribromophenol (S)	32	%	27-110		1	12/13/17 20:56	12/14/17 16:29	118-79-6	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z1-3 **Lab ID: 92366828003** Collected: 12/12/17 09:10 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Acetone	ND	ug/kg	104	10.4	1		12/14/17 16:13	67-64-1	
Benzene	ND	ug/kg	5.2	1.7	1		12/14/17 16:13	71-43-2	
Bromobenzene	ND	ug/kg	5.2	2.1	1		12/14/17 16:13	108-86-1	
Bromochloromethane	ND	ug/kg	5.2	1.8	1		12/14/17 16:13	74-97-5	
Bromodichloromethane	ND	ug/kg	5.2	2.0	1		12/14/17 16:13	75-27-4	
Bromoform	ND	ug/kg	5.2	2.4	1		12/14/17 16:13	75-25-2	
Bromomethane	ND	ug/kg	10.4	2.6	1		12/14/17 16:13	74-83-9	
2-Butanone (MEK)	ND	ug/kg	104	3.0	1		12/14/17 16:13	78-93-3	
n-Butylbenzene	ND	ug/kg	5.2	1.9	1		12/14/17 16:13	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.2	1.7	1		12/14/17 16:13	135-98-8	
tert-Butylbenzene	ND	ug/kg	5.2	2.1	1		12/14/17 16:13	98-06-6	
Carbon tetrachloride	ND	ug/kg	5.2	2.7	1		12/14/17 16:13	56-23-5	
Chlorobenzene	ND	ug/kg	5.2	2.0	1		12/14/17 16:13	108-90-7	
Chloroethane	ND	ug/kg	10.4	2.5	1		12/14/17 16:13	75-00-3	
Chloroform	ND	ug/kg	5.2	1.7	1		12/14/17 16:13	67-66-3	
Chloromethane	ND	ug/kg	10.4	2.5	1		12/14/17 16:13	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.2	1.8	1		12/14/17 16:13	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.2	1.9	1		12/14/17 16:13	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.2	3.7	1		12/14/17 16:13	96-12-8	
Dibromochloromethane	ND	ug/kg	5.2	1.9	1		12/14/17 16:13	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.2	1.9	1		12/14/17 16:13	106-93-4	
Dibromomethane	ND	ug/kg	5.2	2.6	1		12/14/17 16:13	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.2	2.0	1		12/14/17 16:13	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.2	2.1	1		12/14/17 16:13	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.2	1.8	1		12/14/17 16:13	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	10.4	3.7	1		12/14/17 16:13	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.2	1.6	1		12/14/17 16:13	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.2	2.3	1		12/14/17 16:13	107-06-2	
1,1-Dichloroethene	ND	ug/kg	5.2	1.9	1		12/14/17 16:13	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.2	1.4	1		12/14/17 16:13	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.2	2.0	1		12/14/17 16:13	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.2	1.8	1		12/14/17 16:13	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.2	2.0	1		12/14/17 16:13	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.2	1.8	1		12/14/17 16:13	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.2	1.6	1		12/14/17 16:13	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.2	1.9	1		12/14/17 16:13	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.2	1.6	1		12/14/17 16:13	10061-02-6	
Diisopropyl ether	ND	ug/kg	5.2	1.8	1		12/14/17 16:13	108-20-3	
Ethylbenzene	ND	ug/kg	5.2	1.9	1		12/14/17 16:13	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.2	2.1	1		12/14/17 16:13	87-68-3	
2-Hexanone	ND	ug/kg	51.8	4.0	1		12/14/17 16:13	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.2	2.0	1		12/14/17 16:13	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.2	1.8	1		12/14/17 16:13	99-87-6	
Methylene Chloride	ND	ug/kg	20.7	3.1	1		12/14/17 16:13	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	51.8	3.8	1		12/14/17 16:13	108-10-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z1-3 **Lab ID: 92366828003** Collected: 12/12/17 09:10 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Methyl-tert-butyl ether	ND	ug/kg	5.2	1.6	1		12/14/17 16:13	1634-04-4	
Naphthalene	ND	ug/kg	5.2	1.2	1		12/14/17 16:13	91-20-3	
n-Propylbenzene	ND	ug/kg	5.2	1.8	1		12/14/17 16:13	103-65-1	
Styrene	ND	ug/kg	5.2	1.9	1		12/14/17 16:13	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.2	2.2	1		12/14/17 16:13	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.2	2.0	1		12/14/17 16:13	79-34-5	
Tetrachloroethene	ND	ug/kg	5.2	1.8	1		12/14/17 16:13	127-18-4	
Toluene	ND	ug/kg	5.2	1.9	1		12/14/17 16:13	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.2	2.3	1		12/14/17 16:13	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.2	1.7	1		12/14/17 16:13	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.2	1.9	1		12/14/17 16:13	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.2	2.2	1		12/14/17 16:13	79-00-5	
Trichloroethene	ND	ug/kg	5.2	2.2	1		12/14/17 16:13	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.2	2.3	1		12/14/17 16:13	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.2	1.7	1		12/14/17 16:13	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.2	2.1	1		12/14/17 16:13	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.2	1.9	1		12/14/17 16:13	108-67-8	
Vinyl acetate	ND	ug/kg	51.8	9.1	1		12/14/17 16:13	108-05-4	
Vinyl chloride	ND	ug/kg	10.4	1.9	1		12/14/17 16:13	75-01-4	
Xylene (Total)	ND	ug/kg	10.4	3.7	1		12/14/17 16:13	1330-20-7	
m&p-Xylene	ND	ug/kg	10.4	3.7	1		12/14/17 16:13	179601-23-1	
o-Xylene	ND	ug/kg	5.2	2.0	1		12/14/17 16:13	95-47-6	
Surrogates									
Toluene-d8 (S)	101	%	70-130		1		12/14/17 16:13	2037-26-5	
4-Bromofluorobenzene (S)	104	%	70-130		1		12/14/17 16:13	460-00-4	
1,2-Dichloroethane-d4 (S)	114	%	70-132		1		12/14/17 16:13	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**10.9**	%	0.10	0.10	1		12/14/17 11:35		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z1-4 **Lab ID: 92366828004** Collected: 12/12/17 09:20 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, TCLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010A								
	Leachate Method/Date: EPA 1311; 12/20/17 17:45 Initial pH: 7.89; Final pH: 5								
Arsenic	**0.039J**	mg/L	0.050	0.014	1	12/21/17 22:00	12/24/17 17:58	7440-38-2	
Barium	**1.1**	mg/L	0.25	0.0050	1	12/21/17 22:00	12/24/17 17:58	7440-39-3	
Cadmium	ND	mg/L	0.0050	0.0025	1	12/21/17 22:00	12/24/17 17:58	7440-43-9	
Chromium	**0.0055J**	mg/L	0.050	0.0020	1	12/21/17 22:00	12/24/17 17:58	7440-47-3	
Lead	ND	mg/L	0.025	0.020	1	12/21/17 22:00	12/24/17 17:58	7439-92-1	
Selenium	**0.025J**	mg/L	0.10	0.019	1	12/21/17 22:00	12/24/17 17:58	7782-49-2	
Silver	ND	mg/L	0.025	0.00050	1	12/21/17 22:00	12/24/17 17:58	7440-22-4	
7470 Mercury, TCLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
	Leachate Method/Date: EPA 1311; 12/20/17 17:45 Initial pH: 7.89; Final pH: 5								
Mercury	ND	mg/L	0.00020	0.000090	1	12/21/17 23:54	12/26/17 13:16	7439-97-6	
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Acenaphthene	ND	ug/kg	385	88.6	1	12/13/17 20:56	12/14/17 16:58	83-32-9	
Acenaphthylene	ND	ug/kg	385	90.9	1	12/13/17 20:56	12/14/17 16:58	208-96-8	
Aniline	ND	ug/kg	385	104	1	12/13/17 20:56	12/14/17 16:58	62-53-3	
Anthracene	ND	ug/kg	385	86.2	1	12/13/17 20:56	12/14/17 16:58	120-12-7	
Benzo(a)anthracene	ND	ug/kg	385	71.1	1	12/13/17 20:56	12/14/17 16:58	56-55-3	
Benzo(a)pyrene	ND	ug/kg	385	73.4	1	12/13/17 20:56	12/14/17 16:58	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	385	66.4	1	12/13/17 20:56	12/14/17 16:58	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	385	97.9	1	12/13/17 20:56	12/14/17 16:58	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	385	75.8	1	12/13/17 20:56	12/14/17 16:58	207-08-9	
Benzoic Acid	ND	ug/kg	1920	69.9	1	12/13/17 20:56	12/14/17 16:58	65-85-0	
Benzyl alcohol	ND	ug/kg	769	76.9	1	12/13/17 20:56	12/14/17 16:58	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	385	69.9	1	12/13/17 20:56	12/14/17 16:58	101-55-3	
Butylbenzylphthalate	ND	ug/kg	385	81.6	1	12/13/17 20:56	12/14/17 16:58	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	769	79.2	1	12/13/17 20:56	12/14/17 16:58	59-50-7	
4-Chloroaniline	ND	ug/kg	1920	107	1	12/13/17 20:56	12/14/17 16:58	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	385	89.7	1	12/13/17 20:56	12/14/17 16:58	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	385	97.9	1	12/13/17 20:56	12/14/17 16:58	111-44-4	
2-Chloronaphthalene	ND	ug/kg	385	75.8	1	12/13/17 20:56	12/14/17 16:58	91-58-7	
2-Chlorophenol	ND	ug/kg	385	105	1	12/13/17 20:56	12/14/17 16:58	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	385	79.2	1	12/13/17 20:56	12/14/17 16:58	7005-72-3	
Chrysene	ND	ug/kg	385	51.3	1	12/13/17 20:56	12/14/17 16:58	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	385	81.6	1	12/13/17 20:56	12/14/17 16:58	53-70-3	
Dibenzofuran	ND	ug/kg	385	62.9	1	12/13/17 20:56	12/14/17 16:58	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	385	103	1	12/13/17 20:56	12/14/17 16:58	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	385	87.4	1	12/13/17 20:56	12/14/17 16:58	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	385	108	1	12/13/17 20:56	12/14/17 16:58	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	1920	83.9	1	12/13/17 20:56	12/14/17 16:58	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	385	83.9	1	12/13/17 20:56	12/14/17 16:58	120-83-2	
Diethylphthalate	ND	ug/kg	385	59.4	1	12/13/17 20:56	12/14/17 16:58	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	385	152	1	12/13/17 20:56	12/14/17 16:58	105-67-9	
Dimethylphthalate	ND	ug/kg	385	78.1	1	12/13/17 20:56	12/14/17 16:58	131-11-3	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z1-4 **Lab ID: 92366828004** Collected: 12/12/17 09:20 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Di-n-butylphthalate	ND	ug/kg	385	62.9	1	12/13/17 20:56	12/14/17 16:58	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	769	76.9	1	12/13/17 20:56	12/14/17 16:58	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	1920	62.9	1	12/13/17 20:56	12/14/17 16:58	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	385	72.3	1	12/13/17 20:56	12/14/17 16:58	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	385	80.4	1	12/13/17 20:56	12/14/17 16:58	606-20-2	
Di-n-octylphthalate	ND	ug/kg	385	80.4	1	12/13/17 20:56	12/14/17 16:58	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	385	105	1	12/13/17 20:56	12/14/17 16:58	117-81-7	
Fluoranthene	ND	ug/kg	385	55.9	1	12/13/17 20:56	12/14/17 16:58	206-44-0	
Fluorene	ND	ug/kg	385	79.2	1	12/13/17 20:56	12/14/17 16:58	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	385	66.4	1	12/13/17 20:56	12/14/17 16:58	87-68-3	
Hexachlorobenzene	ND	ug/kg	385	48.9	1	12/13/17 20:56	12/14/17 16:58	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	385	71.1	1	12/13/17 20:56	12/14/17 16:58	77-47-4	
Hexachloroethane	ND	ug/kg	385	101	1	12/13/17 20:56	12/14/17 16:58	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	385	79.2	1	12/13/17 20:56	12/14/17 16:58	193-39-5	
Isophorone	ND	ug/kg	385	86.2	1	12/13/17 20:56	12/14/17 16:58	78-59-1	
1-Methylnaphthalene	ND	ug/kg	385	100	1	12/13/17 20:56	12/14/17 16:58	90-12-0	
2-Methylnaphthalene	ND	ug/kg	385	82.7	1	12/13/17 20:56	12/14/17 16:58	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	385	117	1	12/13/17 20:56	12/14/17 16:58	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	385	152	1	12/13/17 20:56	12/14/17 16:58	15831-10-4	
Naphthalene	ND	ug/kg	385	94.4	1	12/13/17 20:56	12/14/17 16:58	91-20-3	
2-Nitroaniline	ND	ug/kg	1920	119	1	12/13/17 20:56	12/14/17 16:58	88-74-4	
3-Nitroaniline	ND	ug/kg	1920	105	1	12/13/17 20:56	12/14/17 16:58	99-09-2	
4-Nitroaniline	ND	ug/kg	769	108	1	12/13/17 20:56	12/14/17 16:58	100-01-6	
Nitrobenzene	ND	ug/kg	385	105	1	12/13/17 20:56	12/14/17 16:58	98-95-3	
2-Nitrophenol	ND	ug/kg	385	93.2	1	12/13/17 20:56	12/14/17 16:58	88-75-5	
4-Nitrophenol	ND	ug/kg	1920	68.8	1	12/13/17 20:56	12/14/17 16:58	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	385	125	1	12/13/17 20:56	12/14/17 16:58	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	385	73.4	1	12/13/17 20:56	12/14/17 16:58	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	385	114	1	12/13/17 20:56	12/14/17 16:58	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/kg	385	103	1	12/13/17 20:56	12/14/17 16:58	108-60-1	
Pentachlorophenol	ND	ug/kg	1920	69.9	1	12/13/17 20:56	12/14/17 16:58	87-86-5	
Phenanthrene	ND	ug/kg	385	64.1	1	12/13/17 20:56	12/14/17 16:58	85-01-8	
Phenol	ND	ug/kg	385	115	1	12/13/17 20:56	12/14/17 16:58	108-95-2	
Pyrene	ND	ug/kg	385	65.3	1	12/13/17 20:56	12/14/17 16:58	129-00-0	
Pyridine	ND	ug/kg	385	85.1	1	12/13/17 20:56	12/14/17 16:58	110-86-1	
1,2,4-Trichlorobenzene	ND	ug/kg	385	74.6	1	12/13/17 20:56	12/14/17 16:58	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	385	119	1	12/13/17 20:56	12/14/17 16:58	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	385	85.1	1	12/13/17 20:56	12/14/17 16:58	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	37	%	23-110		1	12/13/17 20:56	12/14/17 16:58	4165-60-0	
2-Fluorobiphenyl (S)	39	%	30-110		1	12/13/17 20:56	12/14/17 16:58	321-60-8	
Terphenyl-d14 (S)	59	%	28-110		1	12/13/17 20:56	12/14/17 16:58	1718-51-0	
Phenol-d6 (S)	41	%	22-110		1	12/13/17 20:56	12/14/17 16:58	13127-88-3	
2-Fluorophenol (S)	37	%	13-110		1	12/13/17 20:56	12/14/17 16:58	367-12-4	
2,4,6-Tribromophenol (S)	30	%	27-110		1	12/13/17 20:56	12/14/17 16:58	118-79-6	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z1-4 **Lab ID: 92366828004** Collected: 12/12/17 09:20 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Acetone	ND	ug/kg	101	10.1	1		12/14/17 16:33	67-64-1	
Benzene	ND	ug/kg	5.0	1.6	1		12/14/17 16:33	71-43-2	
Bromobenzene	ND	ug/kg	5.0	2.0	1		12/14/17 16:33	108-86-1	
Bromochloromethane	ND	ug/kg	5.0	1.7	1		12/14/17 16:33	74-97-5	
Bromodichloromethane	ND	ug/kg	5.0	1.9	1		12/14/17 16:33	75-27-4	
Bromoform	ND	ug/kg	5.0	2.3	1		12/14/17 16:33	75-25-2	
Bromomethane	ND	ug/kg	10.1	2.5	1		12/14/17 16:33	74-83-9	
2-Butanone (MEK)	ND	ug/kg	101	2.9	1		12/14/17 16:33	78-93-3	
n-Butylbenzene	ND	ug/kg	5.0	1.8	1		12/14/17 16:33	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.0	1.6	1		12/14/17 16:33	135-98-8	
tert-Butylbenzene	ND	ug/kg	5.0	2.0	1		12/14/17 16:33	98-06-6	
Carbon tetrachloride	ND	ug/kg	5.0	2.6	1		12/14/17 16:33	56-23-5	
Chlorobenzene	ND	ug/kg	5.0	1.9	1		12/14/17 16:33	108-90-7	
Chloroethane	ND	ug/kg	10.1	2.4	1		12/14/17 16:33	75-00-3	
Chloroform	ND	ug/kg	5.0	1.6	1		12/14/17 16:33	67-66-3	
Chloromethane	ND	ug/kg	10.1	2.4	1		12/14/17 16:33	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.0	1.7	1		12/14/17 16:33	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.0	1.8	1		12/14/17 16:33	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.0	3.6	1		12/14/17 16:33	96-12-8	
Dibromochloromethane	ND	ug/kg	5.0	1.8	1		12/14/17 16:33	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.0	1.8	1		12/14/17 16:33	106-93-4	
Dibromomethane	ND	ug/kg	5.0	2.5	1		12/14/17 16:33	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.0	1.9	1		12/14/17 16:33	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.0	2.0	1		12/14/17 16:33	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.0	1.7	1		12/14/17 16:33	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	10.1	3.6	1		12/14/17 16:33	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.0	1.5	1		12/14/17 16:33	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.0	2.2	1		12/14/17 16:33	107-06-2	
1,1-Dichloroethene	ND	ug/kg	5.0	1.8	1		12/14/17 16:33	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.0	1.4	1		12/14/17 16:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.0	1.9	1		12/14/17 16:33	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.0	1.7	1		12/14/17 16:33	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.0	1.9	1		12/14/17 16:33	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.0	1.7	1		12/14/17 16:33	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.0	1.5	1		12/14/17 16:33	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.0	1.8	1		12/14/17 16:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.0	1.5	1		12/14/17 16:33	10061-02-6	
Diisopropyl ether	ND	ug/kg	5.0	1.7	1		12/14/17 16:33	108-20-3	
Ethylbenzene	ND	ug/kg	5.0	1.8	1		12/14/17 16:33	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.0	2.0	1		12/14/17 16:33	87-68-3	
2-Hexanone	ND	ug/kg	50.4	3.9	1		12/14/17 16:33	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.0	1.9	1		12/14/17 16:33	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.0	1.7	1		12/14/17 16:33	99-87-6	
Methylene Chloride	ND	ug/kg	20.2	3.0	1		12/14/17 16:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	50.4	3.7	1		12/14/17 16:33	108-10-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z1-4 **Lab ID: 92366828004** Collected: 12/12/17 09:20 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Methyl-tert-butyl ether	ND	ug/kg	5.0	1.5	1		12/14/17 16:33	1634-04-4	
Naphthalene	ND	ug/kg	5.0	1.2	1		12/14/17 16:33	91-20-3	
n-Propylbenzene	ND	ug/kg	5.0	1.7	1		12/14/17 16:33	103-65-1	
Styrene	ND	ug/kg	5.0	1.8	1		12/14/17 16:33	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.0	2.1	1		12/14/17 16:33	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0	1.9	1		12/14/17 16:33	79-34-5	
Tetrachloroethene	ND	ug/kg	5.0	1.7	1		12/14/17 16:33	127-18-4	
Toluene	ND	ug/kg	5.0	1.8	1		12/14/17 16:33	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.0	2.2	1		12/14/17 16:33	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.0	1.6	1		12/14/17 16:33	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.0	1.8	1		12/14/17 16:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.0	2.1	1		12/14/17 16:33	79-00-5	
Trichloroethene	ND	ug/kg	5.0	2.1	1		12/14/17 16:33	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.0	2.2	1		12/14/17 16:33	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.0	1.6	1		12/14/17 16:33	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.0	2.0	1		12/14/17 16:33	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.0	1.8	1		12/14/17 16:33	108-67-8	
Vinyl acetate	ND	ug/kg	50.4	8.9	1		12/14/17 16:33	108-05-4	
Vinyl chloride	ND	ug/kg	10.1	1.8	1		12/14/17 16:33	75-01-4	
Xylene (Total)	ND	ug/kg	10.1	3.6	1		12/14/17 16:33	1330-20-7	
m&p-Xylene	ND	ug/kg	10.1	3.6	1		12/14/17 16:33	179601-23-1	
o-Xylene	ND	ug/kg	5.0	1.9	1		12/14/17 16:33	95-47-6	
Surrogates									
Toluene-d8 (S)	102	%	70-130		1		12/14/17 16:33	2037-26-5	
4-Bromofluorobenzene (S)	103	%	70-130		1		12/14/17 16:33	460-00-4	
1,2-Dichloroethane-d4 (S)	124	%	70-132		1		12/14/17 16:33	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**12.7**	%	0.10	0.10	1		12/14/17 11:35		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z1-5 **Lab ID: 92366828005** Collected: 12/12/17 09:35 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, TCLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010A								
	Leachate Method/Date: EPA 1311; 12/20/17 17:45 Initial pH: 5.85; Final pH: 4.5								
Arsenic	ND	mg/L	0.050	0.014	1	12/21/17 22:00	12/24/17 18:01	7440-38-2	
Barium	**1.1**	mg/L	0.25	0.0050	1	12/21/17 22:00	12/24/17 18:01	7440-39-3	
Cadmium	ND	mg/L	0.0050	0.0025	1	12/21/17 22:00	12/24/17 18:01	7440-43-9	
Chromium	ND	mg/L	0.050	0.0020	1	12/21/17 22:00	12/24/17 18:01	7440-47-3	
Lead	ND	mg/L	0.025	0.020	1	12/21/17 22:00	12/24/17 18:01	7439-92-1	
Selenium	ND	mg/L	0.10	0.019	1	12/21/17 22:00	12/24/17 18:01	7782-49-2	
Silver	ND	mg/L	0.025	0.00050	1	12/21/17 22:00	12/24/17 18:01	7440-22-4	
7470 Mercury, TCLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
	Leachate Method/Date: EPA 1311; 12/20/17 17:45 Initial pH: 5.85; Final pH: 4.5								
Mercury	ND	mg/L	0.00020	0.000090	1	12/21/17 23:54	12/26/17 13:19	7439-97-6	
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Acenaphthene	ND	ug/kg	371	85.4	1	12/13/17 20:56	12/14/17 17:26	83-32-9	
Acenaphthylene	ND	ug/kg	371	87.7	1	12/13/17 20:56	12/14/17 17:26	208-96-8	
Aniline	ND	ug/kg	371	100	1	12/13/17 20:56	12/14/17 17:26	62-53-3	
Anthracene	ND	ug/kg	371	83.2	1	12/13/17 20:56	12/14/17 17:26	120-12-7	
Benzo(a)anthracene	ND	ug/kg	371	68.6	1	12/13/17 20:56	12/14/17 17:26	56-55-3	
Benzo(a)pyrene	ND	ug/kg	371	70.8	1	12/13/17 20:56	12/14/17 17:26	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	371	64.1	1	12/13/17 20:56	12/14/17 17:26	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	371	94.4	1	12/13/17 20:56	12/14/17 17:26	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	371	73.1	1	12/13/17 20:56	12/14/17 17:26	207-08-9	
Benzoic Acid	ND	ug/kg	1850	67.4	1	12/13/17 20:56	12/14/17 17:26	65-85-0	
Benzyl alcohol	ND	ug/kg	742	74.2	1	12/13/17 20:56	12/14/17 17:26	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	371	67.4	1	12/13/17 20:56	12/14/17 17:26	101-55-3	
Butylbenzylphthalate	ND	ug/kg	371	78.7	1	12/13/17 20:56	12/14/17 17:26	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	742	76.4	1	12/13/17 20:56	12/14/17 17:26	59-50-7	
4-Chloroaniline	ND	ug/kg	1850	103	1	12/13/17 20:56	12/14/17 17:26	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	371	86.5	1	12/13/17 20:56	12/14/17 17:26	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	371	94.4	1	12/13/17 20:56	12/14/17 17:26	111-44-4	
2-Chloronaphthalene	ND	ug/kg	371	73.1	1	12/13/17 20:56	12/14/17 17:26	91-58-7	
2-Chlorophenol	ND	ug/kg	371	101	1	12/13/17 20:56	12/14/17 17:26	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	371	76.4	1	12/13/17 20:56	12/14/17 17:26	7005-72-3	
Chrysene	ND	ug/kg	371	49.5	1	12/13/17 20:56	12/14/17 17:26	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	371	78.7	1	12/13/17 20:56	12/14/17 17:26	53-70-3	
Dibenzofuran	ND	ug/kg	371	60.7	1	12/13/17 20:56	12/14/17 17:26	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	371	98.9	1	12/13/17 20:56	12/14/17 17:26	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	371	84.3	1	12/13/17 20:56	12/14/17 17:26	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	371	105	1	12/13/17 20:56	12/14/17 17:26	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	1850	80.9	1	12/13/17 20:56	12/14/17 17:26	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	371	80.9	1	12/13/17 20:56	12/14/17 17:26	120-83-2	
Diethylphthalate	ND	ug/kg	371	57.3	1	12/13/17 20:56	12/14/17 17:26	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	371	146	1	12/13/17 20:56	12/14/17 17:26	105-67-9	
Dimethylphthalate	ND	ug/kg	371	75.3	1	12/13/17 20:56	12/14/17 17:26	131-11-3	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z1-5 **Lab ID: 92366828005** Collected: 12/12/17 09:35 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Di-n-butylphthalate	ND	ug/kg	371	60.7	1	12/13/17 20:56	12/14/17 17:26	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	742	74.2	1	12/13/17 20:56	12/14/17 17:26	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	1850	60.7	1	12/13/17 20:56	12/14/17 17:26	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	371	69.7	1	12/13/17 20:56	12/14/17 17:26	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	371	77.5	1	12/13/17 20:56	12/14/17 17:26	606-20-2	
Di-n-octylphthalate	ND	ug/kg	371	77.5	1	12/13/17 20:56	12/14/17 17:26	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	371	101	1	12/13/17 20:56	12/14/17 17:26	117-81-7	
Fluoranthene	ND	ug/kg	371	53.9	1	12/13/17 20:56	12/14/17 17:26	206-44-0	
Fluorene	ND	ug/kg	371	76.4	1	12/13/17 20:56	12/14/17 17:26	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	371	64.1	1	12/13/17 20:56	12/14/17 17:26	87-68-3	
Hexachlorobenzene	ND	ug/kg	371	47.2	1	12/13/17 20:56	12/14/17 17:26	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	371	68.6	1	12/13/17 20:56	12/14/17 17:26	77-47-4	
Hexachloroethane	ND	ug/kg	371	97.8	1	12/13/17 20:56	12/14/17 17:26	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	371	76.4	1	12/13/17 20:56	12/14/17 17:26	193-39-5	
Isophorone	ND	ug/kg	371	83.2	1	12/13/17 20:56	12/14/17 17:26	78-59-1	
1-Methylnaphthalene	ND	ug/kg	371	96.7	1	12/13/17 20:56	12/14/17 17:26	90-12-0	
2-Methylnaphthalene	ND	ug/kg	371	79.8	1	12/13/17 20:56	12/14/17 17:26	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	371	112	1	12/13/17 20:56	12/14/17 17:26	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	371	146	1	12/13/17 20:56	12/14/17 17:26	15831-10-4	
Naphthalene	ND	ug/kg	371	91.0	1	12/13/17 20:56	12/14/17 17:26	91-20-3	
2-Nitroaniline	ND	ug/kg	1850	115	1	12/13/17 20:56	12/14/17 17:26	88-74-4	
3-Nitroaniline	ND	ug/kg	1850	101	1	12/13/17 20:56	12/14/17 17:26	99-09-2	
4-Nitroaniline	ND	ug/kg	742	105	1	12/13/17 20:56	12/14/17 17:26	100-01-6	
Nitrobenzene	ND	ug/kg	371	101	1	12/13/17 20:56	12/14/17 17:26	98-95-3	
2-Nitrophenol	ND	ug/kg	371	89.9	1	12/13/17 20:56	12/14/17 17:26	88-75-5	
4-Nitrophenol	ND	ug/kg	1850	66.3	1	12/13/17 20:56	12/14/17 17:26	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	371	120	1	12/13/17 20:56	12/14/17 17:26	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	371	70.8	1	12/13/17 20:56	12/14/17 17:26	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	371	110	1	12/13/17 20:56	12/14/17 17:26	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/kg	371	98.9	1	12/13/17 20:56	12/14/17 17:26	108-60-1	
Pentachlorophenol	ND	ug/kg	1850	67.4	1	12/13/17 20:56	12/14/17 17:26	87-86-5	
Phenanthrene	ND	ug/kg	371	61.8	1	12/13/17 20:56	12/14/17 17:26	85-01-8	
Phenol	ND	ug/kg	371	111	1	12/13/17 20:56	12/14/17 17:26	108-95-2	
Pyrene	ND	ug/kg	371	62.9	1	12/13/17 20:56	12/14/17 17:26	129-00-0	
Pyridine	ND	ug/kg	371	82.0	1	12/13/17 20:56	12/14/17 17:26	110-86-1	
1,2,4-Trichlorobenzene	ND	ug/kg	371	71.9	1	12/13/17 20:56	12/14/17 17:26	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	371	115	1	12/13/17 20:56	12/14/17 17:26	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	371	82.0	1	12/13/17 20:56	12/14/17 17:26	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	43	%	23-110		1	12/13/17 20:56	12/14/17 17:26	4165-60-0	
2-Fluorobiphenyl (S)	45	%	30-110		1	12/13/17 20:56	12/14/17 17:26	321-60-8	
Terphenyl-d14 (S)	55	%	28-110		1	12/13/17 20:56	12/14/17 17:26	1718-51-0	
Phenol-d6 (S)	49	%	22-110		1	12/13/17 20:56	12/14/17 17:26	13127-88-3	
2-Fluorophenol (S)	47	%	13-110		1	12/13/17 20:56	12/14/17 17:26	367-12-4	
2,4,6-Tribromophenol (S)	40	%	27-110		1	12/13/17 20:56	12/14/17 17:26	118-79-6	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z1-5 **Lab ID: 92366828005** Collected: 12/12/17 09:35 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Acetone	ND	ug/kg	90.5	9.0	1		12/18/17 13:48	67-64-1	
Benzene	ND	ug/kg	4.5	1.4	1		12/18/17 13:48	71-43-2	
Bromobenzene	ND	ug/kg	4.5	1.8	1		12/18/17 13:48	108-86-1	
Bromochloromethane	ND	ug/kg	4.5	1.5	1		12/18/17 13:48	74-97-5	
Bromodichloromethane	ND	ug/kg	4.5	1.7	1		12/18/17 13:48	75-27-4	
Bromoform	ND	ug/kg	4.5	2.1	1		12/18/17 13:48	75-25-2	
Bromomethane	ND	ug/kg	9.0	2.3	1		12/18/17 13:48	74-83-9	
2-Butanone (MEK)	ND	ug/kg	90.5	2.6	1		12/18/17 13:48	78-93-3	
n-Butylbenzene	ND	ug/kg	4.5	1.6	1		12/18/17 13:48	104-51-8	
sec-Butylbenzene	ND	ug/kg	4.5	1.4	1		12/18/17 13:48	135-98-8	
tert-Butylbenzene	ND	ug/kg	4.5	1.8	1		12/18/17 13:48	98-06-6	
Carbon tetrachloride	ND	ug/kg	4.5	2.4	1		12/18/17 13:48	56-23-5	
Chlorobenzene	ND	ug/kg	4.5	1.7	1		12/18/17 13:48	108-90-7	
Chloroethane	ND	ug/kg	9.0	2.2	1		12/18/17 13:48	75-00-3	
Chloroform	ND	ug/kg	4.5	1.4	1		12/18/17 13:48	67-66-3	
Chloromethane	ND	ug/kg	9.0	2.2	1		12/18/17 13:48	74-87-3	
2-Chlorotoluene	ND	ug/kg	4.5	1.5	1		12/18/17 13:48	95-49-8	
4-Chlorotoluene	ND	ug/kg	4.5	1.6	1		12/18/17 13:48	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	4.5	3.3	1		12/18/17 13:48	96-12-8	
Dibromochloromethane	ND	ug/kg	4.5	1.6	1		12/18/17 13:48	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	4.5	1.6	1		12/18/17 13:48	106-93-4	
Dibromomethane	ND	ug/kg	4.5	2.3	1		12/18/17 13:48	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	4.5	1.7	1		12/18/17 13:48	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	4.5	1.8	1		12/18/17 13:48	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	4.5	1.5	1		12/18/17 13:48	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	9.0	3.3	1		12/18/17 13:48	75-71-8	
1,1-Dichloroethane	ND	ug/kg	4.5	1.4	1		12/18/17 13:48	75-34-3	
1,2-Dichloroethane	ND	ug/kg	4.5	2.0	1		12/18/17 13:48	107-06-2	
1,1-Dichloroethene	ND	ug/kg	4.5	1.6	1		12/18/17 13:48	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	4.5	1.3	1		12/18/17 13:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	4.5	1.7	1		12/18/17 13:48	156-60-5	
1,2-Dichloropropane	ND	ug/kg	4.5	1.5	1		12/18/17 13:48	78-87-5	
1,3-Dichloropropane	ND	ug/kg	4.5	1.7	1		12/18/17 13:48	142-28-9	
2,2-Dichloropropane	ND	ug/kg	4.5	1.5	1		12/18/17 13:48	594-20-7	
1,1-Dichloropropene	ND	ug/kg	4.5	1.4	1		12/18/17 13:48	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	4.5	1.6	1		12/18/17 13:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	4.5	1.4	1		12/18/17 13:48	10061-02-6	
Diisopropyl ether	ND	ug/kg	4.5	1.5	1		12/18/17 13:48	108-20-3	
Ethylbenzene	ND	ug/kg	4.5	1.6	1		12/18/17 13:48	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	4.5	1.8	1		12/18/17 13:48	87-68-3	
2-Hexanone	ND	ug/kg	45.2	3.5	1		12/18/17 13:48	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	4.5	1.7	1		12/18/17 13:48	98-82-8	
p-Isopropyltoluene	ND	ug/kg	4.5	1.5	1		12/18/17 13:48	99-87-6	
Methylene Chloride	ND	ug/kg	18.1	2.7	1		12/18/17 13:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	45.2	3.3	1		12/18/17 13:48	108-10-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z1-5 **Lab ID: 92366828005** Collected: 12/12/17 09:35 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Methyl-tert-butyl ether	ND	ug/kg	4.5	1.4	1		12/18/17 13:48	1634-04-4	
Naphthalene	ND	ug/kg	4.5	1.1	1		12/18/17 13:48	91-20-3	
n-Propylbenzene	ND	ug/kg	4.5	1.5	1		12/18/17 13:48	103-65-1	
Styrene	ND	ug/kg	4.5	1.6	1		12/18/17 13:48	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	4.5	1.9	1		12/18/17 13:48	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.5	1.7	1		12/18/17 13:48	79-34-5	
Tetrachloroethene	ND	ug/kg	4.5	1.5	1		12/18/17 13:48	127-18-4	
Toluene	ND	ug/kg	4.5	1.6	1		12/18/17 13:48	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	4.5	2.0	1		12/18/17 13:48	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	4.5	1.4	1		12/18/17 13:48	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	4.5	1.6	1		12/18/17 13:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	4.5	1.9	1		12/18/17 13:48	79-00-5	
Trichloroethene	ND	ug/kg	4.5	1.9	1		12/18/17 13:48	79-01-6	
Trichlorofluoromethane	ND	ug/kg	4.5	2.0	1		12/18/17 13:48	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	4.5	1.4	1		12/18/17 13:48	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	4.5	1.8	1		12/18/17 13:48	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	4.5	1.6	1		12/18/17 13:48	108-67-8	
Vinyl acetate	ND	ug/kg	45.2	8.0	1		12/18/17 13:48	108-05-4	
Vinyl chloride	ND	ug/kg	9.0	1.6	1		12/18/17 13:48	75-01-4	
Xylene (Total)	ND	ug/kg	9.0	3.3	1		12/18/17 13:48	1330-20-7	
m&p-Xylene	ND	ug/kg	9.0	3.3	1		12/18/17 13:48	179601-23-1	
o-Xylene	ND	ug/kg	4.5	1.7	1		12/18/17 13:48	95-47-6	
Surrogates									
Toluene-d8 (S)	101	%	70-130		1		12/18/17 13:48	2037-26-5	
4-Bromofluorobenzene (S)	103	%	70-130		1		12/18/17 13:48	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	70-132		1		12/18/17 13:48	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**11.0**	%	0.10	0.10	1		12/14/17 11:35		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z1-6 **Lab ID: 92366828006** Collected: 12/12/17 09:45 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, TCLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010A Leachate Method/Date: EPA 1311; 12/20/17 17:45 Initial pH: 6.06; Final pH: 4.5								
Arsenic	**0.022J**	mg/L	0.050	0.014	1	12/21/17 22:00	12/24/17 18:06	7440-38-2	
Barium	**0.88**	mg/L	0.25	0.0050	1	12/21/17 22:00	12/24/17 18:06	7440-39-3	
Cadmium	ND	mg/L	0.0050	0.0025	1	12/21/17 22:00	12/24/17 18:06	7440-43-9	
Chromium	**0.0031J**	mg/L	0.050	0.0020	1	12/21/17 22:00	12/24/17 18:06	7440-47-3	
Lead	ND	mg/L	0.025	0.020	1	12/21/17 22:00	12/24/17 18:06	7439-92-1	
Selenium	ND	mg/L	0.10	0.019	1	12/21/17 22:00	12/24/17 18:06	7782-49-2	
Silver	ND	mg/L	0.025	0.00050	1	12/21/17 22:00	12/24/17 18:06	7440-22-4	
7470 Mercury, TCLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Leachate Method/Date: EPA 1311; 12/20/17 17:45 Initial pH: 6.06; Final pH: 4.5								
Mercury	ND	mg/L	0.00020	0.000090	1	12/21/17 23:54	12/26/17 13:21	7439-97-6	
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Acenaphthene	ND	ug/kg	371	85.4	1	12/13/17 20:56	12/14/17 17:55	83-32-9	
Acenaphthylene	ND	ug/kg	371	87.7	1	12/13/17 20:56	12/14/17 17:55	208-96-8	
Aniline	ND	ug/kg	371	100	1	12/13/17 20:56	12/14/17 17:55	62-53-3	
Anthracene	ND	ug/kg	371	83.2	1	12/13/17 20:56	12/14/17 17:55	120-12-7	
Benzo(a)anthracene	ND	ug/kg	371	68.5	1	12/13/17 20:56	12/14/17 17:55	56-55-3	
Benzo(a)pyrene	ND	ug/kg	371	70.8	1	12/13/17 20:56	12/14/17 17:55	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	371	64.1	1	12/13/17 20:56	12/14/17 17:55	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	371	94.4	1	12/13/17 20:56	12/14/17 17:55	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	371	73.0	1	12/13/17 20:56	12/14/17 17:55	207-08-9	
Benzoic Acid	ND	ug/kg	1850	67.4	1	12/13/17 20:56	12/14/17 17:55	65-85-0	
Benzyl alcohol	ND	ug/kg	742	74.2	1	12/13/17 20:56	12/14/17 17:55	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	371	67.4	1	12/13/17 20:56	12/14/17 17:55	101-55-3	
Butylbenzylphthalate	ND	ug/kg	371	78.7	1	12/13/17 20:56	12/14/17 17:55	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	742	76.4	1	12/13/17 20:56	12/14/17 17:55	59-50-7	
4-Chloroaniline	ND	ug/kg	1850	103	1	12/13/17 20:56	12/14/17 17:55	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	371	86.5	1	12/13/17 20:56	12/14/17 17:55	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	371	94.4	1	12/13/17 20:56	12/14/17 17:55	111-44-4	
2-Chloronaphthalene	ND	ug/kg	371	73.0	1	12/13/17 20:56	12/14/17 17:55	91-58-7	
2-Chlorophenol	ND	ug/kg	371	101	1	12/13/17 20:56	12/14/17 17:55	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	371	76.4	1	12/13/17 20:56	12/14/17 17:55	7005-72-3	
Chrysene	ND	ug/kg	371	49.4	1	12/13/17 20:56	12/14/17 17:55	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	371	78.7	1	12/13/17 20:56	12/14/17 17:55	53-70-3	
Dibenzofuran	ND	ug/kg	371	60.7	1	12/13/17 20:56	12/14/17 17:55	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	371	98.9	1	12/13/17 20:56	12/14/17 17:55	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	371	84.3	1	12/13/17 20:56	12/14/17 17:55	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	371	105	1	12/13/17 20:56	12/14/17 17:55	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	1850	80.9	1	12/13/17 20:56	12/14/17 17:55	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	371	80.9	1	12/13/17 20:56	12/14/17 17:55	120-83-2	
Diethylphthalate	ND	ug/kg	371	57.3	1	12/13/17 20:56	12/14/17 17:55	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	371	146	1	12/13/17 20:56	12/14/17 17:55	105-67-9	
Dimethylphthalate	ND	ug/kg	371	75.3	1	12/13/17 20:56	12/14/17 17:55	131-11-3	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z1-6 **Lab ID: 92366828006** Collected: 12/12/17 09:45 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Di-n-butylphthalate	ND	ug/kg	371	60.7	1	12/13/17 20:56	12/14/17 17:55	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	742	74.2	1	12/13/17 20:56	12/14/17 17:55	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	1850	60.7	1	12/13/17 20:56	12/14/17 17:55	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	371	69.7	1	12/13/17 20:56	12/14/17 17:55	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	371	77.5	1	12/13/17 20:56	12/14/17 17:55	606-20-2	
Di-n-octylphthalate	ND	ug/kg	371	77.5	1	12/13/17 20:56	12/14/17 17:55	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	371	101	1	12/13/17 20:56	12/14/17 17:55	117-81-7	
Fluoranthene	ND	ug/kg	371	53.9	1	12/13/17 20:56	12/14/17 17:55	206-44-0	
Fluorene	ND	ug/kg	371	76.4	1	12/13/17 20:56	12/14/17 17:55	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	371	64.1	1	12/13/17 20:56	12/14/17 17:55	87-68-3	
Hexachlorobenzene	ND	ug/kg	371	47.2	1	12/13/17 20:56	12/14/17 17:55	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	371	68.5	1	12/13/17 20:56	12/14/17 17:55	77-47-4	
Hexachloroethane	ND	ug/kg	371	97.8	1	12/13/17 20:56	12/14/17 17:55	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	371	76.4	1	12/13/17 20:56	12/14/17 17:55	193-39-5	
Isophorone	ND	ug/kg	371	83.2	1	12/13/17 20:56	12/14/17 17:55	78-59-1	
1-Methylnaphthalene	ND	ug/kg	371	96.6	1	12/13/17 20:56	12/14/17 17:55	90-12-0	
2-Methylnaphthalene	ND	ug/kg	371	79.8	1	12/13/17 20:56	12/14/17 17:55	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	371	112	1	12/13/17 20:56	12/14/17 17:55	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	371	146	1	12/13/17 20:56	12/14/17 17:55	15831-10-4	
Naphthalene	ND	ug/kg	371	91.0	1	12/13/17 20:56	12/14/17 17:55	91-20-3	
2-Nitroaniline	ND	ug/kg	1850	115	1	12/13/17 20:56	12/14/17 17:55	88-74-4	
3-Nitroaniline	ND	ug/kg	1850	101	1	12/13/17 20:56	12/14/17 17:55	99-09-2	
4-Nitroaniline	ND	ug/kg	742	105	1	12/13/17 20:56	12/14/17 17:55	100-01-6	
Nitrobenzene	ND	ug/kg	371	101	1	12/13/17 20:56	12/14/17 17:55	98-95-3	
2-Nitrophenol	ND	ug/kg	371	89.9	1	12/13/17 20:56	12/14/17 17:55	88-75-5	
4-Nitrophenol	ND	ug/kg	1850	66.3	1	12/13/17 20:56	12/14/17 17:55	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	371	120	1	12/13/17 20:56	12/14/17 17:55	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	371	70.8	1	12/13/17 20:56	12/14/17 17:55	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	371	110	1	12/13/17 20:56	12/14/17 17:55	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/kg	371	98.9	1	12/13/17 20:56	12/14/17 17:55	108-60-1	
Pentachlorophenol	ND	ug/kg	1850	67.4	1	12/13/17 20:56	12/14/17 17:55	87-86-5	
Phenanthrene	ND	ug/kg	371	61.8	1	12/13/17 20:56	12/14/17 17:55	85-01-8	
Phenol	ND	ug/kg	371	111	1	12/13/17 20:56	12/14/17 17:55	108-95-2	
Pyrene	ND	ug/kg	371	62.9	1	12/13/17 20:56	12/14/17 17:55	129-00-0	
Pyridine	ND	ug/kg	371	82.0	1	12/13/17 20:56	12/14/17 17:55	110-86-1	
1,2,4-Trichlorobenzene	ND	ug/kg	371	71.9	1	12/13/17 20:56	12/14/17 17:55	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	371	115	1	12/13/17 20:56	12/14/17 17:55	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	371	82.0	1	12/13/17 20:56	12/14/17 17:55	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	35	%	23-110		1	12/13/17 20:56	12/14/17 17:55	4165-60-0	
2-Fluorobiphenyl (S)	36	%	30-110		1	12/13/17 20:56	12/14/17 17:55	321-60-8	
Terphenyl-d14 (S)	59	%	28-110		1	12/13/17 20:56	12/14/17 17:55	1718-51-0	
Phenol-d6 (S)	37	%	22-110		1	12/13/17 20:56	12/14/17 17:55	13127-88-3	
2-Fluorophenol (S)	36	%	13-110		1	12/13/17 20:56	12/14/17 17:55	367-12-4	
2,4,6-Tribromophenol (S)	34	%	27-110		1	12/13/17 20:56	12/14/17 17:55	118-79-6	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z1-6 **Lab ID: 92366828006** Collected: 12/12/17 09:45 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Acetone	ND	ug/kg	100	10.0	1		12/14/17 17:13	67-64-1	
Benzene	ND	ug/kg	5.0	1.6	1		12/14/17 17:13	71-43-2	
Bromobenzene	ND	ug/kg	5.0	2.0	1		12/14/17 17:13	108-86-1	
Bromochloromethane	ND	ug/kg	5.0	1.7	1		12/14/17 17:13	74-97-5	
Bromodichloromethane	ND	ug/kg	5.0	1.9	1		12/14/17 17:13	75-27-4	
Bromoform	ND	ug/kg	5.0	2.3	1		12/14/17 17:13	75-25-2	
Bromomethane	ND	ug/kg	10.0	2.5	1		12/14/17 17:13	74-83-9	
2-Butanone (MEK)	ND	ug/kg	100	2.9	1		12/14/17 17:13	78-93-3	
n-Butylbenzene	ND	ug/kg	5.0	1.8	1		12/14/17 17:13	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.0	1.6	1		12/14/17 17:13	135-98-8	
tert-Butylbenzene	ND	ug/kg	5.0	2.0	1		12/14/17 17:13	98-06-6	
Carbon tetrachloride	ND	ug/kg	5.0	2.6	1		12/14/17 17:13	56-23-5	
Chlorobenzene	ND	ug/kg	5.0	1.9	1		12/14/17 17:13	108-90-7	
Chloroethane	ND	ug/kg	10.0	2.4	1		12/14/17 17:13	75-00-3	
Chloroform	ND	ug/kg	5.0	1.6	1		12/14/17 17:13	67-66-3	
Chloromethane	ND	ug/kg	10.0	2.4	1		12/14/17 17:13	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.0	1.7	1		12/14/17 17:13	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.0	1.8	1		12/14/17 17:13	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.0	3.6	1		12/14/17 17:13	96-12-8	
Dibromochloromethane	ND	ug/kg	5.0	1.8	1		12/14/17 17:13	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.0	1.8	1		12/14/17 17:13	106-93-4	
Dibromomethane	ND	ug/kg	5.0	2.5	1		12/14/17 17:13	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.0	1.9	1		12/14/17 17:13	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.0	2.0	1		12/14/17 17:13	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.0	1.7	1		12/14/17 17:13	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	10.0	3.6	1		12/14/17 17:13	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.0	1.5	1		12/14/17 17:13	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.0	2.2	1		12/14/17 17:13	107-06-2	
1,1-Dichloroethene	ND	ug/kg	5.0	1.8	1		12/14/17 17:13	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.0	1.4	1		12/14/17 17:13	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.0	1.9	1		12/14/17 17:13	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.0	1.7	1		12/14/17 17:13	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.0	1.9	1		12/14/17 17:13	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.0	1.7	1		12/14/17 17:13	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.0	1.5	1		12/14/17 17:13	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.0	1.8	1		12/14/17 17:13	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.0	1.5	1		12/14/17 17:13	10061-02-6	
Diisopropyl ether	ND	ug/kg	5.0	1.7	1		12/14/17 17:13	108-20-3	
Ethylbenzene	ND	ug/kg	5.0	1.8	1		12/14/17 17:13	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.0	2.0	1		12/14/17 17:13	87-68-3	
2-Hexanone	ND	ug/kg	50.1	3.9	1		12/14/17 17:13	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.0	1.9	1		12/14/17 17:13	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.0	1.7	1		12/14/17 17:13	99-87-6	
Methylene Chloride	ND	ug/kg	20.0	3.0	1		12/14/17 17:13	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	50.1	3.7	1		12/14/17 17:13	108-10-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z1-6 **Lab ID: 92366828006** Collected: 12/12/17 09:45 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Methyl-tert-butyl ether	ND	ug/kg	5.0	1.5	1		12/14/17 17:13	1634-04-4	
Naphthalene	ND	ug/kg	5.0	1.2	1		12/14/17 17:13	91-20-3	
n-Propylbenzene	ND	ug/kg	5.0	1.7	1		12/14/17 17:13	103-65-1	
Styrene	ND	ug/kg	5.0	1.8	1		12/14/17 17:13	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.0	2.1	1		12/14/17 17:13	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0	1.9	1		12/14/17 17:13	79-34-5	
Tetrachloroethene	ND	ug/kg	5.0	1.7	1		12/14/17 17:13	127-18-4	
Toluene	ND	ug/kg	5.0	1.8	1		12/14/17 17:13	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.0	2.2	1		12/14/17 17:13	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.0	1.6	1		12/14/17 17:13	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.0	1.8	1		12/14/17 17:13	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.0	2.1	1		12/14/17 17:13	79-00-5	
Trichloroethene	ND	ug/kg	5.0	2.1	1		12/14/17 17:13	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.0	2.2	1		12/14/17 17:13	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.0	1.6	1		12/14/17 17:13	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.0	2.0	1		12/14/17 17:13	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.0	1.8	1		12/14/17 17:13	108-67-8	
Vinyl acetate	ND	ug/kg	50.1	8.8	1		12/14/17 17:13	108-05-4	
Vinyl chloride	ND	ug/kg	10.0	1.8	1		12/14/17 17:13	75-01-4	
Xylene (Total)	ND	ug/kg	10.0	3.6	1		12/14/17 17:13	1330-20-7	
m&p-Xylene	ND	ug/kg	10.0	3.6	1		12/14/17 17:13	179601-23-1	
o-Xylene	ND	ug/kg	5.0	1.9	1		12/14/17 17:13	95-47-6	
Surrogates									
Toluene-d8 (S)	102	%	70-130		1		12/14/17 17:13	2037-26-5	
4-Bromofluorobenzene (S)	102	%	70-130		1		12/14/17 17:13	460-00-4	
1,2-Dichloroethane-d4 (S)	123	%	70-132		1		12/14/17 17:13	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**10.4**	%	0.10	0.10	1		12/14/17 11:36		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z2-1 **Lab ID: 92366828007** Collected: 12/12/17 09:15 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Acenaphthene	ND	ug/kg	381	87.8	1	12/13/17 20:56	12/14/17 18:23	83-32-9	
Acenaphthylene	ND	ug/kg	381	90.1	1	12/13/17 20:56	12/14/17 18:23	208-96-8	
Aniline	ND	ug/kg	381	103	1	12/13/17 20:56	12/14/17 18:23	62-53-3	
Anthracene	ND	ug/kg	381	85.5	1	12/13/17 20:56	12/14/17 18:23	120-12-7	
Benzo(a)anthracene	ND	ug/kg	381	70.5	1	12/13/17 20:56	12/14/17 18:23	56-55-3	
Benzo(a)pyrene	ND	ug/kg	381	72.8	1	12/13/17 20:56	12/14/17 18:23	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	381	65.8	1	12/13/17 20:56	12/14/17 18:23	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	381	97.0	1	12/13/17 20:56	12/14/17 18:23	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	381	75.1	1	12/13/17 20:56	12/14/17 18:23	207-08-9	
Benzoic Acid	ND	ug/kg	1910	69.3	1	12/13/17 20:56	12/14/17 18:23	65-85-0	
Benzyl alcohol	ND	ug/kg	762	76.2	1	12/13/17 20:56	12/14/17 18:23	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	381	69.3	1	12/13/17 20:56	12/14/17 18:23	101-55-3	
Butylbenzylphthalate	ND	ug/kg	381	80.9	1	12/13/17 20:56	12/14/17 18:23	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	762	78.5	1	12/13/17 20:56	12/14/17 18:23	59-50-7	
4-Chloroaniline	ND	ug/kg	1910	106	1	12/13/17 20:56	12/14/17 18:23	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	381	88.9	1	12/13/17 20:56	12/14/17 18:23	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	381	97.0	1	12/13/17 20:56	12/14/17 18:23	111-44-4	
2-Chloronaphthalene	ND	ug/kg	381	75.1	1	12/13/17 20:56	12/14/17 18:23	91-58-7	
2-Chlorophenol	ND	ug/kg	381	104	1	12/13/17 20:56	12/14/17 18:23	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	381	78.5	1	12/13/17 20:56	12/14/17 18:23	7005-72-3	
Chrysene	ND	ug/kg	381	50.8	1	12/13/17 20:56	12/14/17 18:23	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	381	80.9	1	12/13/17 20:56	12/14/17 18:23	53-70-3	
Dibenzofuran	ND	ug/kg	381	62.4	1	12/13/17 20:56	12/14/17 18:23	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	381	102	1	12/13/17 20:56	12/14/17 18:23	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	381	86.6	1	12/13/17 20:56	12/14/17 18:23	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	381	107	1	12/13/17 20:56	12/14/17 18:23	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	1910	83.2	1	12/13/17 20:56	12/14/17 18:23	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	381	83.2	1	12/13/17 20:56	12/14/17 18:23	120-83-2	
Diethylphthalate	ND	ug/kg	381	58.9	1	12/13/17 20:56	12/14/17 18:23	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	381	150	1	12/13/17 20:56	12/14/17 18:23	105-67-9	
Dimethylphthalate	ND	ug/kg	381	77.4	1	12/13/17 20:56	12/14/17 18:23	131-11-3	
Di-n-butylphthalate	ND	ug/kg	381	62.4	1	12/13/17 20:56	12/14/17 18:23	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	762	76.2	1	12/13/17 20:56	12/14/17 18:23	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	1910	62.4	1	12/13/17 20:56	12/14/17 18:23	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	381	71.6	1	12/13/17 20:56	12/14/17 18:23	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	381	79.7	1	12/13/17 20:56	12/14/17 18:23	606-20-2	
Di-n-octylphthalate	ND	ug/kg	381	79.7	1	12/13/17 20:56	12/14/17 18:23	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	381	104	1	12/13/17 20:56	12/14/17 18:23	117-81-7	
Fluoranthene	ND	ug/kg	381	55.4	1	12/13/17 20:56	12/14/17 18:23	206-44-0	
Fluorene	ND	ug/kg	381	78.5	1	12/13/17 20:56	12/14/17 18:23	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	381	65.8	1	12/13/17 20:56	12/14/17 18:23	87-68-3	
Hexachlorobenzene	ND	ug/kg	381	48.5	1	12/13/17 20:56	12/14/17 18:23	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	381	70.5	1	12/13/17 20:56	12/14/17 18:23	77-47-4	
Hexachloroethane	ND	ug/kg	381	100	1	12/13/17 20:56	12/14/17 18:23	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	381	78.5	1	12/13/17 20:56	12/14/17 18:23	193-39-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z2-1 **Lab ID: 92366828007** Collected: 12/12/17 09:15 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Isophorone	ND	ug/kg	381	85.5	1	12/13/17 20:56	12/14/17 18:23	78-59-1	
1-Methylnaphthalene	**329J**	ug/kg	381	99.3	1	12/13/17 20:56	12/14/17 18:23	90-12-0	
2-Methylnaphthalene	**285J**	ug/kg	381	82.0	1	12/13/17 20:56	12/14/17 18:23	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	381	116	1	12/13/17 20:56	12/14/17 18:23	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	381	150	1	12/13/17 20:56	12/14/17 18:23	15831-10-4	
Naphthalene	ND	ug/kg	381	93.6	1	12/13/17 20:56	12/14/17 18:23	91-20-3	
2-Nitroaniline	ND	ug/kg	1910	118	1	12/13/17 20:56	12/14/17 18:23	88-74-4	
3-Nitroaniline	ND	ug/kg	1910	104	1	12/13/17 20:56	12/14/17 18:23	99-09-2	
4-Nitroaniline	ND	ug/kg	762	107	1	12/13/17 20:56	12/14/17 18:23	100-01-6	
Nitrobenzene	ND	ug/kg	381	104	1	12/13/17 20:56	12/14/17 18:23	98-95-3	
2-Nitrophenol	ND	ug/kg	381	92.4	1	12/13/17 20:56	12/14/17 18:23	88-75-5	
4-Nitrophenol	ND	ug/kg	1910	68.1	1	12/13/17 20:56	12/14/17 18:23	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	381	124	1	12/13/17 20:56	12/14/17 18:23	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	381	72.8	1	12/13/17 20:56	12/14/17 18:23	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	381	113	1	12/13/17 20:56	12/14/17 18:23	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/kg	381	102	1	12/13/17 20:56	12/14/17 18:23	108-60-1	
Pentachlorophenol	ND	ug/kg	1910	69.3	1	12/13/17 20:56	12/14/17 18:23	87-86-5	
Phenanthrene	**202J**	ug/kg	381	63.5	1	12/13/17 20:56	12/14/17 18:23	85-01-8	
Phenol	ND	ug/kg	381	114	1	12/13/17 20:56	12/14/17 18:23	108-95-2	
Pyrene	ND	ug/kg	381	64.7	1	12/13/17 20:56	12/14/17 18:23	129-00-0	
Pyridine	ND	ug/kg	381	84.3	1	12/13/17 20:56	12/14/17 18:23	110-86-1	
1,2,4-Trichlorobenzene	ND	ug/kg	381	73.9	1	12/13/17 20:56	12/14/17 18:23	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	381	118	1	12/13/17 20:56	12/14/17 18:23	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	381	84.3	1	12/13/17 20:56	12/14/17 18:23	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	30	%	23-110		1	12/13/17 20:56	12/14/17 18:23	4165-60-0	
2-Fluorobiphenyl (S)	33	%	30-110		1	12/13/17 20:56	12/14/17 18:23	321-60-8	
Terphenyl-d14 (S)	47	%	28-110		1	12/13/17 20:56	12/14/17 18:23	1718-51-0	
Phenol-d6 (S)	34	%	22-110		1	12/13/17 20:56	12/14/17 18:23	13127-88-3	
2-Fluorophenol (S)	32	%	13-110		1	12/13/17 20:56	12/14/17 18:23	367-12-4	
2,4,6-Tribromophenol (S)	36	%	27-110		1	12/13/17 20:56	12/14/17 18:23	118-79-6	
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Acetone	ND	ug/kg	2510	251	25		12/14/17 17:33	67-64-1	
Benzene	ND	ug/kg	126	40.2	25		12/14/17 17:33	71-43-2	
Bromobenzene	ND	ug/kg	126	50.3	25		12/14/17 17:33	108-86-1	
Bromochloromethane	ND	ug/kg	126	42.7	25		12/14/17 17:33	74-97-5	
Bromodichloromethane	ND	ug/kg	126	47.8	25		12/14/17 17:33	75-27-4	
Bromoform	ND	ug/kg	126	57.8	25		12/14/17 17:33	75-25-2	
Bromomethane	ND	ug/kg	251	62.9	25		12/14/17 17:33	74-83-9	
2-Butanone (MEK)	ND	ug/kg	2510	72.9	25		12/14/17 17:33	78-93-3	
n-Butylbenzene	ND	ug/kg	126	45.3	25		12/14/17 17:33	104-51-8	
sec-Butylbenzene	ND	ug/kg	126	40.2	25		12/14/17 17:33	135-98-8	
tert-Butylbenzene	ND	ug/kg	126	50.3	25		12/14/17 17:33	98-06-6	
Carbon tetrachloride	ND	ug/kg	126	65.4	25		12/14/17 17:33	56-23-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z2-1 **Lab ID: 92366828007** Collected: 12/12/17 09:15 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Chlorobenzene	ND	ug/kg	126	47.8	25		12/14/17 17:33	108-90-7	
Chloroethane	ND	ug/kg	251	60.3	25		12/14/17 17:33	75-00-3	
Chloroform	ND	ug/kg	126	40.2	25		12/14/17 17:33	67-66-3	
Chloromethane	ND	ug/kg	251	60.3	25		12/14/17 17:33	74-87-3	
2-Chlorotoluene	ND	ug/kg	126	42.7	25		12/14/17 17:33	95-49-8	
4-Chlorotoluene	ND	ug/kg	126	45.3	25		12/14/17 17:33	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	126	90.5	25		12/14/17 17:33	96-12-8	
Dibromochloromethane	ND	ug/kg	126	45.3	25		12/14/17 17:33	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	126	45.3	25		12/14/17 17:33	106-93-4	
Dibromomethane	ND	ug/kg	126	62.9	25		12/14/17 17:33	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	126	47.8	25		12/14/17 17:33	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	126	50.3	25		12/14/17 17:33	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	126	42.7	25		12/14/17 17:33	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	251	90.5	25		12/14/17 17:33	75-71-8	
1,1-Dichloroethane	ND	ug/kg	126	37.7	25		12/14/17 17:33	75-34-3	
1,2-Dichloroethane	ND	ug/kg	126	55.3	25		12/14/17 17:33	107-06-2	
1,1-Dichloroethene	ND	ug/kg	126	45.3	25		12/14/17 17:33	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	126	35.2	25		12/14/17 17:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	126	47.8	25		12/14/17 17:33	156-60-5	
1,2-Dichloropropane	ND	ug/kg	126	42.7	25		12/14/17 17:33	78-87-5	
1,3-Dichloropropane	ND	ug/kg	126	47.8	25		12/14/17 17:33	142-28-9	
2,2-Dichloropropane	ND	ug/kg	126	42.7	25		12/14/17 17:33	594-20-7	
1,1-Dichloropropene	ND	ug/kg	126	37.7	25		12/14/17 17:33	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	126	45.3	25		12/14/17 17:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	126	37.7	25		12/14/17 17:33	10061-02-6	
Diisopropyl ether	ND	ug/kg	126	42.7	25		12/14/17 17:33	108-20-3	
Ethylbenzene	ND	ug/kg	126	45.3	25		12/14/17 17:33	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	126	50.3	25		12/14/17 17:33	87-68-3	
2-Hexanone	ND	ug/kg	1260	98.1	25		12/14/17 17:33	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	126	47.8	25		12/14/17 17:33	98-82-8	
p-Isopropyltoluene	**185**	ug/kg	126	42.7	25		12/14/17 17:33	99-87-6	
Methylene Chloride	ND	ug/kg	503	75.4	25		12/14/17 17:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	1260	93.0	25		12/14/17 17:33	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	126	37.7	25		12/14/17 17:33	1634-04-4	
Naphthalene	ND	ug/kg	126	30.2	25		12/14/17 17:33	91-20-3	
n-Propylbenzene	ND	ug/kg	126	42.7	25		12/14/17 17:33	103-65-1	
Styrene	ND	ug/kg	126	45.3	25		12/14/17 17:33	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	126	52.8	25		12/14/17 17:33	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	126	47.8	25		12/14/17 17:33	79-34-5	
Tetrachloroethene	ND	ug/kg	126	42.7	25		12/14/17 17:33	127-18-4	
Toluene	ND	ug/kg	126	45.3	25		12/14/17 17:33	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	126	55.3	25		12/14/17 17:33	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	126	40.2	25		12/14/17 17:33	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	126	45.3	25		12/14/17 17:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	126	52.8	25		12/14/17 17:33	79-00-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z2-1 **Lab ID: 92366828007** Collected: 12/12/17 09:15 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Trichloroethene	ND	ug/kg	126	52.8	25		12/14/17 17:33	79-01-6	
Trichlorofluoromethane	ND	ug/kg	126	55.3	25		12/14/17 17:33	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	126	40.2	25		12/14/17 17:33	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	126	50.3	25		12/14/17 17:33	95-63-6	
1,3,5-Trimethylbenzene	**169**	ug/kg	126	45.3	25		12/14/17 17:33	108-67-8	
Vinyl acetate	ND	ug/kg	1260	221	25		12/14/17 17:33	108-05-4	
Vinyl chloride	ND	ug/kg	251	45.3	25		12/14/17 17:33	75-01-4	
Xylene (Total)	ND	ug/kg	251	90.5	25		12/14/17 17:33	1330-20-7	
m&p-Xylene	ND	ug/kg	251	90.5	25		12/14/17 17:33	179601-23-1	
o-Xylene	ND	ug/kg	126	47.8	25		12/14/17 17:33	95-47-6	
Surrogates									
Toluene-d8 (S)	103	%	70-130		25		12/14/17 17:33	2037-26-5	D3
4-Bromofluorobenzene (S)	113	%	70-130		25		12/14/17 17:33	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	70-132		25		12/14/17 17:33	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**14.0**	%	0.10	0.10	1		12/14/17 11:36		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z2-2 **Lab ID: 92366828008** Collected: 12/12/17 09:30 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Acenaphthene	ND	ug/kg	4130	950	10	12/13/17 20:56	12/15/17 13:32	83-32-9	
Acenaphthylene	ND	ug/kg	4130	975	10	12/13/17 20:56	12/15/17 13:32	208-96-8	
Aniline	ND	ug/kg	4130	1110	10	12/13/17 20:56	12/15/17 13:32	62-53-3	
Anthracene	ND	ug/kg	4130	925	10	12/13/17 20:56	12/15/17 13:32	120-12-7	
Benzo(a)anthracene	ND	ug/kg	4130	763	10	12/13/17 20:56	12/15/17 13:32	56-55-3	
Benzo(a)pyrene	ND	ug/kg	4130	788	10	12/13/17 20:56	12/15/17 13:32	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	4130	713	10	12/13/17 20:56	12/15/17 13:32	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	4130	1050	10	12/13/17 20:56	12/15/17 13:32	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	4130	813	10	12/13/17 20:56	12/15/17 13:32	207-08-9	
Benzoic Acid	ND	ug/kg	20600	750	10	12/13/17 20:56	12/15/17 13:32	65-85-0	
Benzyl alcohol	ND	ug/kg	8250	825	10	12/13/17 20:56	12/15/17 13:32	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	4130	750	10	12/13/17 20:56	12/15/17 13:32	101-55-3	
Butylbenzylphthalate	ND	ug/kg	4130	875	10	12/13/17 20:56	12/15/17 13:32	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	8250	850	10	12/13/17 20:56	12/15/17 13:32	59-50-7	
4-Chloroaniline	ND	ug/kg	20600	1150	10	12/13/17 20:56	12/15/17 13:32	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	4130	963	10	12/13/17 20:56	12/15/17 13:32	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	4130	1050	10	12/13/17 20:56	12/15/17 13:32	111-44-4	
2-Chloronaphthalene	ND	ug/kg	4130	813	10	12/13/17 20:56	12/15/17 13:32	91-58-7	
2-Chlorophenol	ND	ug/kg	4130	1130	10	12/13/17 20:56	12/15/17 13:32	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	4130	850	10	12/13/17 20:56	12/15/17 13:32	7005-72-3	
Chrysene	ND	ug/kg	4130	550	10	12/13/17 20:56	12/15/17 13:32	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4130	875	10	12/13/17 20:56	12/15/17 13:32	53-70-3	
Dibenzofuran	ND	ug/kg	4130	675	10	12/13/17 20:56	12/15/17 13:32	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	4130	1100	10	12/13/17 20:56	12/15/17 13:32	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	4130	938	10	12/13/17 20:56	12/15/17 13:32	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	4130	1160	10	12/13/17 20:56	12/15/17 13:32	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	20600	900	10	12/13/17 20:56	12/15/17 13:32	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	4130	900	10	12/13/17 20:56	12/15/17 13:32	120-83-2	
Diethylphthalate	ND	ug/kg	4130	638	10	12/13/17 20:56	12/15/17 13:32	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	4130	1630	10	12/13/17 20:56	12/15/17 13:32	105-67-9	
Dimethylphthalate	ND	ug/kg	4130	838	10	12/13/17 20:56	12/15/17 13:32	131-11-3	
Di-n-butylphthalate	ND	ug/kg	4130	675	10	12/13/17 20:56	12/15/17 13:32	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	8250	825	10	12/13/17 20:56	12/15/17 13:32	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	20600	675	10	12/13/17 20:56	12/15/17 13:32	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	4130	775	10	12/13/17 20:56	12/15/17 13:32	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	4130	863	10	12/13/17 20:56	12/15/17 13:32	606-20-2	
Di-n-octylphthalate	ND	ug/kg	4130	863	10	12/13/17 20:56	12/15/17 13:32	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	4130	1130	10	12/13/17 20:56	12/15/17 13:32	117-81-7	
Fluoranthene	ND	ug/kg	4130	600	10	12/13/17 20:56	12/15/17 13:32	206-44-0	
Fluorene	**3570J**	ug/kg	4130	850	10	12/13/17 20:56	12/15/17 13:32	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	4130	713	10	12/13/17 20:56	12/15/17 13:32	87-68-3	
Hexachlorobenzene	ND	ug/kg	4130	525	10	12/13/17 20:56	12/15/17 13:32	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	4130	763	10	12/13/17 20:56	12/15/17 13:32	77-47-4	
Hexachloroethane	ND	ug/kg	4130	1090	10	12/13/17 20:56	12/15/17 13:32	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4130	850	10	12/13/17 20:56	12/15/17 13:32	193-39-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z2-2 **Lab ID: 92366828008** Collected: 12/12/17 09:30 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Isophorone	ND	ug/kg	4130	925	10	12/13/17 20:56	12/15/17 13:32	78-59-1	
1-Methylnaphthalene	**49600**	ug/kg	20600	5380	50	12/13/17 20:56	12/15/17 14:59	90-12-0	
2-Methylnaphthalene	**86400**	ug/kg	20600	4440	50	12/13/17 20:56	12/15/17 14:59	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	4130	1250	10	12/13/17 20:56	12/15/17 13:32	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	4130	1630	10	12/13/17 20:56	12/15/17 13:32	15831-10-4	
Naphthalene	**17100**	ug/kg	4130	1010	10	12/13/17 20:56	12/15/17 13:32	91-20-3	
2-Nitroaniline	ND	ug/kg	20600	1280	10	12/13/17 20:56	12/15/17 13:32	88-74-4	
3-Nitroaniline	ND	ug/kg	20600	1130	10	12/13/17 20:56	12/15/17 13:32	99-09-2	
4-Nitroaniline	ND	ug/kg	8250	1160	10	12/13/17 20:56	12/15/17 13:32	100-01-6	
Nitrobenzene	ND	ug/kg	4130	1130	10	12/13/17 20:56	12/15/17 13:32	98-95-3	
2-Nitrophenol	ND	ug/kg	4130	1000	10	12/13/17 20:56	12/15/17 13:32	88-75-5	
4-Nitrophenol	ND	ug/kg	20600	738	10	12/13/17 20:56	12/15/17 13:32	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	4130	1340	10	12/13/17 20:56	12/15/17 13:32	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	4130	788	10	12/13/17 20:56	12/15/17 13:32	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	4130	1230	10	12/13/17 20:56	12/15/17 13:32	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/kg	4130	1100	10	12/13/17 20:56	12/15/17 13:32	108-60-1	
Pentachlorophenol	ND	ug/kg	20600	750	10	12/13/17 20:56	12/15/17 13:32	87-86-5	
Phenanthrene	**12100**	ug/kg	4130	688	10	12/13/17 20:56	12/15/17 13:32	85-01-8	
Phenol	ND	ug/kg	4130	1240	10	12/13/17 20:56	12/15/17 13:32	108-95-2	
Pyrene	**857J**	ug/kg	4130	700	10	12/13/17 20:56	12/15/17 13:32	129-00-0	
Pyridine	ND	ug/kg	4130	913	10	12/13/17 20:56	12/15/17 13:32	110-86-1	
1,2,4-Trichlorobenzene	ND	ug/kg	4130	800	10	12/13/17 20:56	12/15/17 13:32	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	4130	1280	10	12/13/17 20:56	12/15/17 13:32	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	4130	913	10	12/13/17 20:56	12/15/17 13:32	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	0	%	23-110		10	12/13/17 20:56	12/15/17 13:32	4165-60-0	D3,S4
2-Fluorobiphenyl (S)	0	%	30-110		10	12/13/17 20:56	12/15/17 13:32	321-60-8	S4
Terphenyl-d14 (S)	0	%	28-110		10	12/13/17 20:56	12/15/17 13:32	1718-51-0	S4
Phenol-d6 (S)	0	%	22-110		10	12/13/17 20:56	12/15/17 13:32	13127-88-3	S4
2-Fluorophenol (S)	0	%	13-110		10	12/13/17 20:56	12/15/17 13:32	367-12-4	S4
2,4,6-Tribromophenol (S)	0	%	27-110		10	12/13/17 20:56	12/15/17 13:32	118-79-6	S4
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Acetone	ND	ug/kg	4810	481	50		12/14/17 17:53	67-64-1	
Benzene	**824**	ug/kg	240	77.0	50		12/14/17 17:53	71-43-2	
Bromobenzene	ND	ug/kg	240	96.2	50		12/14/17 17:53	108-86-1	
Bromochloromethane	ND	ug/kg	240	81.8	50		12/14/17 17:53	74-97-5	
Bromodichloromethane	ND	ug/kg	240	91.4	50		12/14/17 17:53	75-27-4	
Bromoform	ND	ug/kg	240	111	50		12/14/17 17:53	75-25-2	
Bromomethane	ND	ug/kg	481	120	50		12/14/17 17:53	74-83-9	
2-Butanone (MEK)	ND	ug/kg	4810	139	50		12/14/17 17:53	78-93-3	
n-Butylbenzene	**4180**	ug/kg	240	86.6	50		12/14/17 17:53	104-51-8	
sec-Butylbenzene	**3900**	ug/kg	240	77.0	50		12/14/17 17:53	135-98-8	
tert-Butylbenzene	**324**	ug/kg	240	96.2	50		12/14/17 17:53	98-06-6	
Carbon tetrachloride	ND	ug/kg	240	125	50		12/14/17 17:53	56-23-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z2-2 **Lab ID: 92366828008** Collected: 12/12/17 09:30 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Chlorobenzene	ND	ug/kg	240	91.4	50		12/14/17 17:53	108-90-7	
Chloroethane	ND	ug/kg	481	115	50		12/14/17 17:53	75-00-3	
Chloroform	ND	ug/kg	240	77.0	50		12/14/17 17:53	67-66-3	
Chloromethane	ND	ug/kg	481	115	50		12/14/17 17:53	74-87-3	
2-Chlorotoluene	ND	ug/kg	240	81.8	50		12/14/17 17:53	95-49-8	
4-Chlorotoluene	ND	ug/kg	240	86.6	50		12/14/17 17:53	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	240	173	50		12/14/17 17:53	96-12-8	
Dibromochloromethane	ND	ug/kg	240	86.6	50		12/14/17 17:53	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	240	86.6	50		12/14/17 17:53	106-93-4	
Dibromomethane	ND	ug/kg	240	120	50		12/14/17 17:53	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	240	91.4	50		12/14/17 17:53	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	240	96.2	50		12/14/17 17:53	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	240	81.8	50		12/14/17 17:53	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	481	173	50		12/14/17 17:53	75-71-8	
1,1-Dichloroethane	ND	ug/kg	240	72.1	50		12/14/17 17:53	75-34-3	
1,2-Dichloroethane	ND	ug/kg	240	106	50		12/14/17 17:53	107-06-2	
1,1-Dichloroethene	ND	ug/kg	240	86.6	50		12/14/17 17:53	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	240	67.3	50		12/14/17 17:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	240	91.4	50		12/14/17 17:53	156-60-5	
1,2-Dichloropropane	ND	ug/kg	240	81.8	50		12/14/17 17:53	78-87-5	
1,3-Dichloropropane	ND	ug/kg	240	91.4	50		12/14/17 17:53	142-28-9	
2,2-Dichloropropane	ND	ug/kg	240	81.8	50		12/14/17 17:53	594-20-7	
1,1-Dichloropropene	ND	ug/kg	240	72.1	50		12/14/17 17:53	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	240	86.6	50		12/14/17 17:53	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	240	72.1	50		12/14/17 17:53	10061-02-6	
Diisopropyl ether	ND	ug/kg	240	81.8	50		12/14/17 17:53	108-20-3	
Ethylbenzene	**6630**	ug/kg	240	86.6	50		12/14/17 17:53	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	240	96.2	50		12/14/17 17:53	87-68-3	
2-Hexanone	ND	ug/kg	2400	188	50		12/14/17 17:53	591-78-6	
Isopropylbenzene (Cumene)	**3240**	ug/kg	240	91.4	50		12/14/17 17:53	98-82-8	
p-Isopropyltoluene	**7780**	ug/kg	240	81.8	50		12/14/17 17:53	99-87-6	
Methylene Chloride	ND	ug/kg	962	144	50		12/14/17 17:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	2400	178	50		12/14/17 17:53	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	240	72.1	50		12/14/17 17:53	1634-04-4	
Naphthalene	**34400**	ug/kg	2400	577	500		12/15/17 14:34	91-20-3	
n-Propylbenzene	**6610**	ug/kg	240	81.8	50		12/14/17 17:53	103-65-1	
Styrene	ND	ug/kg	240	86.6	50		12/14/17 17:53	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	240	101	50		12/14/17 17:53	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	240	91.4	50		12/14/17 17:53	79-34-5	
Tetrachloroethene	ND	ug/kg	240	81.8	50		12/14/17 17:53	127-18-4	
Toluene	**3340**	ug/kg	240	86.6	50		12/14/17 17:53	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	240	106	50		12/14/17 17:53	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	240	77.0	50		12/14/17 17:53	120-82-1	
1,1,1-Trichloroethane	**1110**	ug/kg	240	86.6	50		12/14/17 17:53	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	240	101	50		12/14/17 17:53	79-00-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z2-2 **Lab ID: 92366828008** Collected: 12/12/17 09:30 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Trichloroethene	**45700**	ug/kg	2400	1010	500		12/15/17 14:34	79-01-6	
Trichlorofluoromethane	ND	ug/kg	240	106	50		12/14/17 17:53	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	240	77.0	50		12/14/17 17:53	96-18-4	
1,2,4-Trimethylbenzene	**37500**	ug/kg	2400	962	500		12/15/17 14:34	95-63-6	
1,3,5-Trimethylbenzene	**12900**	ug/kg	2400	866	500		12/15/17 14:34	108-67-8	
Vinyl acetate	ND	ug/kg	2400	423	50		12/14/17 17:53	108-05-4	
Vinyl chloride	ND	ug/kg	481	86.6	50		12/14/17 17:53	75-01-4	
Xylene (Total)	**35200**	ug/kg	4810	1730	500		12/15/17 14:34	1330-20-7	
m&p-Xylene	**24000**	ug/kg	4810	1730	500		12/15/17 14:34	179601-23-1	
o-Xylene	**11200**	ug/kg	2400	914	500		12/15/17 14:34	95-47-6	
Surrogates									
Toluene-d8 (S)	107	%	70-130		50		12/14/17 17:53	2037-26-5	
4-Bromofluorobenzene (S)	144	%	70-130		50		12/14/17 17:53	460-00-4	S1
1,2-Dichloroethane-d4 (S)	124	%	70-132		50		12/14/17 17:53	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**20.0**	%	0.10	0.10	1		12/14/17 11:36		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z2-3 **Lab ID: 92366828009** Collected: 12/12/17 09:50 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	ND	mg/kg	34.5	17.2	50	12/14/17 11:50	12/18/17 15:46	7440-38-2	D3
Barium	**189**	mg/kg	17.2	8.6	50	12/14/17 11:50	12/18/17 15:46	7440-39-3	
Cadmium	ND	mg/kg	3.4	1.7	50	12/14/17 11:50	12/18/17 15:46	7440-43-9	D3
Chromium	**48.9**	mg/kg	17.2	8.6	50	12/14/17 11:50	12/18/17 15:46	7440-47-3	
Lead	**14.8J**	mg/kg	17.2	8.6	50	12/14/17 11:50	12/18/17 15:46	7439-92-1	D3
Selenium	ND	mg/kg	34.5	17.2	50	12/14/17 11:50	12/18/17 15:46	7782-49-2	D3
Silver	ND	mg/kg	17.2	8.6	50	12/14/17 11:50	12/18/17 15:46	7440-22-4	D3
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Acenaphthene	ND	ug/kg	4030	929	10	12/13/17 20:56	12/15/17 14:01	83-32-9	
Acenaphthylene	ND	ug/kg	4030	953	10	12/13/17 20:56	12/15/17 14:01	208-96-8	
Aniline	ND	ug/kg	4030	1090	10	12/13/17 20:56	12/15/17 14:01	62-53-3	
Anthracene	ND	ug/kg	4030	905	10	12/13/17 20:56	12/15/17 14:01	120-12-7	
Benzo(a)anthracene	ND	ug/kg	4030	746	10	12/13/17 20:56	12/15/17 14:01	56-55-3	
Benzo(a)pyrene	ND	ug/kg	4030	770	10	12/13/17 20:56	12/15/17 14:01	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	4030	697	10	12/13/17 20:56	12/15/17 14:01	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	4030	1030	10	12/13/17 20:56	12/15/17 14:01	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	4030	795	10	12/13/17 20:56	12/15/17 14:01	207-08-9	
Benzoic Acid	ND	ug/kg	20200	733	10	12/13/17 20:56	12/15/17 14:01	65-85-0	
Benzyl alcohol	ND	ug/kg	8070	807	10	12/13/17 20:56	12/15/17 14:01	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	4030	733	10	12/13/17 20:56	12/15/17 14:01	101-55-3	
Butylbenzylphthalate	ND	ug/kg	4030	856	10	12/13/17 20:56	12/15/17 14:01	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	8070	831	10	12/13/17 20:56	12/15/17 14:01	59-50-7	
4-Chloroaniline	ND	ug/kg	20200	1120	10	12/13/17 20:56	12/15/17 14:01	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	4030	941	10	12/13/17 20:56	12/15/17 14:01	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	4030	1030	10	12/13/17 20:56	12/15/17 14:01	111-44-4	
2-Chloronaphthalene	ND	ug/kg	4030	795	10	12/13/17 20:56	12/15/17 14:01	91-58-7	
2-Chlorophenol	ND	ug/kg	4030	1100	10	12/13/17 20:56	12/15/17 14:01	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	4030	831	10	12/13/17 20:56	12/15/17 14:01	7005-72-3	
Chrysene	ND	ug/kg	4030	538	10	12/13/17 20:56	12/15/17 14:01	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4030	856	10	12/13/17 20:56	12/15/17 14:01	53-70-3	
Dibenzofuran	ND	ug/kg	4030	660	10	12/13/17 20:56	12/15/17 14:01	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	4030	1080	10	12/13/17 20:56	12/15/17 14:01	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	4030	917	10	12/13/17 20:56	12/15/17 14:01	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	4030	1140	10	12/13/17 20:56	12/15/17 14:01	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	20200	880	10	12/13/17 20:56	12/15/17 14:01	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	4030	880	10	12/13/17 20:56	12/15/17 14:01	120-83-2	
Diethylphthalate	ND	ug/kg	4030	623	10	12/13/17 20:56	12/15/17 14:01	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	4030	1590	10	12/13/17 20:56	12/15/17 14:01	105-67-9	
Dimethylphthalate	ND	ug/kg	4030	819	10	12/13/17 20:56	12/15/17 14:01	131-11-3	
Di-n-butylphthalate	ND	ug/kg	4030	660	10	12/13/17 20:56	12/15/17 14:01	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	8070	807	10	12/13/17 20:56	12/15/17 14:01	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	20200	660	10	12/13/17 20:56	12/15/17 14:01	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	4030	758	10	12/13/17 20:56	12/15/17 14:01	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	4030	843	10	12/13/17 20:56	12/15/17 14:01	606-20-2	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z2-3 **Lab ID: 92366828009** Collected: 12/12/17 09:50 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Di-n-octylphthalate	ND	ug/kg	4030	843	10	12/13/17 20:56	12/15/17 14:01	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	4030	1100	10	12/13/17 20:56	12/15/17 14:01	117-81-7	
Fluoranthene	ND	ug/kg	4030	587	10	12/13/17 20:56	12/15/17 14:01	206-44-0	
Fluorene	**2160J**	ug/kg	4030	831	10	12/13/17 20:56	12/15/17 14:01	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	4030	697	10	12/13/17 20:56	12/15/17 14:01	87-68-3	
Hexachlorobenzene	ND	ug/kg	4030	513	10	12/13/17 20:56	12/15/17 14:01	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	4030	746	10	12/13/17 20:56	12/15/17 14:01	77-47-4	
Hexachloroethane	ND	ug/kg	4030	1060	10	12/13/17 20:56	12/15/17 14:01	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4030	831	10	12/13/17 20:56	12/15/17 14:01	193-39-5	
Isophorone	ND	ug/kg	4030	905	10	12/13/17 20:56	12/15/17 14:01	78-59-1	
1-Methylnaphthalene	**13700**	ug/kg	4030	1050	10	12/13/17 20:56	12/15/17 14:01	90-12-0	
2-Methylnaphthalene	**19600**	ug/kg	4030	868	10	12/13/17 20:56	12/15/17 14:01	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	4030	1220	10	12/13/17 20:56	12/15/17 14:01	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	4030	1590	10	12/13/17 20:56	12/15/17 14:01	15831-10-4	
Naphthalene	**1130J**	ug/kg	4030	990	10	12/13/17 20:56	12/15/17 14:01	91-20-3	
2-Nitroaniline	ND	ug/kg	20200	1250	10	12/13/17 20:56	12/15/17 14:01	88-74-4	
3-Nitroaniline	ND	ug/kg	20200	1100	10	12/13/17 20:56	12/15/17 14:01	99-09-2	
4-Nitroaniline	ND	ug/kg	8070	1140	10	12/13/17 20:56	12/15/17 14:01	100-01-6	
Nitrobenzene	ND	ug/kg	4030	1100	10	12/13/17 20:56	12/15/17 14:01	98-95-3	
2-Nitrophenol	ND	ug/kg	4030	978	10	12/13/17 20:56	12/15/17 14:01	88-75-5	
4-Nitrophenol	ND	ug/kg	20200	721	10	12/13/17 20:56	12/15/17 14:01	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	4030	1310	10	12/13/17 20:56	12/15/17 14:01	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	4030	770	10	12/13/17 20:56	12/15/17 14:01	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	4030	1200	10	12/13/17 20:56	12/15/17 14:01	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/kg	4030	1080	10	12/13/17 20:56	12/15/17 14:01	108-60-1	
Pentachlorophenol	ND	ug/kg	20200	733	10	12/13/17 20:56	12/15/17 14:01	87-86-5	
Phenanthrene	ND	ug/kg	4030	672	10	12/13/17 20:56	12/15/17 14:01	85-01-8	
Phenol	ND	ug/kg	4030	1210	10	12/13/17 20:56	12/15/17 14:01	108-95-2	
Pyrene	**848J**	ug/kg	4030	685	10	12/13/17 20:56	12/15/17 14:01	129-00-0	
Pyridine	ND	ug/kg	4030	892	10	12/13/17 20:56	12/15/17 14:01	110-86-1	
1,2,4-Trichlorobenzene	ND	ug/kg	4030	782	10	12/13/17 20:56	12/15/17 14:01	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	4030	1250	10	12/13/17 20:56	12/15/17 14:01	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	4030	892	10	12/13/17 20:56	12/15/17 14:01	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	0	%	23-110		10	12/13/17 20:56	12/15/17 14:01	4165-60-0	D3,S4
2-Fluorobiphenyl (S)	0	%	30-110		10	12/13/17 20:56	12/15/17 14:01	321-60-8	S4
Terphenyl-d14 (S)	0	%	28-110		10	12/13/17 20:56	12/15/17 14:01	1718-51-0	S4
Phenol-d6 (S)	0	%	22-110		10	12/13/17 20:56	12/15/17 14:01	13127-88-3	S4
2-Fluorophenol (S)	0	%	13-110		10	12/13/17 20:56	12/15/17 14:01	367-12-4	S4
2,4,6-Tribromophenol (S)	0	%	27-110		10	12/13/17 20:56	12/15/17 14:01	118-79-6	S4
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Acetone	ND	ug/kg	2780	278	25		12/14/17 18:13	67-64-1	
Benzene	ND	ug/kg	139	44.5	25		12/14/17 18:13	71-43-2	
Bromobenzene	ND	ug/kg	139	55.6	25		12/14/17 18:13	108-86-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z2-3 **Lab ID: 92366828009** Collected: 12/12/17 09:50 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Bromochloromethane	ND	ug/kg	139	47.3	25		12/14/17 18:13	74-97-5	
Bromodichloromethane	ND	ug/kg	139	52.8	25		12/14/17 18:13	75-27-4	
Bromoform	ND	ug/kg	139	63.9	25		12/14/17 18:13	75-25-2	
Bromomethane	ND	ug/kg	278	69.5	25		12/14/17 18:13	74-83-9	
2-Butanone (MEK)	ND	ug/kg	2780	80.6	25		12/14/17 18:13	78-93-3	
n-Butylbenzene	**1530**	ug/kg	139	50.0	25		12/14/17 18:13	104-51-8	
sec-Butylbenzene	**1380**	ug/kg	139	44.5	25		12/14/17 18:13	135-98-8	
tert-Butylbenzene	**177**	ug/kg	139	55.6	25		12/14/17 18:13	98-06-6	
Carbon tetrachloride	ND	ug/kg	139	72.3	25		12/14/17 18:13	56-23-5	
Chlorobenzene	ND	ug/kg	139	52.8	25		12/14/17 18:13	108-90-7	
Chloroethane	ND	ug/kg	278	66.7	25		12/14/17 18:13	75-00-3	
Chloroform	ND	ug/kg	139	44.5	25		12/14/17 18:13	67-66-3	
Chloromethane	ND	ug/kg	278	66.7	25		12/14/17 18:13	74-87-3	
2-Chlorotoluene	ND	ug/kg	139	47.3	25		12/14/17 18:13	95-49-8	
4-Chlorotoluene	ND	ug/kg	139	50.0	25		12/14/17 18:13	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	139	100	25		12/14/17 18:13	96-12-8	
Dibromochloromethane	ND	ug/kg	139	50.0	25		12/14/17 18:13	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	139	50.0	25		12/14/17 18:13	106-93-4	
Dibromomethane	ND	ug/kg	139	69.5	25		12/14/17 18:13	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	139	52.8	25		12/14/17 18:13	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	139	55.6	25		12/14/17 18:13	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	139	47.3	25		12/14/17 18:13	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	278	100	25		12/14/17 18:13	75-71-8	
1,1-Dichloroethane	ND	ug/kg	139	41.7	25		12/14/17 18:13	75-34-3	
1,2-Dichloroethane	ND	ug/kg	139	61.2	25		12/14/17 18:13	107-06-2	
1,1-Dichloroethene	ND	ug/kg	139	50.0	25		12/14/17 18:13	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	139	38.9	25		12/14/17 18:13	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	139	52.8	25		12/14/17 18:13	156-60-5	
1,2-Dichloropropane	ND	ug/kg	139	47.3	25		12/14/17 18:13	78-87-5	
1,3-Dichloropropane	ND	ug/kg	139	52.8	25		12/14/17 18:13	142-28-9	
2,2-Dichloropropane	ND	ug/kg	139	47.3	25		12/14/17 18:13	594-20-7	
1,1-Dichloropropene	ND	ug/kg	139	41.7	25		12/14/17 18:13	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	139	50.0	25		12/14/17 18:13	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	139	41.7	25		12/14/17 18:13	10061-02-6	
Diisopropyl ether	ND	ug/kg	139	47.3	25		12/14/17 18:13	108-20-3	
Ethylbenzene	**1260**	ug/kg	139	50.0	25		12/14/17 18:13	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	139	55.6	25		12/14/17 18:13	87-68-3	
2-Hexanone	ND	ug/kg	1390	108	25		12/14/17 18:13	591-78-6	
Isopropylbenzene (Cumene)	**884**	ug/kg	139	52.8	25		12/14/17 18:13	98-82-8	
p-Isopropyltoluene	**4870**	ug/kg	139	47.3	25		12/14/17 18:13	99-87-6	
Methylene Chloride	ND	ug/kg	556	83.4	25		12/14/17 18:13	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	1390	103	25		12/14/17 18:13	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	139	41.7	25		12/14/17 18:13	1634-04-4	
Naphthalene	**2490**	ug/kg	139	33.4	25		12/14/17 18:13	91-20-3	
n-Propylbenzene	**1610**	ug/kg	139	47.3	25		12/14/17 18:13	103-65-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z2-3 **Lab ID: 92366828009** Collected: 12/12/17 09:50 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Styrene	ND	ug/kg	139	50.0	25		12/14/17 18:13	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	139	58.4	25		12/14/17 18:13	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	139	52.8	25		12/14/17 18:13	79-34-5	
Tetrachloroethene	ND	ug/kg	139	47.3	25		12/14/17 18:13	127-18-4	
Toluene	**69.6J**	ug/kg	139	50.0	25		12/14/17 18:13	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	139	61.2	25		12/14/17 18:13	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	139	44.5	25		12/14/17 18:13	120-82-1	
1,1,1-Trichloroethane	**470**	ug/kg	139	50.0	25		12/14/17 18:13	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	139	58.4	25		12/14/17 18:13	79-00-5	
Trichloroethene	**5150**	ug/kg	139	58.4	25		12/14/17 18:13	79-01-6	
Trichlorofluoromethane	ND	ug/kg	139	61.2	25		12/14/17 18:13	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	139	44.5	25		12/14/17 18:13	96-18-4	
1,2,4-Trimethylbenzene	**3890**	ug/kg	139	55.6	25		12/14/17 18:13	95-63-6	
1,3,5-Trimethylbenzene	**1210**	ug/kg	139	50.0	25		12/14/17 18:13	108-67-8	
Vinyl acetate	ND	ug/kg	1390	245	25		12/14/17 18:13	108-05-4	
Vinyl chloride	ND	ug/kg	278	50.0	25		12/14/17 18:13	75-01-4	
Xylene (Total)	**3170**	ug/kg	278	100	25		12/14/17 18:13	1330-20-7	
m&p-Xylene	**516**	ug/kg	278	100	25		12/14/17 18:13	179601-23-1	
o-Xylene	**2650**	ug/kg	139	52.8	25		12/14/17 18:13	95-47-6	
Surrogates									
Toluene-d8 (S)	107	%	70-130		25		12/14/17 18:13	2037-26-5	
4-Bromofluorobenzene (S)	140	%	70-130		25		12/14/17 18:13	460-00-4	S5
1,2-Dichloroethane-d4 (S)	118	%	70-132		25		12/14/17 18:13	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**17.6**	%	0.10	0.10	1		12/14/17 11:36		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
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ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z2-4 **Lab ID: 92366828010** Collected: 12/12/17 10:15 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010								
Arsenic	**16.5**	mg/kg			50		12/17/17 20:24	7440-38-2	D3
Barium	**221**	mg/kg			50		12/17/17 20:24	7440-39-3	
Cadmium	**0.13**	mg/kg			50		12/17/17 20:24	7440-43-9	D3
Chromium	**32.6**	mg/kg			50		12/17/17 20:24	7440-47-3	
Lead	**12.2**	mg/kg			50		12/17/17 20:24	7439-92-1	D3
Selenium	**3.1**	mg/kg			50		12/17/17 20:24	7782-49-2	D3
Silver	**0.0**	mg/kg			50		12/17/17 20:24	7440-22-4	D3
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Acenaphthene	ND	ug/kg	4360	1000	10	12/13/17 20:56	12/15/17 14:30	83-32-9	
Acenaphthylene	ND	ug/kg	4360	1030	10	12/13/17 20:56	12/15/17 14:30	208-96-8	
Aniline	ND	ug/kg	4360	1170	10	12/13/17 20:56	12/15/17 14:30	62-53-3	
Anthracene	ND	ug/kg	4360	977	10	12/13/17 20:56	12/15/17 14:30	120-12-7	
Benzo(a)anthracene	ND	ug/kg	4360	805	10	12/13/17 20:56	12/15/17 14:30	56-55-3	
Benzo(a)pyrene	ND	ug/kg	4360	831	10	12/13/17 20:56	12/15/17 14:30	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	4360	752	10	12/13/17 20:56	12/15/17 14:30	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	4360	1110	10	12/13/17 20:56	12/15/17 14:30	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	4360	858	10	12/13/17 20:56	12/15/17 14:30	207-08-9	
Benzoic Acid	ND	ug/kg	21800	792	10	12/13/17 20:56	12/15/17 14:30	65-85-0	
Benzyl alcohol	ND	ug/kg	8710	871	10	12/13/17 20:56	12/15/17 14:30	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	4360	792	10	12/13/17 20:56	12/15/17 14:30	101-55-3	
Butylbenzylphthalate	ND	ug/kg	4360	924	10	12/13/17 20:56	12/15/17 14:30	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	8710	897	10	12/13/17 20:56	12/15/17 14:30	59-50-7	
4-Chloroaniline	ND	ug/kg	21800	1210	10	12/13/17 20:56	12/15/17 14:30	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	4360	1020	10	12/13/17 20:56	12/15/17 14:30	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	4360	1110	10	12/13/17 20:56	12/15/17 14:30	111-44-4	
2-Chloronaphthalene	ND	ug/kg	4360	858	10	12/13/17 20:56	12/15/17 14:30	91-58-7	
2-Chlorophenol	ND	ug/kg	4360	1190	10	12/13/17 20:56	12/15/17 14:30	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	4360	897	10	12/13/17 20:56	12/15/17 14:30	7005-72-3	
Chrysene	ND	ug/kg	4360	581	10	12/13/17 20:56	12/15/17 14:30	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4360	924	10	12/13/17 20:56	12/15/17 14:30	53-70-3	
Dibenzofuran	ND	ug/kg	4360	713	10	12/13/17 20:56	12/15/17 14:30	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	4360	1160	10	12/13/17 20:56	12/15/17 14:30	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	4360	990	10	12/13/17 20:56	12/15/17 14:30	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	4360	1230	10	12/13/17 20:56	12/15/17 14:30	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	21800	950	10	12/13/17 20:56	12/15/17 14:30	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	4360	950	10	12/13/17 20:56	12/15/17 14:30	120-83-2	
Diethylphthalate	ND	ug/kg	4360	673	10	12/13/17 20:56	12/15/17 14:30	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	4360	1720	10	12/13/17 20:56	12/15/17 14:30	105-67-9	
Dimethylphthalate	ND	ug/kg	4360	884	10	12/13/17 20:56	12/15/17 14:30	131-11-3	
Di-n-butylphthalate	ND	ug/kg	4360	713	10	12/13/17 20:56	12/15/17 14:30	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	8710	871	10	12/13/17 20:56	12/15/17 14:30	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	21800	713	10	12/13/17 20:56	12/15/17 14:30	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	4360	818	10	12/13/17 20:56	12/15/17 14:30	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	4360	911	10	12/13/17 20:56	12/15/17 14:30	606-20-2	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z2-4 **Lab ID: 92366828010** Collected: 12/12/17 10:15 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Di-n-octylphthalate	ND	ug/kg	4360	911	10	12/13/17 20:56	12/15/17 14:30	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	4360	1190	10	12/13/17 20:56	12/15/17 14:30	117-81-7	
Fluoranthene	ND	ug/kg	4360	633	10	12/13/17 20:56	12/15/17 14:30	206-44-0	
Fluorene	ND	ug/kg	4360	897	10	12/13/17 20:56	12/15/17 14:30	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	4360	752	10	12/13/17 20:56	12/15/17 14:30	87-68-3	
Hexachlorobenzene	ND	ug/kg	4360	554	10	12/13/17 20:56	12/15/17 14:30	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	4360	805	10	12/13/17 20:56	12/15/17 14:30	77-47-4	
Hexachloroethane	ND	ug/kg	4360	1150	10	12/13/17 20:56	12/15/17 14:30	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4360	897	10	12/13/17 20:56	12/15/17 14:30	193-39-5	
Isophorone	ND	ug/kg	4360	977	10	12/13/17 20:56	12/15/17 14:30	78-59-1	
1-Methylnaphthalene	**51200**	ug/kg	21800	5680	50	12/13/17 20:56	12/15/17 15:29	90-12-0	
2-Methylnaphthalene	**87300**	ug/kg	21800	4690	50	12/13/17 20:56	12/15/17 15:29	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	4360	1320	10	12/13/17 20:56	12/15/17 14:30	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	4360	1720	10	12/13/17 20:56	12/15/17 14:30	15831-10-4	
Naphthalene	**21400**	ug/kg	4360	1070	10	12/13/17 20:56	12/15/17 14:30	91-20-3	
2-Nitroaniline	ND	ug/kg	21800	1350	10	12/13/17 20:56	12/15/17 14:30	88-74-4	
3-Nitroaniline	ND	ug/kg	21800	1190	10	12/13/17 20:56	12/15/17 14:30	99-09-2	
4-Nitroaniline	ND	ug/kg	8710	1230	10	12/13/17 20:56	12/15/17 14:30	100-01-6	
Nitrobenzene	ND	ug/kg	4360	1190	10	12/13/17 20:56	12/15/17 14:30	98-95-3	
2-Nitrophenol	ND	ug/kg	4360	1060	10	12/13/17 20:56	12/15/17 14:30	88-75-5	
4-Nitrophenol	ND	ug/kg	21800	779	10	12/13/17 20:56	12/15/17 14:30	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	4360	1410	10	12/13/17 20:56	12/15/17 14:30	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	4360	831	10	12/13/17 20:56	12/15/17 14:30	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	4360	1290	10	12/13/17 20:56	12/15/17 14:30	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/kg	4360	1160	10	12/13/17 20:56	12/15/17 14:30	108-60-1	
Pentachlorophenol	ND	ug/kg	21800	792	10	12/13/17 20:56	12/15/17 14:30	87-86-5	
Phenanthrene	**14000**	ug/kg	4360	726	10	12/13/17 20:56	12/15/17 14:30	85-01-8	
Phenol	ND	ug/kg	4360	1310	10	12/13/17 20:56	12/15/17 14:30	108-95-2	
Pyrene	**1570J**	ug/kg	4360	739	10	12/13/17 20:56	12/15/17 14:30	129-00-0	
Pyridine	ND	ug/kg	4360	963	10	12/13/17 20:56	12/15/17 14:30	110-86-1	
1,2,4-Trichlorobenzene	ND	ug/kg	4360	845	10	12/13/17 20:56	12/15/17 14:30	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	4360	1350	10	12/13/17 20:56	12/15/17 14:30	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	4360	963	10	12/13/17 20:56	12/15/17 14:30	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	0	%	23-110		10	12/13/17 20:56	12/15/17 14:30	4165-60-0	D3,S4
2-Fluorobiphenyl (S)	0	%	30-110		10	12/13/17 20:56	12/15/17 14:30	321-60-8	S4
Terphenyl-d14 (S)	0	%	28-110		10	12/13/17 20:56	12/15/17 14:30	1718-51-0	S4
Phenol-d6 (S)	0	%	22-110		10	12/13/17 20:56	12/15/17 14:30	13127-88-3	S4
2-Fluorophenol (S)	0	%	13-110		10	12/13/17 20:56	12/15/17 14:30	367-12-4	S4
2,4,6-Tribromophenol (S)	0	%	27-110		10	12/13/17 20:56	12/15/17 14:30	118-79-6	S4
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Acetone	ND	ug/kg	2480	248	25		12/14/17 18:33	67-64-1	
Benzene	**319**	ug/kg	124	39.7	25		12/14/17 18:33	71-43-2	
Bromobenzene	ND	ug/kg	124	49.6	25		12/14/17 18:33	108-86-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z2-4 **Lab ID: 92366828010** Collected: 12/12/17 10:15 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Bromochloromethane	ND	ug/kg	124	42.2	25		12/14/17 18:33	74-97-5	
Bromodichloromethane	ND	ug/kg	124	47.1	25		12/14/17 18:33	75-27-4	
Bromoform	ND	ug/kg	124	57.0	25		12/14/17 18:33	75-25-2	
Bromomethane	ND	ug/kg	248	62.0	25		12/14/17 18:33	74-83-9	
2-Butanone (MEK)	ND	ug/kg	2480	71.9	25		12/14/17 18:33	78-93-3	
n-Butylbenzene	**2840**	ug/kg	124	44.6	25		12/14/17 18:33	104-51-8	
sec-Butylbenzene	**2690**	ug/kg	124	39.7	25		12/14/17 18:33	135-98-8	
tert-Butylbenzene	**169**	ug/kg	124	49.6	25		12/14/17 18:33	98-06-6	
Carbon tetrachloride	ND	ug/kg	124	64.5	25		12/14/17 18:33	56-23-5	
Chlorobenzene	ND	ug/kg	124	47.1	25		12/14/17 18:33	108-90-7	
Chloroethane	ND	ug/kg	248	59.5	25		12/14/17 18:33	75-00-3	
Chloroform	ND	ug/kg	124	39.7	25		12/14/17 18:33	67-66-3	
Chloromethane	ND	ug/kg	248	59.5	25		12/14/17 18:33	74-87-3	
2-Chlorotoluene	ND	ug/kg	124	42.2	25		12/14/17 18:33	95-49-8	
4-Chlorotoluene	ND	ug/kg	124	44.6	25		12/14/17 18:33	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	124	89.3	25		12/14/17 18:33	96-12-8	
Dibromochloromethane	ND	ug/kg	124	44.6	25		12/14/17 18:33	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	124	44.6	25		12/14/17 18:33	106-93-4	
Dibromomethane	ND	ug/kg	124	62.0	25		12/14/17 18:33	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	124	47.1	25		12/14/17 18:33	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	124	49.6	25		12/14/17 18:33	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	124	42.2	25		12/14/17 18:33	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	248	89.3	25		12/14/17 18:33	75-71-8	
1,1-Dichloroethane	ND	ug/kg	124	37.2	25		12/14/17 18:33	75-34-3	
1,2-Dichloroethane	ND	ug/kg	124	54.6	25		12/14/17 18:33	107-06-2	
1,1-Dichloroethene	ND	ug/kg	124	44.6	25		12/14/17 18:33	75-35-4	
cis-1,2-Dichloroethene	**66.7J**	ug/kg	124	34.7	25		12/14/17 18:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	124	47.1	25		12/14/17 18:33	156-60-5	
1,2-Dichloropropane	ND	ug/kg	124	42.2	25		12/14/17 18:33	78-87-5	
1,3-Dichloropropane	ND	ug/kg	124	47.1	25		12/14/17 18:33	142-28-9	
2,2-Dichloropropane	ND	ug/kg	124	42.2	25		12/14/17 18:33	594-20-7	
1,1-Dichloropropene	ND	ug/kg	124	37.2	25		12/14/17 18:33	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	124	44.6	25		12/14/17 18:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	124	37.2	25		12/14/17 18:33	10061-02-6	
Diisopropyl ether	ND	ug/kg	124	42.2	25		12/14/17 18:33	108-20-3	
Ethylbenzene	**949**	ug/kg	124	44.6	25		12/14/17 18:33	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	124	49.6	25		12/14/17 18:33	87-68-3	
2-Hexanone	ND	ug/kg	1240	96.7	25		12/14/17 18:33	591-78-6	
Isopropylbenzene (Cumene)	**2300**	ug/kg	124	47.1	25		12/14/17 18:33	98-82-8	
p-Isopropyltoluene	**7870**	ug/kg	1240	422	250		12/15/17 14:54	99-87-6	
Methylene Chloride	ND	ug/kg	496	74.4	25		12/14/17 18:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	1240	91.8	25		12/14/17 18:33	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	124	37.2	25		12/14/17 18:33	1634-04-4	
Naphthalene	**27500**	ug/kg	1240	298	250		12/15/17 14:54	91-20-3	
n-Propylbenzene	**4010**	ug/kg	124	42.2	25		12/14/17 18:33	103-65-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z2-4 **Lab ID: 92366828010** Collected: 12/12/17 10:15 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Styrene	ND	ug/kg	124	44.6	25		12/14/17 18:33	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	124	52.1	25		12/14/17 18:33	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	124	47.1	25		12/14/17 18:33	79-34-5	
Tetrachloroethene	ND	ug/kg	124	42.2	25		12/14/17 18:33	127-18-4	
Toluene	**132**	ug/kg	124	44.6	25		12/14/17 18:33	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	124	54.6	25		12/14/17 18:33	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	124	39.7	25		12/14/17 18:33	120-82-1	
1,1,1-Trichloroethane	**2150**	ug/kg	124	44.6	25		12/14/17 18:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	124	52.1	25		12/14/17 18:33	79-00-5	
Trichloroethene	**18000**	ug/kg	1240	521	250		12/15/17 14:54	79-01-6	
Trichlorofluoromethane	ND	ug/kg	124	54.6	25		12/14/17 18:33	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	124	39.7	25		12/14/17 18:33	96-18-4	
1,2,4-Trimethylbenzene	**28500**	ug/kg	1240	496	250		12/15/17 14:54	95-63-6	
1,3,5-Trimethylbenzene	**5950**	ug/kg	1240	446	250		12/15/17 14:54	108-67-8	
Vinyl acetate	ND	ug/kg	1240	218	25		12/14/17 18:33	108-05-4	
Vinyl chloride	ND	ug/kg	248	44.6	25		12/14/17 18:33	75-01-4	
Xylene (Total)	**14600**	ug/kg	2480	893	250		12/15/17 14:54	1330-20-7	
m&p-Xylene	**4980**	ug/kg	248	89.3	25		12/14/17 18:33	179601-23-1	
o-Xylene	**9610**	ug/kg	1240	471	250		12/15/17 14:54	95-47-6	
Surrogates									
Toluene-d8 (S)	107	%	70-130		25		12/14/17 18:33	2037-26-5	
4-Bromofluorobenzene (S)	136	%	70-130		25		12/14/17 18:33	460-00-4	S1
1,2-Dichloroethane-d4 (S)	114	%	70-132		25		12/14/17 18:33	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**24.0**	%	0.10	0.10	1		12/14/17 11:36		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z3-1 **Lab ID: 92366828011** Collected: 12/12/17 10:10 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Acenaphthene	ND	ug/kg	406	93.5	1	12/13/17 20:56	12/14/17 20:16	83-32-9	
Acenaphthylene	ND	ug/kg	406	96.0	1	12/13/17 20:56	12/14/17 20:16	208-96-8	
Aniline	ND	ug/kg	406	110	1	12/13/17 20:56	12/14/17 20:16	62-53-3	
Anthracene	ND	ug/kg	406	91.1	1	12/13/17 20:56	12/14/17 20:16	120-12-7	
Benzo(a)anthracene	ND	ug/kg	406	75.1	1	12/13/17 20:56	12/14/17 20:16	56-55-3	
Benzo(a)pyrene	ND	ug/kg	406	77.5	1	12/13/17 20:56	12/14/17 20:16	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	406	70.2	1	12/13/17 20:56	12/14/17 20:16	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	406	103	1	12/13/17 20:56	12/14/17 20:16	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	406	80.0	1	12/13/17 20:56	12/14/17 20:16	207-08-9	
Benzoic Acid	ND	ug/kg	2030	73.8	1	12/13/17 20:56	12/14/17 20:16	65-85-0	
Benzyl alcohol	ND	ug/kg	812	81.2	1	12/13/17 20:56	12/14/17 20:16	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	406	73.8	1	12/13/17 20:56	12/14/17 20:16	101-55-3	
Butylbenzylphthalate	ND	ug/kg	406	86.2	1	12/13/17 20:56	12/14/17 20:16	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	812	83.7	1	12/13/17 20:56	12/14/17 20:16	59-50-7	
4-Chloroaniline	ND	ug/kg	2030	113	1	12/13/17 20:56	12/14/17 20:16	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	406	94.8	1	12/13/17 20:56	12/14/17 20:16	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	406	103	1	12/13/17 20:56	12/14/17 20:16	111-44-4	
2-Chloronaphthalene	ND	ug/kg	406	80.0	1	12/13/17 20:56	12/14/17 20:16	91-58-7	
2-Chlorophenol	ND	ug/kg	406	111	1	12/13/17 20:56	12/14/17 20:16	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	406	83.7	1	12/13/17 20:56	12/14/17 20:16	7005-72-3	
Chrysene	ND	ug/kg	406	54.2	1	12/13/17 20:56	12/14/17 20:16	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	406	86.2	1	12/13/17 20:56	12/14/17 20:16	53-70-3	
Dibenzofuran	ND	ug/kg	406	66.5	1	12/13/17 20:56	12/14/17 20:16	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	406	108	1	12/13/17 20:56	12/14/17 20:16	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	406	92.3	1	12/13/17 20:56	12/14/17 20:16	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	406	114	1	12/13/17 20:56	12/14/17 20:16	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	2030	88.6	1	12/13/17 20:56	12/14/17 20:16	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	406	88.6	1	12/13/17 20:56	12/14/17 20:16	120-83-2	
Diethylphthalate	ND	ug/kg	406	62.8	1	12/13/17 20:56	12/14/17 20:16	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	406	160	1	12/13/17 20:56	12/14/17 20:16	105-67-9	
Dimethylphthalate	ND	ug/kg	406	82.5	1	12/13/17 20:56	12/14/17 20:16	131-11-3	
Di-n-butylphthalate	ND	ug/kg	406	66.5	1	12/13/17 20:56	12/14/17 20:16	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	812	81.2	1	12/13/17 20:56	12/14/17 20:16	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	2030	66.5	1	12/13/17 20:56	12/14/17 20:16	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	406	76.3	1	12/13/17 20:56	12/14/17 20:16	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	406	84.9	1	12/13/17 20:56	12/14/17 20:16	606-20-2	
Di-n-octylphthalate	ND	ug/kg	406	84.9	1	12/13/17 20:56	12/14/17 20:16	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	406	111	1	12/13/17 20:56	12/14/17 20:16	117-81-7	
Fluoranthene	ND	ug/kg	406	59.1	1	12/13/17 20:56	12/14/17 20:16	206-44-0	
Fluorene	ND	ug/kg	406	83.7	1	12/13/17 20:56	12/14/17 20:16	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	406	70.2	1	12/13/17 20:56	12/14/17 20:16	87-68-3	
Hexachlorobenzene	ND	ug/kg	406	51.7	1	12/13/17 20:56	12/14/17 20:16	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	406	75.1	1	12/13/17 20:56	12/14/17 20:16	77-47-4	
Hexachloroethane	ND	ug/kg	406	107	1	12/13/17 20:56	12/14/17 20:16	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	406	83.7	1	12/13/17 20:56	12/14/17 20:16	193-39-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z3-1 **Lab ID: 92366828011** Collected: 12/12/17 10:10 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Isophorone	ND	ug/kg	406	91.1	1	12/13/17 20:56	12/14/17 20:16	78-59-1	
1-Methylnaphthalene	**12200**	ug/kg	4060	1060	10	12/13/17 20:56	12/15/17 12:03	90-12-0	
2-Methylnaphthalene	**21900**	ug/kg	4060	874	10	12/13/17 20:56	12/15/17 12:03	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	406	123	1	12/13/17 20:56	12/14/17 20:16	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	406	160	1	12/13/17 20:56	12/14/17 20:16	15831-10-4	
Naphthalene	**4370**	ug/kg	4060	997	10	12/13/17 20:56	12/15/17 12:03	91-20-3	
2-Nitroaniline	ND	ug/kg	2030	126	1	12/13/17 20:56	12/14/17 20:16	88-74-4	
3-Nitroaniline	ND	ug/kg	2030	111	1	12/13/17 20:56	12/14/17 20:16	99-09-2	
4-Nitroaniline	ND	ug/kg	812	114	1	12/13/17 20:56	12/14/17 20:16	100-01-6	
Nitrobenzene	ND	ug/kg	406	111	1	12/13/17 20:56	12/14/17 20:16	98-95-3	
2-Nitrophenol	ND	ug/kg	406	98.5	1	12/13/17 20:56	12/14/17 20:16	88-75-5	
4-Nitrophenol	ND	ug/kg	2030	72.6	1	12/13/17 20:56	12/14/17 20:16	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	406	132	1	12/13/17 20:56	12/14/17 20:16	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	406	77.5	1	12/13/17 20:56	12/14/17 20:16	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	406	121	1	12/13/17 20:56	12/14/17 20:16	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/kg	406	108	1	12/13/17 20:56	12/14/17 20:16	108-60-1	
Pentachlorophenol	ND	ug/kg	2030	73.8	1	12/13/17 20:56	12/14/17 20:16	87-86-5	
Phenanthrene	**2950**	ug/kg	406	67.7	1	12/13/17 20:56	12/14/17 20:16	85-01-8	
Phenol	ND	ug/kg	406	122	1	12/13/17 20:56	12/14/17 20:16	108-95-2	
Pyrene	**145J**	ug/kg	406	68.9	1	12/13/17 20:56	12/14/17 20:16	129-00-0	
Pyridine	ND	ug/kg	406	89.8	1	12/13/17 20:56	12/14/17 20:16	110-86-1	
1,2,4-Trichlorobenzene	ND	ug/kg	406	78.8	1	12/13/17 20:56	12/14/17 20:16	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	406	126	1	12/13/17 20:56	12/14/17 20:16	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	406	89.8	1	12/13/17 20:56	12/14/17 20:16	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	70	%	23-110		1	12/13/17 20:56	12/14/17 20:16	4165-60-0	
2-Fluorobiphenyl (S)	53	%	30-110		1	12/13/17 20:56	12/14/17 20:16	321-60-8	
Terphenyl-d14 (S)	66	%	28-110		1	12/13/17 20:56	12/14/17 20:16	1718-51-0	
Phenol-d6 (S)	58	%	22-110		1	12/13/17 20:56	12/14/17 20:16	13127-88-3	
2-Fluorophenol (S)	54	%	13-110		1	12/13/17 20:56	12/14/17 20:16	367-12-4	
2,4,6-Tribromophenol (S)	67	%	27-110		1	12/13/17 20:56	12/14/17 20:16	118-79-6	
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Acetone	ND	ug/kg	2460	246	25		12/14/17 18:53	67-64-1	
Benzene	**61.5J**	ug/kg	123	39.4	25		12/14/17 18:53	71-43-2	
Bromobenzene	ND	ug/kg	123	49.2	25		12/14/17 18:53	108-86-1	
Bromochloromethane	ND	ug/kg	123	41.8	25		12/14/17 18:53	74-97-5	
Bromodichloromethane	ND	ug/kg	123	46.8	25		12/14/17 18:53	75-27-4	
Bromoform	ND	ug/kg	123	56.6	25		12/14/17 18:53	75-25-2	
Bromomethane	ND	ug/kg	246	61.5	25		12/14/17 18:53	74-83-9	
2-Butanone (MEK)	ND	ug/kg	2460	71.4	25		12/14/17 18:53	78-93-3	
n-Butylbenzene	**1180**	ug/kg	123	44.3	25		12/14/17 18:53	104-51-8	
sec-Butylbenzene	**922**	ug/kg	123	39.4	25		12/14/17 18:53	135-98-8	
tert-Butylbenzene	**67.4J**	ug/kg	123	49.2	25		12/14/17 18:53	98-06-6	
Carbon tetrachloride	ND	ug/kg	123	64.0	25		12/14/17 18:53	56-23-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z3-1 **Lab ID: 92366828011** Collected: 12/12/17 10:10 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Chlorobenzene	ND	ug/kg	123	46.8	25		12/14/17 18:53	108-90-7	
Chloroethane	ND	ug/kg	246	59.1	25		12/14/17 18:53	75-00-3	
Chloroform	ND	ug/kg	123	39.4	25		12/14/17 18:53	67-66-3	
Chloromethane	ND	ug/kg	246	59.1	25		12/14/17 18:53	74-87-3	
2-Chlorotoluene	ND	ug/kg	123	41.8	25		12/14/17 18:53	95-49-8	
4-Chlorotoluene	ND	ug/kg	123	44.3	25		12/14/17 18:53	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	123	88.6	25		12/14/17 18:53	96-12-8	
Dibromochloromethane	ND	ug/kg	123	44.3	25		12/14/17 18:53	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	123	44.3	25		12/14/17 18:53	106-93-4	
Dibromomethane	ND	ug/kg	123	61.5	25		12/14/17 18:53	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	123	46.8	25		12/14/17 18:53	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	123	49.2	25		12/14/17 18:53	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	123	41.8	25		12/14/17 18:53	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	246	88.6	25		12/14/17 18:53	75-71-8	
1,1-Dichloroethane	ND	ug/kg	123	36.9	25		12/14/17 18:53	75-34-3	
1,2-Dichloroethane	ND	ug/kg	123	54.1	25		12/14/17 18:53	107-06-2	
1,1-Dichloroethene	ND	ug/kg	123	44.3	25		12/14/17 18:53	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	123	34.5	25		12/14/17 18:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	123	46.8	25		12/14/17 18:53	156-60-5	
1,2-Dichloropropane	ND	ug/kg	123	41.8	25		12/14/17 18:53	78-87-5	
1,3-Dichloropropane	ND	ug/kg	123	46.8	25		12/14/17 18:53	142-28-9	
2,2-Dichloropropane	ND	ug/kg	123	41.8	25		12/14/17 18:53	594-20-7	
1,1-Dichloropropene	ND	ug/kg	123	36.9	25		12/14/17 18:53	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	123	44.3	25		12/14/17 18:53	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	123	36.9	25		12/14/17 18:53	10061-02-6	
Diisopropyl ether	ND	ug/kg	123	41.8	25		12/14/17 18:53	108-20-3	
Ethylbenzene	**1040**	ug/kg	123	44.3	25		12/14/17 18:53	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	123	49.2	25		12/14/17 18:53	87-68-3	
2-Hexanone	ND	ug/kg	1230	96.0	25		12/14/17 18:53	591-78-6	
Isopropylbenzene (Cumene)	**625**	ug/kg	123	46.8	25		12/14/17 18:53	98-82-8	
p-Isopropyltoluene	**1910**	ug/kg	123	41.8	25		12/14/17 18:53	99-87-6	
Methylene Chloride	ND	ug/kg	492	73.8	25		12/14/17 18:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	1230	91.1	25		12/14/17 18:53	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	123	36.9	25		12/14/17 18:53	1634-04-4	
Naphthalene	**7560**	ug/kg	492	118	100		12/15/17 15:14	91-20-3	
n-Propylbenzene	**1280**	ug/kg	123	41.8	25		12/14/17 18:53	103-65-1	
Styrene	ND	ug/kg	123	44.3	25		12/14/17 18:53	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	123	51.7	25		12/14/17 18:53	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	123	46.8	25		12/14/17 18:53	79-34-5	
Tetrachloroethene	ND	ug/kg	123	41.8	25		12/14/17 18:53	127-18-4	
Toluene	**298**	ug/kg	123	44.3	25		12/14/17 18:53	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	123	54.1	25		12/14/17 18:53	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	123	39.4	25		12/14/17 18:53	120-82-1	
1,1,1-Trichloroethane	**76.2J**	ug/kg	123	44.3	25		12/14/17 18:53	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	123	51.7	25		12/14/17 18:53	79-00-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z3-1 **Lab ID: 92366828011** Collected: 12/12/17 10:10 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Trichloroethene	**5510**	ug/kg	492	207	100		12/15/17 15:14	79-01-6	
Trichlorofluoromethane	ND	ug/kg	123	54.1	25		12/14/17 18:53	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	123	39.4	25		12/14/17 18:53	96-18-4	
1,2,4-Trimethylbenzene	**8170**	ug/kg	492	197	100		12/15/17 15:14	95-63-6	
1,3,5-Trimethylbenzene	**2550**	ug/kg	123	44.3	25		12/14/17 18:53	108-67-8	
Vinyl acetate	ND	ug/kg	1230	217	25		12/14/17 18:53	108-05-4	
Vinyl chloride	ND	ug/kg	246	44.3	25		12/14/17 18:53	75-01-4	
Xylene (Total)	**5640**	ug/kg	246	88.6	25		12/14/17 18:53	1330-20-7	
m&p-Xylene	**3800**	ug/kg	246	88.6	25		12/14/17 18:53	179601-23-1	
o-Xylene	**1840**	ug/kg	123	46.8	25		12/14/17 18:53	95-47-6	
Surrogates									
Toluene-d8 (S)	103	%	70-130		25		12/14/17 18:53	2037-26-5	
4-Bromofluorobenzene (S)	139	%	70-130		25		12/14/17 18:53	460-00-4	S1
1,2-Dichloroethane-d4 (S)	117	%	70-132		25		12/14/17 18:53	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**18.5**	%	0.10	0.10	1		12/14/17 11:36		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
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(704)875-9092

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z3-2 **Lab ID: 92366828012** Collected: 12/12/17 10:35 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Acenaphthene	ND	ug/kg	441	101	1	12/13/17 20:56	12/15/17 13:02	83-32-9	
Acenaphthylene	ND	ug/kg	441	104	1	12/13/17 20:56	12/15/17 13:02	208-96-8	
Aniline	ND	ug/kg	441	119	1	12/13/17 20:56	12/15/17 13:02	62-53-3	
Anthracene	ND	ug/kg	441	98.8	1	12/13/17 20:56	12/15/17 13:02	120-12-7	
Benzo(a)anthracene	ND	ug/kg	441	81.5	1	12/13/17 20:56	12/15/17 13:02	56-55-3	
Benzo(a)pyrene	ND	ug/kg	441	84.1	1	12/13/17 20:56	12/15/17 13:02	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	441	76.1	1	12/13/17 20:56	12/15/17 13:02	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	441	112	1	12/13/17 20:56	12/15/17 13:02	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	441	86.8	1	12/13/17 20:56	12/15/17 13:02	207-08-9	
Benzoic Acid	ND	ug/kg	2200	80.1	1	12/13/17 20:56	12/15/17 13:02	65-85-0	
Benzyl alcohol	ND	ug/kg	881	88.1	1	12/13/17 20:56	12/15/17 13:02	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	441	80.1	1	12/13/17 20:56	12/15/17 13:02	101-55-3	
Butylbenzylphthalate	ND	ug/kg	441	93.5	1	12/13/17 20:56	12/15/17 13:02	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	881	90.8	1	12/13/17 20:56	12/15/17 13:02	59-50-7	
4-Chloroaniline	ND	ug/kg	2200	123	1	12/13/17 20:56	12/15/17 13:02	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	441	103	1	12/13/17 20:56	12/15/17 13:02	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	441	112	1	12/13/17 20:56	12/15/17 13:02	111-44-4	
2-Chloronaphthalene	ND	ug/kg	441	86.8	1	12/13/17 20:56	12/15/17 13:02	91-58-7	
2-Chlorophenol	ND	ug/kg	441	120	1	12/13/17 20:56	12/15/17 13:02	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	441	90.8	1	12/13/17 20:56	12/15/17 13:02	7005-72-3	
Chrysene	ND	ug/kg	441	58.8	1	12/13/17 20:56	12/15/17 13:02	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	441	93.5	1	12/13/17 20:56	12/15/17 13:02	53-70-3	
Dibenzofuran	ND	ug/kg	441	72.1	1	12/13/17 20:56	12/15/17 13:02	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	441	118	1	12/13/17 20:56	12/15/17 13:02	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	441	100	1	12/13/17 20:56	12/15/17 13:02	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	441	124	1	12/13/17 20:56	12/15/17 13:02	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	2200	96.1	1	12/13/17 20:56	12/15/17 13:02	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	441	96.1	1	12/13/17 20:56	12/15/17 13:02	120-83-2	
Diethylphthalate	ND	ug/kg	441	68.1	1	12/13/17 20:56	12/15/17 13:02	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	441	174	1	12/13/17 20:56	12/15/17 13:02	105-67-9	
Dimethylphthalate	ND	ug/kg	441	89.5	1	12/13/17 20:56	12/15/17 13:02	131-11-3	
Di-n-butylphthalate	ND	ug/kg	441	72.1	1	12/13/17 20:56	12/15/17 13:02	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	881	88.1	1	12/13/17 20:56	12/15/17 13:02	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	2200	72.1	1	12/13/17 20:56	12/15/17 13:02	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	441	82.8	1	12/13/17 20:56	12/15/17 13:02	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	441	92.1	1	12/13/17 20:56	12/15/17 13:02	606-20-2	
Di-n-octylphthalate	ND	ug/kg	441	92.1	1	12/13/17 20:56	12/15/17 13:02	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	441	120	1	12/13/17 20:56	12/15/17 13:02	117-81-7	
Fluoranthene	ND	ug/kg	441	64.1	1	12/13/17 20:56	12/15/17 13:02	206-44-0	
Fluorene	**1630**	ug/kg	441	90.8	1	12/13/17 20:56	12/15/17 13:02	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	441	76.1	1	12/13/17 20:56	12/15/17 13:02	87-68-3	
Hexachlorobenzene	ND	ug/kg	441	56.1	1	12/13/17 20:56	12/15/17 13:02	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	441	81.5	1	12/13/17 20:56	12/15/17 13:02	77-47-4	
Hexachloroethane	ND	ug/kg	441	116	1	12/13/17 20:56	12/15/17 13:02	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	441	90.8	1	12/13/17 20:56	12/15/17 13:02	193-39-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z3-2 **Lab ID: 92366828012** Collected: 12/12/17 10:35 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Isophorone	ND	ug/kg	441	98.8	1	12/13/17 20:56	12/15/17 13:02	78-59-1	
1-Methylnaphthalene	**19000**	ug/kg	4410	1150	10	12/13/17 20:56	12/15/17 14:31	90-12-0	
2-Methylnaphthalene	**29800**	ug/kg	4410	948	10	12/13/17 20:56	12/15/17 14:31	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	441	134	1	12/13/17 20:56	12/15/17 13:02	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	441	174	1	12/13/17 20:56	12/15/17 13:02	15831-10-4	
Naphthalene	**7830**	ug/kg	4410	1080	10	12/13/17 20:56	12/15/17 14:31	91-20-3	
2-Nitroaniline	ND	ug/kg	2200	136	1	12/13/17 20:56	12/15/17 13:02	88-74-4	
3-Nitroaniline	ND	ug/kg	2200	120	1	12/13/17 20:56	12/15/17 13:02	99-09-2	
4-Nitroaniline	ND	ug/kg	881	124	1	12/13/17 20:56	12/15/17 13:02	100-01-6	
Nitrobenzene	ND	ug/kg	441	120	1	12/13/17 20:56	12/15/17 13:02	98-95-3	
2-Nitrophenol	ND	ug/kg	441	107	1	12/13/17 20:56	12/15/17 13:02	88-75-5	
4-Nitrophenol	ND	ug/kg	2200	78.8	1	12/13/17 20:56	12/15/17 13:02	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	441	143	1	12/13/17 20:56	12/15/17 13:02	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	441	84.1	1	12/13/17 20:56	12/15/17 13:02	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	441	131	1	12/13/17 20:56	12/15/17 13:02	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/kg	441	118	1	12/13/17 20:56	12/15/17 13:02	108-60-1	
Pentachlorophenol	ND	ug/kg	2200	80.1	1	12/13/17 20:56	12/15/17 13:02	87-86-5	
Phenanthrene	**3790**	ug/kg	441	73.4	1	12/13/17 20:56	12/15/17 13:02	85-01-8	
Phenol	ND	ug/kg	441	132	1	12/13/17 20:56	12/15/17 13:02	108-95-2	
Pyrene	**430J**	ug/kg	441	74.8	1	12/13/17 20:56	12/15/17 13:02	129-00-0	
Pyridine	ND	ug/kg	441	97.5	1	12/13/17 20:56	12/15/17 13:02	110-86-1	
1,2,4-Trichlorobenzene	ND	ug/kg	441	85.5	1	12/13/17 20:56	12/15/17 13:02	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	441	136	1	12/13/17 20:56	12/15/17 13:02	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	441	97.5	1	12/13/17 20:56	12/15/17 13:02	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	66	%	23-110		1	12/13/17 20:56	12/15/17 13:02	4165-60-0	
2-Fluorobiphenyl (S)	57	%	30-110		1	12/13/17 20:56	12/15/17 13:02	321-60-8	
Terphenyl-d14 (S)	79	%	28-110		1	12/13/17 20:56	12/15/17 13:02	1718-51-0	
Phenol-d6 (S)	69	%	22-110		1	12/13/17 20:56	12/15/17 13:02	13127-88-3	
2-Fluorophenol (S)	69	%	13-110		1	12/13/17 20:56	12/15/17 13:02	367-12-4	
2,4,6-Tribromophenol (S)	68	%	27-110		1	12/13/17 20:56	12/15/17 13:02	118-79-6	
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Acetone	ND	ug/kg	105	10.5	1		12/14/17 19:13	67-64-1	
Benzene	**68.3**	ug/kg	5.2	1.7	1		12/14/17 19:13	71-43-2	
Bromobenzene	ND	ug/kg	5.2	2.1	1		12/14/17 19:13	108-86-1	
Bromochloromethane	ND	ug/kg	5.2	1.8	1		12/14/17 19:13	74-97-5	
Bromodichloromethane	ND	ug/kg	5.2	2.0	1		12/14/17 19:13	75-27-4	
Bromoform	ND	ug/kg	5.2	2.4	1		12/14/17 19:13	75-25-2	
Bromomethane	ND	ug/kg	10.5	2.6	1		12/14/17 19:13	74-83-9	
2-Butanone (MEK)	ND	ug/kg	105	3.0	1		12/14/17 19:13	78-93-3	
n-Butylbenzene	**2960**	ug/kg	1310	471	250		12/15/17 15:34	104-51-8	
sec-Butylbenzene	**2530**	ug/kg	1310	419	250		12/15/17 15:34	135-98-8	
tert-Butylbenzene	**19.4**	ug/kg	5.2	2.1	1		12/14/17 19:13	98-06-6	
Carbon tetrachloride	ND	ug/kg	5.2	2.7	1		12/14/17 19:13	56-23-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z3-2 **Lab ID: 92366828012** Collected: 12/12/17 10:35 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Chlorobenzene	ND	ug/kg	5.2	2.0	1		12/14/17 19:13	108-90-7	
Chloroethane	ND	ug/kg	10.5	2.5	1		12/14/17 19:13	75-00-3	
Chloroform	ND	ug/kg	5.2	1.7	1		12/14/17 19:13	67-66-3	
Chloromethane	ND	ug/kg	10.5	2.5	1		12/14/17 19:13	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.2	1.8	1		12/14/17 19:13	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.2	1.9	1		12/14/17 19:13	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.2	3.8	1		12/14/17 19:13	96-12-8	
Dibromochloromethane	ND	ug/kg	5.2	1.9	1		12/14/17 19:13	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.2	1.9	1		12/14/17 19:13	106-93-4	
Dibromomethane	ND	ug/kg	5.2	2.6	1		12/14/17 19:13	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.2	2.0	1		12/14/17 19:13	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.2	2.1	1		12/14/17 19:13	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.2	1.8	1		12/14/17 19:13	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	10.5	3.8	1		12/14/17 19:13	75-71-8	
1,1-Dichloroethane	**5.3**	ug/kg	5.2	1.6	1		12/14/17 19:13	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.2	2.3	1		12/14/17 19:13	107-06-2	
1,1-Dichloroethene	**8.6**	ug/kg	5.2	1.9	1		12/14/17 19:13	75-35-4	
cis-1,2-Dichloroethene	**16.5**	ug/kg	5.2	1.5	1		12/14/17 19:13	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.2	2.0	1		12/14/17 19:13	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.2	1.8	1		12/14/17 19:13	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.2	2.0	1		12/14/17 19:13	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.2	1.8	1		12/14/17 19:13	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.2	1.6	1		12/14/17 19:13	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.2	1.9	1		12/14/17 19:13	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.2	1.6	1		12/14/17 19:13	10061-02-6	
Diisopropyl ether	ND	ug/kg	5.2	1.8	1		12/14/17 19:13	108-20-3	
Ethylbenzene	**100**	ug/kg	5.2	1.9	1		12/14/17 19:13	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.2	2.1	1		12/14/17 19:13	87-68-3	
2-Hexanone	ND	ug/kg	52.4	4.1	1		12/14/17 19:13	591-78-6	
Isopropylbenzene (Cumene)	**1790**	ug/kg	1310	497	250		12/15/17 15:34	98-82-8	
p-Isopropyltoluene	**5300**	ug/kg	1310	445	250		12/15/17 15:34	99-87-6	
Methylene Chloride	ND	ug/kg	20.9	3.1	1		12/14/17 19:13	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	52.4	3.9	1		12/14/17 19:13	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.2	1.6	1		12/14/17 19:13	1634-04-4	
Naphthalene	**17700**	ug/kg	1310	314	250		12/15/17 15:34	91-20-3	
n-Propylbenzene	**2850**	ug/kg	1310	445	250		12/15/17 15:34	103-65-1	
Styrene	ND	ug/kg	5.2	1.9	1		12/14/17 19:13	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.2	2.2	1		12/14/17 19:13	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.2	2.0	1		12/14/17 19:13	79-34-5	
Tetrachloroethene	ND	ug/kg	5.2	1.8	1		12/14/17 19:13	127-18-4	
Toluene	**15.3**	ug/kg	5.2	1.9	1		12/14/17 19:13	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.2	2.3	1		12/14/17 19:13	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.2	1.7	1		12/14/17 19:13	120-82-1	
1,1,1-Trichloroethane	**1150J**	ug/kg	1310	471	250		12/15/17 15:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.2	2.2	1		12/14/17 19:13	79-00-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z3-2 **Lab ID: 92366828012** Collected: 12/12/17 10:35 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Trichloroethene	**20400**	ug/kg	1310	550	250		12/15/17 15:34	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.2	2.3	1		12/14/17 19:13	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.2	1.7	1		12/14/17 19:13	96-18-4	
1,2,4-Trimethylbenzene	**18800**	ug/kg	1310	524	250		12/15/17 15:34	95-63-6	
1,3,5-Trimethylbenzene	**3620**	ug/kg	1310	471	250		12/15/17 15:34	108-67-8	
Vinyl acetate	ND	ug/kg	52.4	9.2	1		12/14/17 19:13	108-05-4	
Vinyl chloride	ND	ug/kg	10.5	1.9	1		12/14/17 19:13	75-01-4	
Xylene (Total)	**9500**	ug/kg	2620	943	250		12/15/17 15:34	1330-20-7	
m&p-Xylene	**3370**	ug/kg	2620	943	250		12/15/17 15:34	179601-23-1	
o-Xylene	**6130**	ug/kg	1310	497	250		12/15/17 15:34	95-47-6	
Surrogates									
Toluene-d8 (S)	114	%	70-130		1		12/14/17 19:13	2037-26-5	
4-Bromofluorobenzene (S)	262	%	70-130		1		12/14/17 19:13	460-00-4	S1
1,2-Dichloroethane-d4 (S)	126	%	70-132		1		12/14/17 19:13	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**26.1**	%	0.10	0.10	1		12/14/17 11:36		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z3-3 **Lab ID: 92366828013** Collected: 12/12/17 10:50 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Acenaphthene	ND	ug/kg	451	104	1	12/13/17 20:56	12/15/17 10:35	83-32-9	
Acenaphthylene	ND	ug/kg	451	107	1	12/13/17 20:56	12/15/17 10:35	208-96-8	
Aniline	ND	ug/kg	451	122	1	12/13/17 20:56	12/15/17 10:35	62-53-3	
Anthracene	ND	ug/kg	451	101	1	12/13/17 20:56	12/15/17 10:35	120-12-7	
Benzo(a)anthracene	ND	ug/kg	451	83.3	1	12/13/17 20:56	12/15/17 10:35	56-55-3	
Benzo(a)pyrene	ND	ug/kg	451	86.1	1	12/13/17 20:56	12/15/17 10:35	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	451	77.9	1	12/13/17 20:56	12/15/17 10:35	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	451	115	1	12/13/17 20:56	12/15/17 10:35	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	451	88.8	1	12/13/17 20:56	12/15/17 10:35	207-08-9	
Benzoic Acid	ND	ug/kg	2250	82.0	1	12/13/17 20:56	12/15/17 10:35	65-85-0	
Benzyl alcohol	ND	ug/kg	902	90.2	1	12/13/17 20:56	12/15/17 10:35	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	451	82.0	1	12/13/17 20:56	12/15/17 10:35	101-55-3	
Butylbenzylphthalate	ND	ug/kg	451	95.6	1	12/13/17 20:56	12/15/17 10:35	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	902	92.9	1	12/13/17 20:56	12/15/17 10:35	59-50-7	
4-Chloroaniline	ND	ug/kg	2250	126	1	12/13/17 20:56	12/15/17 10:35	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	451	105	1	12/13/17 20:56	12/15/17 10:35	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	451	115	1	12/13/17 20:56	12/15/17 10:35	111-44-4	
2-Chloronaphthalene	ND	ug/kg	451	88.8	1	12/13/17 20:56	12/15/17 10:35	91-58-7	
2-Chlorophenol	ND	ug/kg	451	123	1	12/13/17 20:56	12/15/17 10:35	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	451	92.9	1	12/13/17 20:56	12/15/17 10:35	7005-72-3	
Chrysene	ND	ug/kg	451	60.1	1	12/13/17 20:56	12/15/17 10:35	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	451	95.6	1	12/13/17 20:56	12/15/17 10:35	53-70-3	
Dibenzofuran	ND	ug/kg	451	73.8	1	12/13/17 20:56	12/15/17 10:35	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	451	120	1	12/13/17 20:56	12/15/17 10:35	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	451	102	1	12/13/17 20:56	12/15/17 10:35	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	451	127	1	12/13/17 20:56	12/15/17 10:35	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	2250	98.3	1	12/13/17 20:56	12/15/17 10:35	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	451	98.3	1	12/13/17 20:56	12/15/17 10:35	120-83-2	
Diethylphthalate	ND	ug/kg	451	69.7	1	12/13/17 20:56	12/15/17 10:35	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	451	178	1	12/13/17 20:56	12/15/17 10:35	105-67-9	
Dimethylphthalate	ND	ug/kg	451	91.5	1	12/13/17 20:56	12/15/17 10:35	131-11-3	
Di-n-butylphthalate	ND	ug/kg	451	73.8	1	12/13/17 20:56	12/15/17 10:35	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	902	90.2	1	12/13/17 20:56	12/15/17 10:35	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	2250	73.8	1	12/13/17 20:56	12/15/17 10:35	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	451	84.7	1	12/13/17 20:56	12/15/17 10:35	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	451	94.3	1	12/13/17 20:56	12/15/17 10:35	606-20-2	
Di-n-octylphthalate	ND	ug/kg	451	94.3	1	12/13/17 20:56	12/15/17 10:35	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	451	123	1	12/13/17 20:56	12/15/17 10:35	117-81-7	
Fluoranthene	ND	ug/kg	451	65.6	1	12/13/17 20:56	12/15/17 10:35	206-44-0	
Fluorene	ND	ug/kg	451	92.9	1	12/13/17 20:56	12/15/17 10:35	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	451	77.9	1	12/13/17 20:56	12/15/17 10:35	87-68-3	
Hexachlorobenzene	ND	ug/kg	451	57.4	1	12/13/17 20:56	12/15/17 10:35	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	451	83.3	1	12/13/17 20:56	12/15/17 10:35	77-47-4	
Hexachloroethane	ND	ug/kg	451	119	1	12/13/17 20:56	12/15/17 10:35	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	451	92.9	1	12/13/17 20:56	12/15/17 10:35	193-39-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z3-3 **Lab ID: 92366828013** Collected: 12/12/17 10:50 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Isophorone	ND	ug/kg	451	101	1	12/13/17 20:56	12/15/17 10:35	78-59-1	
1-Methylnaphthalene	**4440**	ug/kg	451	117	1	12/13/17 20:56	12/15/17 10:35	90-12-0	
2-Methylnaphthalene	**7900**	ug/kg	902	194	2	12/13/17 20:56	12/15/17 11:34	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	451	137	1	12/13/17 20:56	12/15/17 10:35	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	451	178	1	12/13/17 20:56	12/15/17 10:35	15831-10-4	
Naphthalene	**1740**	ug/kg	451	111	1	12/13/17 20:56	12/15/17 10:35	91-20-3	
2-Nitroaniline	ND	ug/kg	2250	139	1	12/13/17 20:56	12/15/17 10:35	88-74-4	
3-Nitroaniline	ND	ug/kg	2250	123	1	12/13/17 20:56	12/15/17 10:35	99-09-2	
4-Nitroaniline	ND	ug/kg	902	127	1	12/13/17 20:56	12/15/17 10:35	100-01-6	
Nitrobenzene	ND	ug/kg	451	123	1	12/13/17 20:56	12/15/17 10:35	98-95-3	
2-Nitrophenol	ND	ug/kg	451	109	1	12/13/17 20:56	12/15/17 10:35	88-75-5	
4-Nitrophenol	ND	ug/kg	2250	80.6	1	12/13/17 20:56	12/15/17 10:35	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	451	146	1	12/13/17 20:56	12/15/17 10:35	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	451	86.1	1	12/13/17 20:56	12/15/17 10:35	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	451	134	1	12/13/17 20:56	12/15/17 10:35	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/kg	451	120	1	12/13/17 20:56	12/15/17 10:35	108-60-1	
Pentachlorophenol	ND	ug/kg	2250	82.0	1	12/13/17 20:56	12/15/17 10:35	87-86-5	
Phenanthrene	**1020**	ug/kg	451	75.1	1	12/13/17 20:56	12/15/17 10:35	85-01-8	
Phenol	ND	ug/kg	451	135	1	12/13/17 20:56	12/15/17 10:35	108-95-2	
Pyrene	**77.9J**	ug/kg	451	76.5	1	12/13/17 20:56	12/15/17 10:35	129-00-0	
Pyridine	ND	ug/kg	451	99.7	1	12/13/17 20:56	12/15/17 10:35	110-86-1	
1,2,4-Trichlorobenzene	ND	ug/kg	451	87.4	1	12/13/17 20:56	12/15/17 10:35	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	451	139	1	12/13/17 20:56	12/15/17 10:35	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	451	99.7	1	12/13/17 20:56	12/15/17 10:35	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	68	%	23-110		1	12/13/17 20:56	12/15/17 10:35	4165-60-0	
2-Fluorobiphenyl (S)	51	%	30-110		1	12/13/17 20:56	12/15/17 10:35	321-60-8	
Terphenyl-d14 (S)	60	%	28-110		1	12/13/17 20:56	12/15/17 10:35	1718-51-0	
Phenol-d6 (S)	63	%	22-110		1	12/13/17 20:56	12/15/17 10:35	13127-88-3	
2-Fluorophenol (S)	63	%	13-110		1	12/13/17 20:56	12/15/17 10:35	367-12-4	
2,4,6-Tribromophenol (S)	66	%	27-110		1	12/13/17 20:56	12/15/17 10:35	118-79-6	
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Acetone	ND	ug/kg	2580	258	25		12/14/17 19:33	67-64-1	
Benzene	**78.6J**	ug/kg	129	41.3	25		12/14/17 19:33	71-43-2	
Bromobenzene	ND	ug/kg	129	51.6	25		12/14/17 19:33	108-86-1	
Bromochloromethane	ND	ug/kg	129	43.9	25		12/14/17 19:33	74-97-5	
Bromodichloromethane	ND	ug/kg	129	49.1	25		12/14/17 19:33	75-27-4	
Bromoform	ND	ug/kg	129	59.4	25		12/14/17 19:33	75-25-2	
Bromomethane	ND	ug/kg	258	64.6	25		12/14/17 19:33	74-83-9	
2-Butanone (MEK)	ND	ug/kg	2580	74.9	25		12/14/17 19:33	78-93-3	
n-Butylbenzene	**727**	ug/kg	129	46.5	25		12/14/17 19:33	104-51-8	
sec-Butylbenzene	**589**	ug/kg	129	41.3	25		12/14/17 19:33	135-98-8	
tert-Butylbenzene	ND	ug/kg	129	51.6	25		12/14/17 19:33	98-06-6	
Carbon tetrachloride	ND	ug/kg	129	67.1	25		12/14/17 19:33	56-23-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z3-3 **Lab ID: 92366828013** Collected: 12/12/17 10:50 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Chlorobenzene	ND	ug/kg	129	49.1	25		12/14/17 19:33	108-90-7	
Chloroethane	ND	ug/kg	258	62.0	25		12/14/17 19:33	75-00-3	
Chloroform	ND	ug/kg	129	41.3	25		12/14/17 19:33	67-66-3	
Chloromethane	ND	ug/kg	258	62.0	25		12/14/17 19:33	74-87-3	
2-Chlorotoluene	ND	ug/kg	129	43.9	25		12/14/17 19:33	95-49-8	
4-Chlorotoluene	ND	ug/kg	129	46.5	25		12/14/17 19:33	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	129	93.0	25		12/14/17 19:33	96-12-8	
Dibromochloromethane	ND	ug/kg	129	46.5	25		12/14/17 19:33	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	129	46.5	25		12/14/17 19:33	106-93-4	
Dibromomethane	ND	ug/kg	129	64.6	25		12/14/17 19:33	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	129	49.1	25		12/14/17 19:33	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	129	51.6	25		12/14/17 19:33	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	129	43.9	25		12/14/17 19:33	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	258	93.0	25		12/14/17 19:33	75-71-8	
1,1-Dichloroethane	ND	ug/kg	129	38.7	25		12/14/17 19:33	75-34-3	
1,2-Dichloroethane	ND	ug/kg	129	56.8	25		12/14/17 19:33	107-06-2	
1,1-Dichloroethene	ND	ug/kg	129	46.5	25		12/14/17 19:33	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	129	36.2	25		12/14/17 19:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	129	49.1	25		12/14/17 19:33	156-60-5	
1,2-Dichloropropane	ND	ug/kg	129	43.9	25		12/14/17 19:33	78-87-5	
1,3-Dichloropropane	ND	ug/kg	129	49.1	25		12/14/17 19:33	142-28-9	
2,2-Dichloropropane	ND	ug/kg	129	43.9	25		12/14/17 19:33	594-20-7	
1,1-Dichloropropene	ND	ug/kg	129	38.7	25		12/14/17 19:33	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	129	46.5	25		12/14/17 19:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	129	38.7	25		12/14/17 19:33	10061-02-6	
Diisopropyl ether	ND	ug/kg	129	43.9	25		12/14/17 19:33	108-20-3	
Ethylbenzene	**696**	ug/kg	129	46.5	25		12/14/17 19:33	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	129	51.6	25		12/14/17 19:33	87-68-3	
2-Hexanone	ND	ug/kg	1290	101	25		12/14/17 19:33	591-78-6	
Isopropylbenzene (Cumene)	**397**	ug/kg	129	49.1	25		12/14/17 19:33	98-82-8	
p-Isopropyltoluene	**1200**	ug/kg	129	43.9	25		12/14/17 19:33	99-87-6	
Methylene Chloride	ND	ug/kg	516	77.5	25		12/14/17 19:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	1290	95.5	25		12/14/17 19:33	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	129	38.7	25		12/14/17 19:33	1634-04-4	
Naphthalene	**4340**	ug/kg	129	31.0	25		12/14/17 19:33	91-20-3	
n-Propylbenzene	**811**	ug/kg	129	43.9	25		12/14/17 19:33	103-65-1	
Styrene	ND	ug/kg	129	46.5	25		12/14/17 19:33	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	129	54.2	25		12/14/17 19:33	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	129	49.1	25		12/14/17 19:33	79-34-5	
Tetrachloroethene	ND	ug/kg	129	43.9	25		12/14/17 19:33	127-18-4	
Toluene	**258**	ug/kg	129	46.5	25		12/14/17 19:33	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	129	56.8	25		12/14/17 19:33	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	129	41.3	25		12/14/17 19:33	120-82-1	
1,1,1-Trichloroethane	**116J**	ug/kg	129	46.5	25		12/14/17 19:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	129	54.2	25		12/14/17 19:33	79-00-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Sample: IDW-Z3-3 **Lab ID: 92366828013** Collected: 12/12/17 10:50 Received: 12/13/17 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Trichloroethene	**9210**	ug/kg	1030	434	200		12/15/17 15:54	79-01-6	
Trichlorofluoromethane	ND	ug/kg	129	56.8	25		12/14/17 19:33	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	129	41.3	25		12/14/17 19:33	96-18-4	
1,2,4-Trimethylbenzene	**4250**	ug/kg	129	51.6	25		12/14/17 19:33	95-63-6	
1,3,5-Trimethylbenzene	**1550**	ug/kg	129	46.5	25		12/14/17 19:33	108-67-8	
Vinyl acetate	ND	ug/kg	1290	227	25		12/14/17 19:33	108-05-4	
Vinyl chloride	ND	ug/kg	258	46.5	25		12/14/17 19:33	75-01-4	
Xylene (Total)	**3600**	ug/kg	258	93.0	25		12/14/17 19:33	1330-20-7	
m&p-Xylene	**2380**	ug/kg	258	93.0	25		12/14/17 19:33	179601-23-1	
o-Xylene	**1210**	ug/kg	129	49.1	25		12/14/17 19:33	95-47-6	
Surrogates									
Toluene-d8 (S)	103	%	70-130		25		12/14/17 19:33	2037-26-5	
4-Bromofluorobenzene (S)	124	%	70-130		25		12/14/17 19:33	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	70-132		25		12/14/17 19:33	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**26.5**	%	0.10	0.10	1		12/14/17 11:36		

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: CTS ASHEVILLE
Pace Project No.: 92366828

QC Batch: 392059 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury TCLP
Associated Lab Samples: 92366828001, 92366828002, 92366828003, 92366828004, 92366828005, 92366828006

METHOD BLANK: 2175343 Matrix: Water
Associated Lab Samples: 92366828001, 92366828002, 92366828003, 92366828004, 92366828005, 92366828006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.000090	12/26/17 13:00	

LABORATORY CONTROL SAMPLE: 2175344

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0021	85	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2175345 2175346

Parameter	Units	92366828002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	.0025	.0025	0.0020	0.0021	79	82	75-125	4	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: CTS ASHEVILLE
Pace Project No.: 92366828

QC Batch: 390896 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 92366828009

METHOD BLANK: 2168755 Matrix: Solid
Associated Lab Samples: 92366828009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/kg	ND	1.0	0.50	12/16/17 06:26	
Barium	mg/kg	ND	0.50	0.25	12/16/17 06:26	
Cadmium	mg/kg	ND	0.10	0.050	12/16/17 06:26	
Chromium	mg/kg	ND	0.50	0.25	12/16/17 06:26	
Lead	mg/kg	ND	0.50	0.25	12/16/17 06:26	
Selenium	mg/kg	ND	1.0	0.50	12/16/17 06:26	
Silver	mg/kg	ND	0.50	0.25	12/16/17 06:26	

LABORATORY CONTROL SAMPLE: 2168756

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	48.9	98	80-120	
Barium	mg/kg	50	46.0	92	80-120	
Cadmium	mg/kg	50	53.3	107	80-120	
Chromium	mg/kg	50	51.4	103	80-120	
Lead	mg/kg	50	47.2	94	80-120	
Selenium	mg/kg	50	47.5	95	80-120	
Silver	mg/kg	25	24.7	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2168757 2168758

Parameter	Units	92366828001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	ND			35.1	36.2				3	20	
Barium	mg/kg	0.56 mg/L			99.1	116				16	20	M1
Cadmium	mg/kg	ND			42.1	44.2				5	20	
Chromium	mg/kg	ND			59.3	65.5				10	20	
Lead	mg/kg	ND			38.3	40.3				5	20	
Selenium	mg/kg	0.034J mg/L			33.1	35.5				7	20	
Silver	mg/kg	ND			20.9	22.2				6	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: CTS ASHEVILLE
Pace Project No.: 92366828

QC Batch: 392058 Analysis Method: EPA 6010
QC Batch Method: EPA 3010A Analysis Description: 6010 MET TCLP
Associated Lab Samples: 92366828001, 92366828002, 92366828003, 92366828004, 92366828005, 92366828006

METHOD BLANK: 2175339 Matrix: Water
Associated Lab Samples: 92366828001, 92366828002, 92366828003, 92366828004, 92366828005, 92366828006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.050	0.014	12/24/17 17:20	
Barium	mg/L	ND	0.25	0.0050	12/24/17 17:20	
Cadmium	mg/L	ND	0.0050	0.0025	12/24/17 17:20	
Chromium	mg/L	ND	0.050	0.0020	12/24/17 17:20	
Lead	mg/L	ND	0.025	0.020	12/24/17 17:20	
Selenium	mg/L	ND	0.10	0.019	12/26/17 00:32	
Silver	mg/L	ND	0.025	0.00050	12/24/17 17:20	

LABORATORY CONTROL SAMPLE: 2175340

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	2.5	2.5	99	80-120	
Barium	mg/L	2.5	2.2	87	80-120	
Cadmium	mg/L	2.5	2.2	90	80-120	
Chromium	mg/L	2.5	2.3	91	80-120	
Lead	mg/L	2.5	2.1	84	80-120	
Selenium	mg/L	2.5	2.5	101	80-120	
Silver	mg/L	1.2	1.2	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2175341 2175342

Parameter	Units	92366828001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	ND	2.5	2.5	2.4	2.4	98	96	75-125	1	20	
Barium	mg/L	0.56	2.5	2.5	2.7	2.7	86	84	75-125	2	20	
Cadmium	mg/L	ND	2.5	2.5	2.1	2.1	86	85	75-125	1	20	
Chromium	mg/L	ND	2.5	2.5	2.2	2.2	88	87	75-125	1	20	
Lead	mg/L	ND	2.5	2.5	2.1	2.0	82	82	75-125	1	20	
Selenium	mg/L	0.034J	2.5	2.5	2.5	2.5	99	98	75-125	1	20	
Silver	mg/L	ND	1.2	1.2	1.2	1.2	96	95	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(704)875-9092

QUALITY CONTROL DATA

Project: CTS ASHEVILLE
Pace Project No.: 92366828

QC Batch: 390935 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5035A Volatile Organics
Associated Lab Samples: 92366828001, 92366828002, 92366828003, 92366828004, 92366828006, 92366828007, 92366828008, 92366828009, 92366828010, 92366828011, 92366828012, 92366828013

METHOD BLANK: 2169077 Matrix: Solid
Associated Lab Samples: 92366828001, 92366828002, 92366828003, 92366828004, 92366828006, 92366828007, 92366828008, 92366828009, 92366828010, 92366828011, 92366828012, 92366828013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	5.6	2.4	12/14/17 13:54	
1,1,1-Trichloroethane	ug/kg	ND	5.6	2.0	12/14/17 13:54	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.6	2.1	12/14/17 13:54	
1,1,2-Trichloroethane	ug/kg	ND	5.6	2.4	12/14/17 13:54	
1,1-Dichloroethane	ug/kg	ND	5.6	1.7	12/14/17 13:54	
1,1-Dichloroethene	ug/kg	ND	5.6	2.0	12/14/17 13:54	
1,1-Dichloropropene	ug/kg	ND	5.6	1.7	12/14/17 13:54	
1,2,3-Trichlorobenzene	ug/kg	ND	5.6	2.5	12/14/17 13:54	
1,2,3-Trichloropropane	ug/kg	ND	5.6	1.8	12/14/17 13:54	
1,2,4-Trichlorobenzene	ug/kg	ND	5.6	1.8	12/14/17 13:54	
1,2,4-Trimethylbenzene	ug/kg	ND	5.6	2.2	12/14/17 13:54	
1,2-Dibromo-3-chloropropane	ug/kg	ND	5.6	4.0	12/14/17 13:54	
1,2-Dibromoethane (EDB)	ug/kg	ND	5.6	2.0	12/14/17 13:54	
1,2-Dichlorobenzene	ug/kg	ND	5.6	2.1	12/14/17 13:54	
1,2-Dichloroethane	ug/kg	ND	5.6	2.5	12/14/17 13:54	
1,2-Dichloropropane	ug/kg	ND	5.6	1.9	12/14/17 13:54	
1,3,5-Trimethylbenzene	ug/kg	ND	5.6	2.0	12/14/17 13:54	
1,3-Dichlorobenzene	ug/kg	ND	5.6	2.2	12/14/17 13:54	
1,3-Dichloropropane	ug/kg	ND	5.6	2.1	12/14/17 13:54	
1,4-Dichlorobenzene	ug/kg	ND	5.6	1.9	12/14/17 13:54	
2,2-Dichloropropane	ug/kg	ND	5.6	1.9	12/14/17 13:54	
2-Butanone (MEK)	ug/kg	ND	112	3.3	12/14/17 13:54	
2-Chlorotoluene	ug/kg	ND	5.6	1.9	12/14/17 13:54	
2-Hexanone	ug/kg	ND	56.1	4.4	12/14/17 13:54	
4-Chlorotoluene	ug/kg	ND	5.6	2.0	12/14/17 13:54	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	56.1	4.1	12/14/17 13:54	
Acetone	ug/kg	ND	112	11.2	12/14/17 13:54	
Benzene	ug/kg	ND	5.6	1.8	12/14/17 13:54	
Bromobenzene	ug/kg	ND	5.6	2.2	12/14/17 13:54	
Bromochloromethane	ug/kg	ND	5.6	1.9	12/14/17 13:54	
Bromodichloromethane	ug/kg	ND	5.6	2.1	12/14/17 13:54	
Bromoform	ug/kg	ND	5.6	2.6	12/14/17 13:54	
Bromomethane	ug/kg	ND	11.2	2.8	12/14/17 13:54	
Carbon tetrachloride	ug/kg	ND	5.6	2.9	12/14/17 13:54	
Chlorobenzene	ug/kg	ND	5.6	2.1	12/14/17 13:54	
Chloroethane	ug/kg	ND	11.2	2.7	12/14/17 13:54	
Chloroform	ug/kg	ND	5.6	1.8	12/14/17 13:54	
Chloromethane	ug/kg	ND	11.2	2.7	12/14/17 13:54	
cis-1,2-Dichloroethene	ug/kg	ND	5.6	1.6	12/14/17 13:54	
cis-1,3-Dichloropropene	ug/kg	ND	5.6	2.0	12/14/17 13:54	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: CTS ASHEVILLE
Pace Project No.: 92366828

METHOD BLANK: 2169077 Matrix: Solid

Associated Lab Samples: 92366828001, 92366828002, 92366828003, 92366828004, 92366828006, 92366828007, 92366828008, 92366828009, 92366828010, 92366828011, 92366828012, 92366828013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dibromochloromethane	ug/kg	ND	5.6	2.0	12/14/17 13:54	
Dibromomethane	ug/kg	ND	5.6	2.8	12/14/17 13:54	
Dichlorodifluoromethane	ug/kg	ND	11.2	4.0	12/14/17 13:54	
Diisopropyl ether	ug/kg	ND	5.6	1.9	12/14/17 13:54	
Ethylbenzene	ug/kg	ND	5.6	2.0	12/14/17 13:54	
Hexachloro-1,3-butadiene	ug/kg	ND	5.6	2.2	12/14/17 13:54	
Isopropylbenzene (Cumene)	ug/kg	ND	5.6	2.1	12/14/17 13:54	
m&p-Xylene	ug/kg	ND	11.2	4.0	12/14/17 13:54	
Methyl-tert-butyl ether	ug/kg	ND	5.6	1.7	12/14/17 13:54	
Methylene Chloride	ug/kg	ND	22.4	3.4	12/14/17 13:54	
n-Butylbenzene	ug/kg	ND	5.6	2.0	12/14/17 13:54	
n-Propylbenzene	ug/kg	ND	5.6	1.9	12/14/17 13:54	
Naphthalene	ug/kg	ND	5.6	1.3	12/14/17 13:54	
o-Xylene	ug/kg	ND	5.6	2.1	12/14/17 13:54	
p-Isopropyltoluene	ug/kg	ND	5.6	1.9	12/14/17 13:54	
sec-Butylbenzene	ug/kg	ND	5.6	1.8	12/14/17 13:54	
Styrene	ug/kg	ND	5.6	2.0	12/14/17 13:54	
tert-Butylbenzene	ug/kg	ND	5.6	2.2	12/14/17 13:54	
Tetrachloroethene	ug/kg	ND	5.6	1.9	12/14/17 13:54	
Toluene	ug/kg	ND	5.6	2.0	12/14/17 13:54	
trans-1,2-Dichloroethene	ug/kg	ND	5.6	2.1	12/14/17 13:54	
trans-1,3-Dichloropropene	ug/kg	ND	5.6	1.7	12/14/17 13:54	
Trichloroethene	ug/kg	ND	5.6	2.4	12/14/17 13:54	
Trichlorofluoromethane	ug/kg	ND	5.6	2.5	12/14/17 13:54	
Vinyl acetate	ug/kg	ND	56.1	9.9	12/14/17 13:54	
Vinyl chloride	ug/kg	ND	11.2	2.0	12/14/17 13:54	
Xylene (Total)	ug/kg	ND	11.2	4.0	12/14/17 13:54	
1,2-Dichloroethane-d4 (S)	%	113	70-132		12/14/17 13:54	
4-Bromofluorobenzene (S)	%	101	70-130		12/14/17 13:54	
Toluene-d8 (S)	%	100	70-130		12/14/17 13:54	

LABORATORY CONTROL SAMPLE: 2169078

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	58.4	55.0	94	74-137	
1,1,1-Trichloroethane	ug/kg	58.4	57.9	99	67-140	
1,1,2,2-Tetrachloroethane	ug/kg	58.4	52.8	90	72-141	
1,1,2-Trichloroethane	ug/kg	58.4	55.6	95	78-138	
1,1-Dichloroethane	ug/kg	58.4	59.7	102	69-134	
1,1-Dichloroethene	ug/kg	58.4	62.2	106	67-138	
1,1-Dichloropropene	ug/kg	58.4	55.2	95	69-139	
1,2,3-Trichlorobenzene	ug/kg	58.4	51.7	89	70-146	
1,2,3-Trichloropropane	ug/kg	58.4	59.1	101	69-144	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
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(704)875-9092

QUALITY CONTROL DATA

Project: CTS ASHEVILLE
Pace Project No.: 92366828

LABORATORY CONTROL SAMPLE: 2169078

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	58.4	52.4	90	68-148	
1,2,4-Trimethylbenzene	ug/kg	58.4	56.7	97	74-137	
1,2-Dibromo-3-chloropropane	ug/kg	58.4	52.4	90	65-140	
1,2-Dibromoethane (EDB)	ug/kg	58.4	56.3	96	77-135	
1,2-Dichlorobenzene	ug/kg	58.4	54.1	93	77-141	
1,2-Dichloroethane	ug/kg	58.4	60.4	103	65-137	
1,2-Dichloropropane	ug/kg	58.4	57.4	98	72-136	
1,3,5-Trimethylbenzene	ug/kg	58.4	56.7	97	76-133	
1,3-Dichlorobenzene	ug/kg	58.4	54.8	94	74-138	
1,3-Dichloropropane	ug/kg	58.4	58.4	100	71-139	
1,4-Dichlorobenzene	ug/kg	58.4	54.4	93	76-138	
2,2-Dichloropropane	ug/kg	58.4	57.5	99	68-137	
2-Butanone (MEK)	ug/kg	117	114J	97	58-147	
2-Chlorotoluene	ug/kg	58.4	56.7	97	73-139	
2-Hexanone	ug/kg	117	118	101	62-145	
4-Chlorotoluene	ug/kg	58.4	56.8	97	76-141	
4-Methyl-2-pentanone (MIBK)	ug/kg	117	120	103	64-149	
Acetone	ug/kg	117	128	109	53-153	
Benzene	ug/kg	58.4	54.3	93	73-135	
Bromobenzene	ug/kg	58.4	55.6	95	75-133	
Bromochloromethane	ug/kg	58.4	52.4	90	73-134	
Bromodichloromethane	ug/kg	58.4	58.0	99	71-135	
Bromoform	ug/kg	58.4	54.7	94	66-141	
Bromomethane	ug/kg	58.4	63.8	109	53-160	
Carbon tetrachloride	ug/kg	58.4	59.5	102	60-145	
Chlorobenzene	ug/kg	58.4	55.9	96	78-130	
Chloroethane	ug/kg	58.4	67.4	115	64-149	
Chloroform	ug/kg	58.4	60.3	103	70-134	
Chloromethane	ug/kg	58.4	66.7	114	52-150	
cis-1,2-Dichloroethene	ug/kg	58.4	62.2	106	70-133	
cis-1,3-Dichloropropene	ug/kg	58.4	59.0	101	68-134	
Dibromochloromethane	ug/kg	58.4	56.2	96	71-138	
Dibromomethane	ug/kg	58.4	58.8	101	74-130	
Dichlorodifluoromethane	ug/kg	58.4	59.5	102	40-160	
Diisopropyl ether	ug/kg	58.4	59.1	101	69-141	
Ethylbenzene	ug/kg	58.4	56.8	97	75-133	
Hexachloro-1,3-butadiene	ug/kg	58.4	52.9	91	68-143	
Isopropylbenzene (Cumene)	ug/kg	58.4	57.4	98	76-143	
m&p-Xylene	ug/kg	117	115	98	75-136	
Methyl-tert-butyl ether	ug/kg	58.4	54.7	94	68-144	
Methylene Chloride	ug/kg	58.4	63.6	109	45-154	
n-Butylbenzene	ug/kg	58.4	56.6	97	72-137	
n-Propylbenzene	ug/kg	58.4	58.0	99	76-136	
Naphthalene	ug/kg	58.4	53.7	92	68-151	
o-Xylene	ug/kg	58.4	56.4	97	76-141	
p-Isopropyltoluene	ug/kg	58.4	56.5	97	76-140	
sec-Butylbenzene	ug/kg	58.4	56.9	97	79-139	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: CTS ASHEVILLE
Pace Project No.: 92366828

LABORATORY CONTROL SAMPLE: 2169078

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Styrene	ug/kg	58.4	55.8	95	79-137	
tert-Butylbenzene	ug/kg	58.4	50.9	87	74-143	
Tetrachloroethene	ug/kg	58.4	48.9	84	71-138	
Toluene	ug/kg	58.4	56.6	97	74-131	
trans-1,2-Dichloroethene	ug/kg	58.4	61.5	105	67-135	
trans-1,3-Dichloropropene	ug/kg	58.4	58.3	100	65-146	
Trichloroethene	ug/kg	58.4	57.8	99	67-135	
Trichlorofluoromethane	ug/kg	58.4	58.2	100	59-144	
Vinyl acetate	ug/kg	117	89.4	77	40-160	
Vinyl chloride	ug/kg	58.4	64.1	110	56-141	
Xylene (Total)	ug/kg	175	171	98	76-137	
1,2-Dichloroethane-d4 (S)	%			108	70-132	
4-Bromofluorobenzene (S)	%			102	70-130	
Toluene-d8 (S)	%			102	70-130	

MATRIX SPIKE SAMPLE: 2169715

Parameter	Units	92367006002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	16.7	16.5	98	70-130	
1,1,1-Trichloroethane	ug/kg	ND	16.7	17.4	104	70-130	
1,1,2,2-Tetrachloroethane	ug/kg	ND	16.7	15.9	94	70-130	
1,1,2-Trichloroethane	ug/kg	ND	16.7	15.9	95	70-130	
1,1-Dichloroethane	ug/kg	ND	16.7	17.6	105	70-130	
1,1-Dichloroethene	ug/kg	ND	16.7	18.5	110	49-180	
1,1-Dichloropropene	ug/kg	ND	16.7	16.7	99	70-130	
1,2,3-Trichlorobenzene	ug/kg	ND	16.7	14.7	88	70-130	
1,2,3-Trichloropropane	ug/kg	ND	16.7	17.6	105	70-130	
1,2,4-Trichlorobenzene	ug/kg	ND	16.7	15.3	91	70-130	
1,2,4-Trimethylbenzene	ug/kg	ND	16.7	18.0	107	70-130	
1,2-Dibromo-3-chloropropane	ug/kg	ND	16.7	15.2	91	70-130	
1,2-Dibromoethane (EDB)	ug/kg	ND	16.7	16.1	96	70-130	
1,2-Dichlorobenzene	ug/kg	ND	16.7	16.1	96	70-130	
1,2-Dichloroethane	ug/kg	ND	16.7	17.7	106	70-130	
1,2-Dichloropropane	ug/kg	ND	16.7	16.8	100	70-130	
1,3,5-Trimethylbenzene	ug/kg	ND	16.7	17.9	107	70-130	
1,3-Dichlorobenzene	ug/kg	ND	16.7	16.4	98	70-130	
1,3-Dichloropropane	ug/kg	ND	16.7	17.0	101	70-130	
1,4-Dichlorobenzene	ug/kg	ND	16.7	16.5	98	70-130	
2,2-Dichloropropane	ug/kg	ND	16.7	17.3	103	70-130	
2-Butanone (MEK)	ug/kg	ND	33.6	33.3J	89	70-130	
2-Chlorotoluene	ug/kg	ND	16.7	18.0	107	70-130	
2-Hexanone	ug/kg	ND	33.6	33.1J	98	70-130	
4-Chlorotoluene	ug/kg	ND	16.7	17.8	106	70-130	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	33.6	33.2J	99	70-130	
Acetone	ug/kg	137	33.6	105	-95	70-130	M1

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: CTS ASHEVILLE
Pace Project No.: 92366828

MATRIX SPIKE SAMPLE: 2169715

Parameter	Units	92367006002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Benzene	ug/kg	ND	16.7	16.2	97	50-166	
Bromobenzene	ug/kg	ND	16.7	16.9	101	70-130	
Bromochloromethane	ug/kg	ND	16.7	16.4	97	70-130	
Bromodichloromethane	ug/kg	ND	16.7	16.4	98	70-130	
Bromoform	ug/kg	ND	16.7	15.1	90	70-130	
Bromomethane	ug/kg	ND	16.7	18.2	108	70-130	
Carbon tetrachloride	ug/kg	ND	16.7	17.1	102	70-130	
Chlorobenzene	ug/kg	ND	16.7	16.8	100	43-169	
Chloroethane	ug/kg	ND	16.7	20.2	120	70-130	
Chloroform	ug/kg	ND	16.7	17.7	105	70-130	
Chloromethane	ug/kg	ND	16.7	18.9	113	70-130	
cis-1,2-Dichloroethene	ug/kg	ND	16.7	18.0	107	70-130	
cis-1,3-Dichloropropene	ug/kg	ND	16.7	16.4	98	70-130	
Dibromochloromethane	ug/kg	ND	16.7	15.7	94	70-130	
Dibromomethane	ug/kg	ND	16.7	15.6	93	70-130	
Dichlorodifluoromethane	ug/kg	ND	16.7	17.2	102	70-130	
Diisopropyl ether	ug/kg	ND	16.7	17.6	105	70-130	
Ethylbenzene	ug/kg	ND	16.7	17.6	105	70-130	
Hexachloro-1,3-butadiene	ug/kg	ND	16.7	16.9	101	70-130	
Isopropylbenzene (Cumene)	ug/kg	ND	16.7	17.6	105	70-130	
m&p-Xylene	ug/kg	ND	33.6	35.3	105	70-130	
Methyl-tert-butyl ether	ug/kg	ND	16.7	16.0	95	70-130	
Methylene Chloride	ug/kg	ND	16.7	17.4	103	70-130	
n-Butylbenzene	ug/kg	ND	16.7	18.0	107	70-130	
n-Propylbenzene	ug/kg	ND	16.7	18.5	110	70-130	
Naphthalene	ug/kg	ND	16.7	16.5	98	70-130	
o-Xylene	ug/kg	ND	16.7	17.3	103	70-130	
p-Isopropyltoluene	ug/kg	ND	16.7	17.9	107	70-130	
sec-Butylbenzene	ug/kg	ND	16.7	18.1	108	70-130	
Styrene	ug/kg	ND	16.7	16.3	97	70-130	
tert-Butylbenzene	ug/kg	ND	16.7	16.4	98	70-130	
Tetrachloroethene	ug/kg	ND	16.7	15.1	90	70-130	
Toluene	ug/kg	ND	16.7	16.7	99	52-163	
trans-1,2-Dichloroethene	ug/kg	ND	16.7	18.2	108	70-130	
trans-1,3-Dichloropropene	ug/kg	ND	16.7	15.7	93	70-130	
Trichloroethene	ug/kg	ND	16.7	16.2	96	49-167	
Trichlorofluoromethane	ug/kg	ND	16.7	17.8	106	70-130	
Vinyl acetate	ug/kg	ND	33.6	23.4J	70	70-130	
Vinyl chloride	ug/kg	ND	16.7	18.9	113	70-130	
1,2-Dichloroethane-d4 (S)	%				107	70-132	
4-Bromofluorobenzene (S)	%				104	70-130	
Toluene-d8 (S)	%				101	70-130	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: CTS ASHEVILLE
Pace Project No.: 92366828

SAMPLE DUPLICATE: 2169714

Parameter	Units	92366828002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	ND		30	
1,1,1-Trichloroethane	ug/kg	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/kg	ND	ND		30	
1,1,2-Trichloroethane	ug/kg	ND	ND		30	
1,1-Dichloroethane	ug/kg	ND	ND		30	
1,1-Dichloroethene	ug/kg	ND	ND		30	
1,1-Dichloropropene	ug/kg	ND	ND		30	
1,2,3-Trichlorobenzene	ug/kg	ND	ND		30	
1,2,3-Trichloropropane	ug/kg	ND	ND		30	
1,2,4-Trichlorobenzene	ug/kg	ND	ND		30	
1,2,4-Trimethylbenzene	ug/kg	ND	ND		30	
1,2-Dibromo-3-chloropropane	ug/kg	ND	ND		30	
1,2-Dibromoethane (EDB)	ug/kg	ND	ND		30	
1,2-Dichlorobenzene	ug/kg	ND	ND		30	
1,2-Dichloroethane	ug/kg	ND	ND		30	
1,2-Dichloropropane	ug/kg	ND	ND		30	
1,3,5-Trimethylbenzene	ug/kg	ND	ND		30	
1,3-Dichlorobenzene	ug/kg	ND	ND		30	
1,3-Dichloropropane	ug/kg	ND	ND		30	
1,4-Dichlorobenzene	ug/kg	ND	ND		30	
2,2-Dichloropropane	ug/kg	ND	ND		30	
2-Butanone (MEK)	ug/kg	ND	ND		30	
2-Chlorotoluene	ug/kg	ND	ND		30	
2-Hexanone	ug/kg	ND	ND		30	
4-Chlorotoluene	ug/kg	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	ND		30	
Acetone	ug/kg	ND	ND		30	
Benzene	ug/kg	ND	ND		30	
Bromobenzene	ug/kg	ND	ND		30	
Bromochloromethane	ug/kg	ND	ND		30	
Bromodichloromethane	ug/kg	ND	ND		30	
Bromoform	ug/kg	ND	ND		30	
Bromomethane	ug/kg	ND	ND		30	
Carbon tetrachloride	ug/kg	ND	ND		30	
Chlorobenzene	ug/kg	ND	ND		30	
Chloroethane	ug/kg	ND	ND		30	
Chloroform	ug/kg	ND	ND		30	
Chloromethane	ug/kg	ND	ND		30	
cis-1,2-Dichloroethene	ug/kg	ND	ND		30	
cis-1,3-Dichloropropene	ug/kg	ND	ND		30	
Dibromochloromethane	ug/kg	ND	ND		30	
Dibromomethane	ug/kg	ND	ND		30	
Dichlorodifluoromethane	ug/kg	ND	ND		30	
Diisopropyl ether	ug/kg	ND	ND		30	
Ethylbenzene	ug/kg	ND	ND		30	
Hexachloro-1,3-butadiene	ug/kg	ND	ND		30	
Isopropylbenzene (Cumene)	ug/kg	ND	ND		30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: CTS ASHEVILLE
Pace Project No.: 92366828

SAMPLE DUPLICATE: 2169714

Parameter	Units	92366828002 Result	Dup Result	RPD	Max RPD	Qualifiers
m&p-Xylene	ug/kg	ND	ND		30	
Methyl-tert-butyl ether	ug/kg	ND	ND		30	
Methylene Chloride	ug/kg	ND	ND		30	
n-Butylbenzene	ug/kg	ND	ND		30	
n-Propylbenzene	ug/kg	ND	ND		30	
Naphthalene	ug/kg	ND	ND		30	
o-Xylene	ug/kg	ND	ND		30	
p-Isopropyltoluene	ug/kg	ND	ND		30	
sec-Butylbenzene	ug/kg	ND	ND		30	
Styrene	ug/kg	ND	ND		30	
tert-Butylbenzene	ug/kg	ND	ND		30	
Tetrachloroethene	ug/kg	ND	ND		30	
Toluene	ug/kg	ND	ND		30	
trans-1,2-Dichloroethene	ug/kg	ND	ND		30	
trans-1,3-Dichloropropene	ug/kg	ND	ND		30	
Trichloroethene	ug/kg	ND	ND		30	
Trichlorofluoromethane	ug/kg	ND	ND		30	
Vinyl acetate	ug/kg	ND	ND		30	
Vinyl chloride	ug/kg	ND	ND		30	
Xylene (Total)	ug/kg	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	111	111	0		
4-Bromofluorobenzene (S)	%	104	103	2		
Toluene-d8 (S)	%	101	101	1		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(704)875-9092

QUALITY CONTROL DATA

Project: CTS ASHEVILLE
Pace Project No.: 92366828

QC Batch: 391378
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV 5035A Volatile Organics
Associated Lab Samples: 92366828005

METHOD BLANK: 2171452
Matrix: Solid
Associated Lab Samples: 92366828005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	6.1	2.5	12/18/17 12:46	
1,1,1-Trichloroethane	ug/kg	ND	6.1	2.2	12/18/17 12:46	
1,1,2,2-Tetrachloroethane	ug/kg	ND	6.1	2.3	12/18/17 12:46	
1,1,2-Trichloroethane	ug/kg	ND	6.1	2.5	12/18/17 12:46	
1,1-Dichloroethane	ug/kg	ND	6.1	1.8	12/18/17 12:46	
1,1-Dichloroethene	ug/kg	ND	6.1	2.2	12/18/17 12:46	
1,1-Dichloropropene	ug/kg	ND	6.1	1.8	12/18/17 12:46	
1,2,3-Trichlorobenzene	ug/kg	ND	6.1	2.7	12/18/17 12:46	
1,2,3-Trichloropropane	ug/kg	ND	6.1	1.9	12/18/17 12:46	
1,2,4-Trichlorobenzene	ug/kg	ND	6.1	1.9	12/18/17 12:46	
1,2,4-Trimethylbenzene	ug/kg	ND	6.1	2.4	12/18/17 12:46	
1,2-Dibromo-3-chloropropane	ug/kg	ND	6.1	4.4	12/18/17 12:46	
1,2-Dibromoethane (EDB)	ug/kg	ND	6.1	2.2	12/18/17 12:46	
1,2-Dichlorobenzene	ug/kg	ND	6.1	2.3	12/18/17 12:46	
1,2-Dichloroethane	ug/kg	ND	6.1	2.7	12/18/17 12:46	
1,2-Dichloropropane	ug/kg	ND	6.1	2.1	12/18/17 12:46	
1,3,5-Trimethylbenzene	ug/kg	ND	6.1	2.2	12/18/17 12:46	
1,3-Dichlorobenzene	ug/kg	ND	6.1	2.4	12/18/17 12:46	
1,3-Dichloropropane	ug/kg	ND	6.1	2.3	12/18/17 12:46	
1,4-Dichlorobenzene	ug/kg	ND	6.1	2.1	12/18/17 12:46	
2,2-Dichloropropane	ug/kg	ND	6.1	2.1	12/18/17 12:46	
2-Butanone (MEK)	ug/kg	ND	121	3.5	12/18/17 12:46	
2-Chlorotoluene	ug/kg	ND	6.1	2.1	12/18/17 12:46	
2-Hexanone	ug/kg	ND	60.7	4.7	12/18/17 12:46	
4-Chlorotoluene	ug/kg	ND	6.1	2.2	12/18/17 12:46	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	60.7	4.5	12/18/17 12:46	
Acetone	ug/kg	ND	121	12.1	12/18/17 12:46	
Benzene	ug/kg	ND	6.1	1.9	12/18/17 12:46	
Bromobenzene	ug/kg	ND	6.1	2.4	12/18/17 12:46	
Bromochloromethane	ug/kg	ND	6.1	2.1	12/18/17 12:46	
Bromodichloromethane	ug/kg	ND	6.1	2.3	12/18/17 12:46	
Bromoform	ug/kg	ND	6.1	2.8	12/18/17 12:46	
Bromomethane	ug/kg	ND	12.1	3.0	12/18/17 12:46	
Carbon tetrachloride	ug/kg	ND	6.1	3.2	12/18/17 12:46	
Chlorobenzene	ug/kg	ND	6.1	2.3	12/18/17 12:46	
Chloroethane	ug/kg	ND	12.1	2.9	12/18/17 12:46	
Chloroform	ug/kg	ND	6.1	1.9	12/18/17 12:46	
Chloromethane	ug/kg	ND	12.1	2.9	12/18/17 12:46	
cis-1,2-Dichloroethene	ug/kg	ND	6.1	1.7	12/18/17 12:46	
cis-1,3-Dichloropropene	ug/kg	ND	6.1	2.2	12/18/17 12:46	
Dibromochloromethane	ug/kg	ND	6.1	2.2	12/18/17 12:46	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: CTS ASHEVILLE
Pace Project No.: 92366828

METHOD BLANK: 2171452 Matrix: Solid
Associated Lab Samples: 92366828005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dibromomethane	ug/kg	ND	6.1	3.0	12/18/17 12:46	
Dichlorodifluoromethane	ug/kg	ND	12.1	4.4	12/18/17 12:46	
Diisopropyl ether	ug/kg	ND	6.1	2.1	12/18/17 12:46	
Ethylbenzene	ug/kg	ND	6.1	2.2	12/18/17 12:46	
Hexachloro-1,3-butadiene	ug/kg	ND	6.1	2.4	12/18/17 12:46	
Isopropylbenzene (Cumene)	ug/kg	ND	6.1	2.3	12/18/17 12:46	
m&p-Xylene	ug/kg	ND	12.1	4.4	12/18/17 12:46	
Methyl-tert-butyl ether	ug/kg	ND	6.1	1.8	12/18/17 12:46	
Methylene Chloride	ug/kg	ND	24.3	3.6	12/18/17 12:46	
n-Butylbenzene	ug/kg	ND	6.1	2.2	12/18/17 12:46	
n-Propylbenzene	ug/kg	ND	6.1	2.1	12/18/17 12:46	
Naphthalene	ug/kg	ND	6.1	1.5	12/18/17 12:46	
o-Xylene	ug/kg	ND	6.1	2.3	12/18/17 12:46	
p-Isopropyltoluene	ug/kg	ND	6.1	2.1	12/18/17 12:46	
sec-Butylbenzene	ug/kg	ND	6.1	1.9	12/18/17 12:46	
Styrene	ug/kg	ND	6.1	2.2	12/18/17 12:46	
tert-Butylbenzene	ug/kg	ND	6.1	2.4	12/18/17 12:46	
Tetrachloroethene	ug/kg	ND	6.1	2.1	12/18/17 12:46	
Toluene	ug/kg	ND	6.1	2.2	12/18/17 12:46	
trans-1,2-Dichloroethene	ug/kg	ND	6.1	2.3	12/18/17 12:46	
trans-1,3-Dichloropropene	ug/kg	ND	6.1	1.8	12/18/17 12:46	
Trichloroethene	ug/kg	ND	6.1	2.5	12/18/17 12:46	
Trichlorofluoromethane	ug/kg	ND	6.1	2.7	12/18/17 12:46	
Vinyl acetate	ug/kg	ND	60.7	10.7	12/18/17 12:46	
Vinyl chloride	ug/kg	ND	12.1	2.2	12/18/17 12:46	
Xylene (Total)	ug/kg	ND	12.1	4.4	12/18/17 12:46	
1,2-Dichloroethane-d4 (S)	%	106	70-132		12/18/17 12:46	
4-Bromofluorobenzene (S)	%	100	70-130		12/18/17 12:46	
Toluene-d8 (S)	%	103	70-130		12/18/17 12:46	

LABORATORY CONTROL SAMPLE: 2171453

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	64.1	63.3	99	74-137	
1,1,1-Trichloroethane	ug/kg	64.1	62.1	97	67-140	
1,1,2,2-Tetrachloroethane	ug/kg	64.1	56.1	87	72-141	
1,1,2-Trichloroethane	ug/kg	64.1	63.2	99	78-138	
1,1-Dichloroethane	ug/kg	64.1	62.1	97	69-134	
1,1-Dichloroethene	ug/kg	64.1	64.8	101	67-138	
1,1-Dichloropropene	ug/kg	64.1	58.5	91	69-139	
1,2,3-Trichlorobenzene	ug/kg	64.1	59.2	92	70-146	
1,2,3-Trichloropropane	ug/kg	64.1	66.8	104	69-144	
1,2,4-Trichlorobenzene	ug/kg	64.1	60.3	94	68-148	
1,2,4-Trimethylbenzene	ug/kg	64.1	58.7	92	74-137	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: CTS ASHEVILLE
Pace Project No.: 92366828

LABORATORY CONTROL SAMPLE: 2171453

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromo-3-chloropropane	ug/kg	64.1	62.8	98	65-140	
1,2-Dibromoethane (EDB)	ug/kg	64.1	62.7	98	77-135	
1,2-Dichlorobenzene	ug/kg	64.1	59.6	93	77-141	
1,2-Dichloroethane	ug/kg	64.1	65.1	102	65-137	
1,2-Dichloropropane	ug/kg	64.1	59.8	93	72-136	
1,3,5-Trimethylbenzene	ug/kg	64.1	58.7	92	76-133	
1,3-Dichlorobenzene	ug/kg	64.1	59.0	92	74-138	
1,3-Dichloropropane	ug/kg	64.1	65.6	102	71-139	
1,4-Dichlorobenzene	ug/kg	64.1	61.1	95	76-138	
2,2-Dichloropropane	ug/kg	64.1	65.1	102	68-137	
2-Butanone (MEK)	ug/kg	128	139	109	58-147	
2-Chlorotoluene	ug/kg	64.1	59.4	93	73-139	
2-Hexanone	ug/kg	128	144	112	62-145	
4-Chlorotoluene	ug/kg	64.1	61.7	96	76-141	
4-Methyl-2-pentanone (MIBK)	ug/kg	128	137	107	64-149	
Acetone	ug/kg	128	162	126	53-153	
Benzene	ug/kg	64.1	58.1	91	73-135	
Bromobenzene	ug/kg	64.1	59.9	93	75-133	
Bromochloromethane	ug/kg	64.1	62.2	97	73-134	
Bromodichloromethane	ug/kg	64.1	63.6	99	71-135	
Bromoform	ug/kg	64.1	67.2	105	66-141	
Bromomethane	ug/kg	64.1	71.3	111	53-160	
Carbon tetrachloride	ug/kg	64.1	61.2	95	60-145	
Chlorobenzene	ug/kg	64.1	60.2	94	78-130	
Chloroethane	ug/kg	64.1	83.5	130	64-149	
Chloroform	ug/kg	64.1	57.2	89	70-134	
Chloromethane	ug/kg	64.1	65.6	102	52-150	
cis-1,2-Dichloroethene	ug/kg	64.1	65.5	102	70-133	
cis-1,3-Dichloropropene	ug/kg	64.1	61.6	96	68-134	
Dibromochloromethane	ug/kg	64.1	66.2	103	71-138	
Dibromomethane	ug/kg	64.1	62.8	98	74-130	
Dichlorodifluoromethane	ug/kg	64.1	67.0	104	40-160	
Diisopropyl ether	ug/kg	64.1	67.3	105	69-141	
Ethylbenzene	ug/kg	64.1	61.4	96	75-133	
Hexachloro-1,3-butadiene	ug/kg	64.1	58.9	92	68-143	
Isopropylbenzene (Cumene)	ug/kg	64.1	60.1	94	76-143	
m&p-Xylene	ug/kg	128	122	95	75-136	
Methyl-tert-butyl ether	ug/kg	64.1	61.8	96	68-144	
Methylene Chloride	ug/kg	64.1	60.9	95	45-154	
n-Butylbenzene	ug/kg	64.1	58.9	92	72-137	
n-Propylbenzene	ug/kg	64.1	60.9	95	76-136	
Naphthalene	ug/kg	64.1	62.3	97	68-151	
o-Xylene	ug/kg	64.1	61.6	96	76-141	
p-Isopropyltoluene	ug/kg	64.1	57.4	90	76-140	
sec-Butylbenzene	ug/kg	64.1	58.9	92	79-139	
Styrene	ug/kg	64.1	60.7	95	79-137	
tert-Butylbenzene	ug/kg	64.1	53.7	84	74-143	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
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(704)875-9092

QUALITY CONTROL DATA

Project: CTS ASHEVILLE
Pace Project No.: 92366828

LABORATORY CONTROL SAMPLE: 2171453

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tetrachloroethene	ug/kg	64.1	54.9	86	71-138	
Toluene	ug/kg	64.1	59.7	93	74-131	
trans-1,2-Dichloroethene	ug/kg	64.1	63.9	100	67-135	
trans-1,3-Dichloropropene	ug/kg	64.1	62.4	97	65-146	
Trichloroethene	ug/kg	64.1	67.7	106	67-135	
Trichlorofluoromethane	ug/kg	64.1	69.6	109	59-144	
Vinyl acetate	ug/kg	128	81.0	63	40-160	
Vinyl chloride	ug/kg	64.1	73.5	115	56-141	
Xylene (Total)	ug/kg	192	184	96	76-137	
1,2-Dichloroethane-d4 (S)	%			103	70-132	
4-Bromofluorobenzene (S)	%			104	70-130	
Toluene-d8 (S)	%			98	70-130	

MATRIX SPIKE SAMPLE: 2172185

Parameter	Units	92367069001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	23	23.3	101	70-130	
1,1,1-Trichloroethane	ug/kg	ND	23	24.5	106	70-130	
1,1,2,2-Tetrachloroethane	ug/kg	ND	23	24.8	108	70-130	
1,1,2-Trichloroethane	ug/kg	ND	23	25.7	112	70-130	
1,1-Dichloroethane	ug/kg	ND	23	25.5	111	70-130	
1,1-Dichloroethene	ug/kg	ND	23	25.2	109	49-180	
1,1-Dichloropropene	ug/kg	ND	23	23.5	102	70-130	
1,2,3-Trichlorobenzene	ug/kg	ND	23	24.8	108	70-130	
1,2,3-Trichloropropane	ug/kg	ND	23	25.3	110	70-130	
1,2,4-Trichlorobenzene	ug/kg	ND	23	24.6	107	70-130	
1,2,4-Trimethylbenzene	ug/kg	ND	23	26.6	116	70-130	
1,2-Dibromo-3-chloropropane	ug/kg	ND	23	25.5	111	70-130	
1,2-Dibromoethane (EDB)	ug/kg	ND	23	23.9	104	70-130	
1,2-Dichlorobenzene	ug/kg	ND	23	24.7	107	70-130	
1,2-Dichloroethane	ug/kg	ND	23	25.0	109	70-130	
1,2-Dichloropropane	ug/kg	ND	23	25.4	110	70-130	
1,3,5-Trimethylbenzene	ug/kg	ND	23	26.7	116	70-130	
1,3-Dichlorobenzene	ug/kg	ND	23	25.5	111	70-130	
1,3-Dichloropropane	ug/kg	ND	23	26.6	116	70-130	
1,4-Dichlorobenzene	ug/kg	ND	23	25.7	112	70-130	
2,2-Dichloropropane	ug/kg	ND	23	25.3	110	70-130	
2-Butanone (MEK)	ug/kg	ND	46.1	58.8J	128	70-130	
2-Chlorotoluene	ug/kg	ND	23	26.4	114	70-130	
2-Hexanone	ug/kg	ND	46.1	58.8	128	70-130	
4-Chlorotoluene	ug/kg	ND	23	26.8	117	70-130	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	46.1	53.3J	116	70-130	
Acetone	ug/kg	ND	46.1	90.9J	198	70-130	M1
Benzene	ug/kg	ND	23	25.2	110	50-166	
Bromobenzene	ug/kg	ND	23	26.1	113	70-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(704)875-9092

QUALITY CONTROL DATA

Project: CTS ASHEVILLE
Pace Project No.: 92366828

MATRIX SPIKE SAMPLE: 2172185

Parameter	Units	92367069001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromochloromethane	ug/kg	ND	23	22.2	96	70-130	
Bromodichloromethane	ug/kg	ND	23	23.7	103	70-130	
Bromoform	ug/kg	ND	23	23.3	101	70-130	
Bromomethane	ug/kg	ND	23	26.9	117	70-130	
Carbon tetrachloride	ug/kg	ND	23	25.6	111	70-130	
Chlorobenzene	ug/kg	ND	23	24.9	108	43-169	
Chloroethane	ug/kg	ND	23	33.1	144	70-130	M1
Chloroform	ug/kg	ND	23	24.5	106	70-130	
Chloromethane	ug/kg	ND	23	25.5	111	70-130	
cis-1,2-Dichloroethene	ug/kg	ND	23	25.8	112	70-130	
cis-1,3-Dichloropropene	ug/kg	ND	23	23.8	103	70-130	
Dibromochloromethane	ug/kg	ND	23	24.5	106	70-130	
Dibromomethane	ug/kg	ND	23	23.8	103	70-130	
Dichlorodifluoromethane	ug/kg	ND	23	24.5	107	70-130	
Diisopropyl ether	ug/kg	ND	23	26.1	113	70-130	
Ethylbenzene	ug/kg	ND	23	26.4	115	70-130	
Hexachloro-1,3-butadiene	ug/kg	ND	23	25.8	112	70-130	
Isopropylbenzene (Cumene)	ug/kg	ND	23	26.9	117	70-130	
m&p-Xylene	ug/kg	ND	46.1	53.2	116	70-130	
Methyl-tert-butyl ether	ug/kg	ND	23	23.1	100	70-130	
Methylene Chloride	ug/kg	ND	23	42.9	186	70-130	M1
n-Butylbenzene	ug/kg	ND	23	26.7	116	70-130	
n-Propylbenzene	ug/kg	ND	23	27.7	121	70-130	
Naphthalene	ug/kg	ND	23	25.6	111	70-130	
o-Xylene	ug/kg	ND	23	26.5	115	70-130	
p-Isopropyltoluene	ug/kg	ND	23	26.2	114	70-130	
sec-Butylbenzene	ug/kg	ND	23	27.1	118	70-130	
Styrene	ug/kg	ND	23	26.0	113	70-130	
tert-Butylbenzene	ug/kg	ND	23	25.1	109	70-130	
Tetrachloroethene	ug/kg	ND	23	23.6	103	70-130	
Toluene	ug/kg	ND	23	24.8	108	52-163	
trans-1,2-Dichloroethene	ug/kg	ND	23	25.4	111	70-130	
trans-1,3-Dichloropropene	ug/kg	ND	23	23.7	103	70-130	
Trichloroethene	ug/kg	ND	23	24.1	105	49-167	
Trichlorofluoromethane	ug/kg	ND	23	28.6	124	70-130	
Vinyl acetate	ug/kg	ND	46.1	71.0	154	70-130	M1
Vinyl chloride	ug/kg	ND	23	28.0	122	70-130	
1,2-Dichloroethane-d4 (S)	%				102	70-132	
4-Bromofluorobenzene (S)	%				103	70-130	
Toluene-d8 (S)	%				98	70-130	

SAMPLE DUPLICATE: 2172184

Parameter	Units	92366805001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	ND		30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: CTS ASHEVILLE
Pace Project No.: 92366828

SAMPLE DUPLICATE: 2172184

Parameter	Units	92366805001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/kg	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/kg	ND	ND		30	
1,1,2-Trichloroethane	ug/kg	ND	ND		30	
1,1-Dichloroethane	ug/kg	ND	ND		30	
1,1-Dichloroethene	ug/kg	ND	ND		30	
1,1-Dichloropropene	ug/kg	ND	ND		30	
1,2,3-Trichlorobenzene	ug/kg	ND	ND		30	
1,2,3-Trichloropropane	ug/kg	ND	ND		30	
1,2,4-Trichlorobenzene	ug/kg	ND	ND		30	
1,2,4-Trimethylbenzene	ug/kg	ND	ND		30	
1,2-Dibromo-3-chloropropane	ug/kg	ND	ND		30	
1,2-Dibromoethane (EDB)	ug/kg	ND	ND		30	
1,2-Dichlorobenzene	ug/kg	ND	ND		30	
1,2-Dichloroethane	ug/kg	ND	ND		30	
1,2-Dichloropropane	ug/kg	ND	ND		30	
1,3,5-Trimethylbenzene	ug/kg	ND	ND		30	
1,3-Dichlorobenzene	ug/kg	ND	ND		30	
1,3-Dichloropropane	ug/kg	ND	ND		30	
1,4-Dichlorobenzene	ug/kg	ND	ND		30	
2,2-Dichloropropane	ug/kg	ND	ND		30	
2-Butanone (MEK)	ug/kg	ND	ND		30	
2-Chlorotoluene	ug/kg	ND	ND		30	
2-Hexanone	ug/kg	ND	ND		30	
4-Chlorotoluene	ug/kg	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	ND		30	
Acetone	ug/kg	ND	39.3J		30	
Benzene	ug/kg	ND	ND		30	
Bromobenzene	ug/kg	ND	ND		30	
Bromochloromethane	ug/kg	ND	ND		30	
Bromodichloromethane	ug/kg	ND	ND		30	
Bromoform	ug/kg	ND	ND		30	
Bromomethane	ug/kg	ND	ND		30	
Carbon tetrachloride	ug/kg	ND	ND		30	
Chlorobenzene	ug/kg	ND	ND		30	
Chloroethane	ug/kg	ND	ND		30	
Chloroform	ug/kg	ND	ND		30	
Chloromethane	ug/kg	ND	ND		30	
cis-1,2-Dichloroethene	ug/kg	6.7	3.7J		30	
cis-1,3-Dichloropropene	ug/kg	ND	ND		30	
Dibromochloromethane	ug/kg	ND	ND		30	
Dibromomethane	ug/kg	ND	ND		30	
Dichlorodifluoromethane	ug/kg	ND	ND		30	
Diisopropyl ether	ug/kg	ND	ND		30	
Ethylbenzene	ug/kg	ND	ND		30	
Hexachloro-1,3-butadiene	ug/kg	ND	ND		30	
Isopropylbenzene (Cumene)	ug/kg	ND	ND		30	
m&p-Xylene	ug/kg	ND	ND		30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CTS ASHEVILLE
Pace Project No.: 92366828

SAMPLE DUPLICATE: 2172184

Parameter	Units	92366805001 Result	Dup Result	RPD	Max RPD	Qualifiers
Methyl-tert-butyl ether	ug/kg	ND	ND		30	
Methylene Chloride	ug/kg	ND	ND		30	
n-Butylbenzene	ug/kg	ND	ND		30	
n-Propylbenzene	ug/kg	ND	ND		30	
Naphthalene	ug/kg	ND	ND		30	
o-Xylene	ug/kg	ND	ND		30	
p-Isopropyltoluene	ug/kg	ND	ND		30	
sec-Butylbenzene	ug/kg	ND	ND		30	
Styrene	ug/kg	ND	ND		30	
tert-Butylbenzene	ug/kg	ND	ND		30	
Tetrachloroethene	ug/kg	ND	ND		30	
Toluene	ug/kg	ND	ND		30	
trans-1,2-Dichloroethene	ug/kg	ND	ND		30	
trans-1,3-Dichloropropene	ug/kg	ND	ND		30	
Trichloroethene	ug/kg	ND	ND		30	
Trichlorofluoromethane	ug/kg	ND	ND		30	
Vinyl acetate	ug/kg	ND	ND		30	
Vinyl chloride	ug/kg	ND	ND		30	
Xylene (Total)	ug/kg	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	105	98	1		
4-Bromofluorobenzene (S)	%	103	98	4		
Toluene-d8 (S)	%	101	99	6		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CTS ASHEVILLE
Pace Project No.: 92366828

QC Batch: 390794 Analysis Method: EPA 8270
QC Batch Method: EPA 3546 Analysis Description: 8270 Solid MSSV Microwave
Associated Lab Samples: 92366828002, 92366828003, 92366828004, 92366828005, 92366828006, 92366828007, 92366828008, 92366828009, 92366828010, 92366828011, 92366828012, 92366828013

METHOD BLANK: 2168368 Matrix: Solid
Associated Lab Samples: 92366828002, 92366828003, 92366828004, 92366828005, 92366828006, 92366828007, 92366828008, 92366828009, 92366828010, 92366828011, 92366828012, 92366828013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	ND	326	63.2	12/14/17 15:04	
1,2-Dichlorobenzene	ug/kg	ND	326	86.8	12/14/17 15:04	
1,3-Dichlorobenzene	ug/kg	ND	326	74.0	12/14/17 15:04	
1,4-Dichlorobenzene	ug/kg	ND	326	91.8	12/14/17 15:04	
1-Methylnaphthalene	ug/kg	ND	326	84.9	12/14/17 15:04	
2,2'-Oxybis(1-chloropropane)	ug/kg	ND	326	86.8	12/14/17 15:04	
2,4,5-Trichlorophenol	ug/kg	ND	326	101	12/14/17 15:04	
2,4,6-Trichlorophenol	ug/kg	ND	326	72.0	12/14/17 15:04	
2,4-Dichlorophenol	ug/kg	ND	326	71.1	12/14/17 15:04	
2,4-Dimethylphenol	ug/kg	ND	326	128	12/14/17 15:04	
2,4-Dinitrophenol	ug/kg	ND	1630	53.3	12/14/17 15:04	
2,4-Dinitrotoluene	ug/kg	ND	326	61.2	12/14/17 15:04	
2,6-Dinitrotoluene	ug/kg	ND	326	68.1	12/14/17 15:04	
2-Chloronaphthalene	ug/kg	ND	326	64.1	12/14/17 15:04	
2-Chlorophenol	ug/kg	ND	326	88.8	12/14/17 15:04	
2-Methylnaphthalene	ug/kg	ND	326	70.1	12/14/17 15:04	
2-Methylphenol(o-Cresol)	ug/kg	ND	326	98.7	12/14/17 15:04	
2-Nitroaniline	ug/kg	ND	1630	101	12/14/17 15:04	
2-Nitrophenol	ug/kg	ND	326	78.9	12/14/17 15:04	
3&4-Methylphenol(m&p Cresol)	ug/kg	ND	326	128	12/14/17 15:04	
3,3'-Dichlorobenzidine	ug/kg	ND	1630	71.1	12/14/17 15:04	
3-Nitroaniline	ug/kg	ND	1630	88.8	12/14/17 15:04	
4,6-Dinitro-2-methylphenol	ug/kg	ND	651	65.1	12/14/17 15:04	
4-Bromophenylphenyl ether	ug/kg	ND	326	59.2	12/14/17 15:04	
4-Chloro-3-methylphenol	ug/kg	ND	651	67.1	12/14/17 15:04	
4-Chloroaniline	ug/kg	ND	1630	90.8	12/14/17 15:04	
4-Chlorophenylphenyl ether	ug/kg	ND	326	67.1	12/14/17 15:04	
4-Nitroaniline	ug/kg	ND	651	91.8	12/14/17 15:04	
4-Nitrophenol	ug/kg	ND	1630	58.2	12/14/17 15:04	
Acenaphthene	ug/kg	ND	326	75.0	12/14/17 15:04	
Acenaphthylene	ug/kg	ND	326	77.0	12/14/17 15:04	
Aniline	ug/kg	ND	326	87.8	12/14/17 15:04	
Anthracene	ug/kg	ND	326	73.0	12/14/17 15:04	
Benzo(a)anthracene	ug/kg	ND	326	60.2	12/14/17 15:04	
Benzo(a)pyrene	ug/kg	ND	326	62.2	12/14/17 15:04	
Benzo(b)fluoranthene	ug/kg	ND	326	56.2	12/14/17 15:04	
Benzo(g,h,i)perylene	ug/kg	ND	326	82.9	12/14/17 15:04	
Benzo(k)fluoranthene	ug/kg	ND	326	64.1	12/14/17 15:04	
Benzoic Acid	ug/kg	ND	1630	59.2	12/14/17 15:04	
Benzyl alcohol	ug/kg	ND	651	65.1	12/14/17 15:04	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: CTS ASHEVILLE
Pace Project No.: 92366828

METHOD BLANK: 2168368 Matrix: Solid

Associated Lab Samples: 92366828002, 92366828003, 92366828004, 92366828005, 92366828006, 92366828007, 92366828008, 92366828009, 92366828010, 92366828011, 92366828012, 92366828013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
bis(2-Chloroethoxy)methane	ug/kg	ND	326	76.0	12/14/17 15:04	
bis(2-Chloroethyl) ether	ug/kg	ND	326	82.9	12/14/17 15:04	
bis(2-Ethylhexyl)phthalate	ug/kg	ND	326	88.8	12/14/17 15:04	
Butylbenzylphthalate	ug/kg	ND	326	69.1	12/14/17 15:04	
Chrysene	ug/kg	ND	326	43.4	12/14/17 15:04	
Di-n-butylphthalate	ug/kg	ND	326	53.3	12/14/17 15:04	
Di-n-octylphthalate	ug/kg	ND	326	68.1	12/14/17 15:04	
Dibenz(a,h)anthracene	ug/kg	ND	326	69.1	12/14/17 15:04	
Dibenzofuran	ug/kg	ND	326	53.3	12/14/17 15:04	
Diethylphthalate	ug/kg	ND	326	50.3	12/14/17 15:04	
Dimethylphthalate	ug/kg	ND	326	66.1	12/14/17 15:04	
Fluoranthene	ug/kg	ND	326	47.4	12/14/17 15:04	
Fluorene	ug/kg	ND	326	67.1	12/14/17 15:04	
Hexachloro-1,3-butadiene	ug/kg	ND	326	56.2	12/14/17 15:04	
Hexachlorobenzene	ug/kg	ND	326	41.4	12/14/17 15:04	
Hexachlorocyclopentadiene	ug/kg	ND	326	60.2	12/14/17 15:04	
Hexachloroethane	ug/kg	ND	326	85.9	12/14/17 15:04	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	326	67.1	12/14/17 15:04	
Isophorone	ug/kg	ND	326	73.0	12/14/17 15:04	
N-Nitroso-di-n-propylamine	ug/kg	ND	326	62.2	12/14/17 15:04	
N-Nitrosodimethylamine	ug/kg	ND	326	106	12/14/17 15:04	
N-Nitrosodiphenylamine	ug/kg	ND	326	96.7	12/14/17 15:04	
Naphthalene	ug/kg	ND	326	79.9	12/14/17 15:04	
Nitrobenzene	ug/kg	ND	326	88.8	12/14/17 15:04	
Pentachlorophenol	ug/kg	ND	1630	59.2	12/14/17 15:04	
Phenanthrene	ug/kg	ND	326	54.3	12/14/17 15:04	
Phenol	ug/kg	ND	326	97.7	12/14/17 15:04	
Pyrene	ug/kg	ND	326	55.3	12/14/17 15:04	
Pyridine	ug/kg	ND	326	72.0	12/14/17 15:04	
2,4,6-Tribromophenol (S)	%	58	27-110		12/14/17 15:04	
2-Fluorobiphenyl (S)	%	66	30-110		12/14/17 15:04	
2-Fluorophenol (S)	%	65	13-110		12/14/17 15:04	
Nitrobenzene-d5 (S)	%	65	23-110		12/14/17 15:04	
Phenol-d6 (S)	%	70	22-110		12/14/17 15:04	
Terphenyl-d14 (S)	%	94	28-110		12/14/17 15:04	

LABORATORY CONTROL SAMPLE: 2168369

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	1660	1250	76	36-120	
1,2-Dichlorobenzene	ug/kg	1660	1210	73	41-120	
1,3-Dichlorobenzene	ug/kg	1660	1220	74	66-120	
1,4-Dichlorobenzene	ug/kg	1660	1210	73	42-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: CTS ASHEVILLE
Pace Project No.: 92366828

LABORATORY CONTROL SAMPLE: 2168369

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	1660	1190	72	40-120	
2,2'-Oxybis(1-chloropropane)	ug/kg	1660	803	49	17-120	
2,4,5-Trichlorophenol	ug/kg	1660	1260	76	37-120	
2,4,6-Trichlorophenol	ug/kg	1660	1340	81	40-120	
2,4-Dichlorophenol	ug/kg	1660	1250	75	33-120	
2,4-Dimethylphenol	ug/kg	1660	1190	72	36-120	
2,4-Dinitrophenol	ug/kg	8280	7970	96	22-121	
2,4-Dinitrotoluene	ug/kg	1660	1380	83	60-120	
2,6-Dinitrotoluene	ug/kg	1660	1390	84	54-120	
2-Chloronaphthalene	ug/kg	1660	1260	76	41-120	
2-Chlorophenol	ug/kg	1660	1270	77	39-120	
2-Methylnaphthalene	ug/kg	1660	1210	73	26-120	
2-Methylphenol(o-Cresol)	ug/kg	1660	1230	74	41-120	
2-Nitroaniline	ug/kg	3310	2570	77	45-120	
2-Nitrophenol	ug/kg	1660	1320	80	35-120	
3&4-Methylphenol(m&p Cresol)	ug/kg	1660	1180	71	35-120	
3,3'-Dichlorobenzidine	ug/kg	3310	2550	77	16-125	
3-Nitroaniline	ug/kg	3310	2780	84	45-120	
4,6-Dinitro-2-methylphenol	ug/kg	3310	3510	106	46-120	
4-Bromophenylphenyl ether	ug/kg	1660	1370	83	36-120	
4-Chloro-3-methylphenol	ug/kg	3310	2520	76	37-120	
4-Chloroaniline	ug/kg	3310	2300	70	35-120	
4-Chlorophenylphenyl ether	ug/kg	1660	1230	75	30-120	
4-Nitroaniline	ug/kg	3310	2760	83	48-120	
4-Nitrophenol	ug/kg	8280	6990	84	43-120	
Acenaphthene	ug/kg	1660	1250	76	46-120	
Acenaphthylene	ug/kg	1660	1290	78	46-120	
Aniline	ug/kg	1660	1160	70	33-120	
Anthracene	ug/kg	1660	1370	83	63-120	
Benzo(a)anthracene	ug/kg	1660	1400	84	61-120	
Benzo(a)pyrene	ug/kg	1660	1430	87	59-120	
Benzo(b)fluoranthene	ug/kg	1660	1400	85	55-120	
Benzo(g,h,i)perylene	ug/kg	1660	1360	82	57-120	
Benzo(k)fluoranthene	ug/kg	1660	1400	84	56-120	
Benzoic Acid	ug/kg	8280	5750	69	13-120	
Benzyl alcohol	ug/kg	3310	2480	75	34-120	
bis(2-Chloroethoxy)methane	ug/kg	1660	1220	74	21-120	
bis(2-Chloroethyl) ether	ug/kg	1660	1180	71	25-120	
bis(2-Ethylhexyl)phthalate	ug/kg	1660	1560	94	56-123	
Butylbenzylphthalate	ug/kg	1660	1850	112	57-120	
Chrysene	ug/kg	1660	1370	83	64-120	
Di-n-butylphthalate	ug/kg	1660	1400	85	58-120	
Di-n-octylphthalate	ug/kg	1660	1820	110	47-121	
Dibenz(a,h)anthracene	ug/kg	1660	1420	86	56-120	
Dibenzofuran	ug/kg	1660	1280	78	43-120	
Diethylphthalate	ug/kg	1660	1320	80	55-120	
Dimethylphthalate	ug/kg	1660	1360	82	54-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(704)875-9092

QUALITY CONTROL DATA

Project: CTS ASHEVILLE
Pace Project No.: 92366828

LABORATORY CONTROL SAMPLE: 2168369

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoranthene	ug/kg	1660	1330	81	61-120	
Fluorene	ug/kg	1660	1310	79	51-120	
Hexachloro-1,3-butadiene	ug/kg	1660	1250	75	22-120	
Hexachlorobenzene	ug/kg	1660	1370	83	53-120	
Hexachlorocyclopentadiene	ug/kg	1660	1450	87	18-150	
Hexachloroethane	ug/kg	1660	1250	75	39-120	
Indeno(1,2,3-cd)pyrene	ug/kg	1660	1370	83	58-120	
Isophorone	ug/kg	1660	1150	70	38-120	
N-Nitroso-di-n-propylamine	ug/kg	1660	1160	70	30-120	
N-Nitrosodimethylamine	ug/kg	1660	1380	83	32-120	
N-Nitrosodiphenylamine	ug/kg	1660	1360	82	50-120	
Naphthalene	ug/kg	1660	1210	73	38-120	
Nitrobenzene	ug/kg	1660	1220	73	37-120	
Pentachlorophenol	ug/kg	3310	2830	85	10-120	
Phenanthrene	ug/kg	1660	1370	83	62-120	
Phenol	ug/kg	1660	1290	78	37-120	
Pyrene	ug/kg	1660	1470	89	63-120	
Pyridine	ug/kg	1660	1220	73	15-120	
2,4,6-Tribromophenol (S)	%			91	27-110	
2-Fluorobiphenyl (S)	%			75	30-110	
2-Fluorophenol (S)	%			77	13-110	
Nitrobenzene-d5 (S)	%			75	23-110	
Phenol-d6 (S)	%			78	22-110	
Terphenyl-d14 (S)	%			91	28-110	

MATRIX SPIKE SAMPLE: 2168370

Parameter	Units	92366933001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	ND	2110	1200	57	18-119	
1,2-Dichlorobenzene	ug/kg	ND	2110	1170	55	50-110	
1,3-Dichlorobenzene	ug/kg	ND	2110	1170	55	27-110	
1,4-Dichlorobenzene	ug/kg	ND	2110	1170	55	28-110	
1-Methylnaphthalene	ug/kg	ND	2110	1200	57	24-116	
2,2'-Oxybis(1-chloropropane)	ug/kg	ND	2110	1020	48	50-150	M1
2,4,5-Trichlorophenol	ug/kg	ND	2110	1190	56	28-110	
2,4,6-Trichlorophenol	ug/kg	ND	2110	1220	58	17-117	
2,4-Dichlorophenol	ug/kg	ND	2110	1240	58	21-128	
2,4-Dimethylphenol	ug/kg	ND	2110	1150	54	10-120	
2,4-Dinitrophenol	ug/kg	ND	10600	3380	32	10-107	
2,4-Dinitrotoluene	ug/kg	ND	2110	1270	60	36-109	
2,6-Dinitrotoluene	ug/kg	ND	2110	1310	62	32-110	
2-Chloronaphthalene	ug/kg	ND	2110	1180	56	30-107	
2-Chlorophenol	ug/kg	ND	2110	1220	57	14-106	
2-Methylnaphthalene	ug/kg	ND	2110	1270	60	10-135	
2-Methylphenol(o-Cresol)	ug/kg	ND	2110	1170	55	10-124	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
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(704)875-9092

QUALITY CONTROL DATA

Project: CTS ASHEVILLE
Pace Project No.: 92366828

MATRIX SPIKE SAMPLE: 2168370

Parameter	Units	92366933001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
2-Nitroaniline	ug/kg	ND	4240	2620	62	26-116	
2-Nitrophenol	ug/kg	ND	2110	1180	56	28-103	
3&4-Methylphenol(m&p Cresol)	ug/kg	ND	2110	1110	52	10-109	
3,3'-Dichlorobenzidine	ug/kg	ND	4240	2630	62	10-150	
3-Nitroaniline	ug/kg	ND	4240	2550	60	22-110	
4,6-Dinitro-2-methylphenol	ug/kg	ND	4240	1750	41	13-121	
4-Bromophenylphenyl ether	ug/kg	ND	2110	1190	56	31-109	
4-Chloro-3-methylphenol	ug/kg	ND	4240	2670	63	13-128	
4-Chloroaniline	ug/kg	ND	4240	2350	56	18-102	
4-Chlorophenylphenyl ether	ug/kg	ND	2110	1170	55	29-112	
4-Nitroaniline	ug/kg	ND	4240	2590	61	16-111	
4-Nitrophenol	ug/kg	ND	10600	6090	57	14-135	
Acenaphthene	ug/kg	ND	2110	1220	58	26-114	
Acenaphthylene	ug/kg	ND	2110	1260	60	32-108	
Aniline	ug/kg	ND	2110	786	37	10-107	
Anthracene	ug/kg	ND	2110	1310	62	32-111	
Benzo(a)anthracene	ug/kg	ND	2110	1220	58	25-117	
Benzo(a)pyrene	ug/kg	ND	2110	1270	60	25-106	
Benzo(b)fluoranthene	ug/kg	ND	2110	1170	55	24-110	
Benzo(g,h,i)perylene	ug/kg	ND	2110	1160	55	19-112	
Benzo(k)fluoranthene	ug/kg	ND	2110	1260	60	24-114	
Benzoic Acid	ug/kg	ND	10600	2480	23	10-110	
Benzyl alcohol	ug/kg	ND	4240	2300	54	24-106	
bis(2-Chloroethoxy)methane	ug/kg	ND	2110	1230	58	13-119	
bis(2-Chloroethyl) ether	ug/kg	ND	2110	1210	57	10-134	
bis(2-Ethylhexyl)phthalate	ug/kg	ND	2110	1180	56	10-125	
Butylbenzylphthalate	ug/kg	ND	2110	1230	58	18-110	
Chrysene	ug/kg	ND	2110	1250	59	30-110	
Di-n-butylphthalate	ug/kg	ND	2110	1300	61	19-112	
Di-n-octylphthalate	ug/kg	ND	2110	1480	70	17-105	
Dibenz(a,h)anthracene	ug/kg	ND	2110	1220	57	23-111	
Dibenzofuran	ug/kg	ND	2110	1230	58	35-103	
Diethylphthalate	ug/kg	ND	2110	1320	62	27-113	
Dimethylphthalate	ug/kg	ND	2110	1310	62	26-111	
Fluoranthene	ug/kg	ND	2110	1360	64	33-109	
Fluorene	ug/kg	ND	2110	1290	61	32-113	
Hexachloro-1,3-butadiene	ug/kg	ND	2110	1200	57	16-116	
Hexachlorobenzene	ug/kg	ND	2110	1230	58	27-120	
Hexachlorocyclopentadiene	ug/kg	ND	2110	590	28	10-108	
Hexachloroethane	ug/kg	ND	2110	1090	52	10-117	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	2110	1190	56	10-122	
Isophorone	ug/kg	ND	2110	1240	58	28-114	
N-Nitroso-di-n-propylamine	ug/kg	ND	2110	1180	56	27-113	
N-Nitrosodimethylamine	ug/kg	ND	2110	1180	56	10-109	
N-Nitrosodiphenylamine	ug/kg	ND	2110	1270	60	10-128	
Naphthalene	ug/kg	ND	2110	1200	57	25-110	
Nitrobenzene	ug/kg	ND	2110	1170	55	18-114	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(704)875-9092

QUALITY CONTROL DATA

Project: CTS ASHEVILLE
Pace Project No.: 92366828

MATRIX SPIKE SAMPLE: 2168370

Parameter	Units	92366933001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Pentachlorophenol	ug/kg	ND	4240	2500	59	10-122	
Phenanthrene	ug/kg	ND	2110	1270	60	30-114	
Phenol	ug/kg	ND	2110	1230	58	11-102	
Pyrene	ug/kg	ND	2110	1200	57	25-116	
2,4,6-Tribromophenol (S)	%				65	27-110	
2-Fluorobiphenyl (S)	%				54	30-110	
2-Fluorophenol (S)	%				53	13-110	
Nitrobenzene-d5 (S)	%				56	23-110	
Phenol-d6 (S)	%				56	22-110	
Terphenyl-d14 (S)	%				52	28-110	

SAMPLE DUPLICATE: 2168371

Parameter	Units	92366933002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	ND	ND		30	
1,2-Dichlorobenzene	ug/kg	ND	ND		30	
1,3-Dichlorobenzene	ug/kg	ND	ND		30	
1,4-Dichlorobenzene	ug/kg	ND	ND		30	
1-Methylnaphthalene	ug/kg	ND	ND		30	
2,2'-Oxybis(1-chloropropane)	ug/kg	ND	ND		30	
2,4,5-Trichlorophenol	ug/kg	ND	ND		30	
2,4,6-Trichlorophenol	ug/kg	ND	ND		30	
2,4-Dichlorophenol	ug/kg	ND	ND		30	
2,4-Dimethylphenol	ug/kg	ND	ND		30	
2,4-Dinitrophenol	ug/kg	ND	ND		30	
2,4-Dinitrotoluene	ug/kg	ND	ND		30	
2,6-Dinitrotoluene	ug/kg	ND	ND		30	
2-Chloronaphthalene	ug/kg	ND	ND		30	
2-Chlorophenol	ug/kg	ND	ND		30	
2-Methylnaphthalene	ug/kg	ND	ND		30	
2-Methylphenol(o-Cresol)	ug/kg	ND	ND		30	
2-Nitroaniline	ug/kg	ND	ND		30	
2-Nitrophenol	ug/kg	ND	ND		30	
3&4-Methylphenol(m&p Cresol)	ug/kg	ND	ND		30	
3,3'-Dichlorobenzidine	ug/kg	ND	ND		30	
3-Nitroaniline	ug/kg	ND	ND		30	
4,6-Dinitro-2-methylphenol	ug/kg	ND	ND		30	
4-Bromophenylphenyl ether	ug/kg	ND	ND		30	
4-Chloro-3-methylphenol	ug/kg	ND	ND		30	
4-Chloroaniline	ug/kg	ND	ND		30	
4-Chlorophenylphenyl ether	ug/kg	ND	ND		30	
4-Nitroaniline	ug/kg	ND	ND		30	
4-Nitrophenol	ug/kg	ND	ND		30	
Acenaphthene	ug/kg	ND	ND		30	
Acenaphthylene	ug/kg	ND	ND		30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CTS ASHEVILLE
Pace Project No.: 92366828

SAMPLE DUPLICATE: 2168371

Parameter	Units	92366933002 Result	Dup Result	RPD	Max RPD	Qualifiers
Aniline	ug/kg	ND	ND		30	
Anthracene	ug/kg	ND	ND		30	
Benzo(a)anthracene	ug/kg	ND	ND		30	
Benzo(a)pyrene	ug/kg	ND	ND		30	
Benzo(b)fluoranthene	ug/kg	ND	ND		30	
Benzo(g,h,i)perylene	ug/kg	ND	ND		30	
Benzo(k)fluoranthene	ug/kg	ND	ND		30	
Benzoic Acid	ug/kg	ND	ND		30	
Benzyl alcohol	ug/kg	ND	ND		30	
bis(2-Chloroethoxy)methane	ug/kg	ND	ND		30	
bis(2-Chloroethyl) ether	ug/kg	ND	ND		30	
bis(2-Ethylhexyl)phthalate	ug/kg	ND	ND		30	
Butylbenzylphthalate	ug/kg	ND	ND		30	
Chrysene	ug/kg	ND	ND		30	
Di-n-butylphthalate	ug/kg	ND	ND		30	
Di-n-octylphthalate	ug/kg	ND	ND		30	
Dibenz(a,h)anthracene	ug/kg	ND	ND		30	
Dibenzofuran	ug/kg	ND	ND		30	
Diethylphthalate	ug/kg	ND	ND		30	
Dimethylphthalate	ug/kg	ND	ND		30	
Fluoranthene	ug/kg	ND	ND		30	
Fluorene	ug/kg	ND	ND		30	
Hexachloro-1,3-butadiene	ug/kg	ND	ND		30	
Hexachlorobenzene	ug/kg	ND	ND		30	
Hexachlorocyclopentadiene	ug/kg	ND	ND		30	
Hexachloroethane	ug/kg	ND	ND		30	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	ND		30	
Isophorone	ug/kg	ND	ND		30	
N-Nitroso-di-n-propylamine	ug/kg	ND	ND		30	
N-Nitrosodimethylamine	ug/kg	ND	ND		30	
N-Nitrosodiphenylamine	ug/kg	ND	ND		30	
Naphthalene	ug/kg	ND	ND		30	
Nitrobenzene	ug/kg	ND	ND		30	
Pentachlorophenol	ug/kg	ND	ND		30	
Phenanthrene	ug/kg	ND	ND		30	
Phenol	ug/kg	ND	ND		30	
Pyrene	ug/kg	ND	ND		30	
2,4,6-Tribromophenol (S)	%	62	54	13		
2-Fluorobiphenyl (S)	%	63	51	22		
2-Fluorophenol (S)	%	60	49	21		
Nitrobenzene-d5 (S)	%	59	53	11		
Phenol-d6 (S)	%	55	49	12		
Terphenyl-d14 (S)	%	54	63	15		

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: CTS ASHEVILLE
Pace Project No.: 92366828

QC Batch: 390928
QC Batch Method: EPA 3546
Analysis Method: EPA 8270
Analysis Description: 8270 Solid MSSV Microwave
Associated Lab Samples: 92366828001

METHOD BLANK: 2169021
Matrix: Solid
Associated Lab Samples: 92366828001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	ND	333	64.6	12/15/17 11:41	
1,2-Dichlorobenzene	ug/kg	ND	333	88.9	12/15/17 11:41	
1,3-Dichlorobenzene	ug/kg	ND	333	75.8	12/15/17 11:41	
1,4-Dichlorobenzene	ug/kg	ND	333	93.9	12/15/17 11:41	
1-Methylnaphthalene	ug/kg	ND	333	86.9	12/15/17 11:41	
2,2'-Oxybis(1-chloropropane)	ug/kg	ND	333	88.9	12/15/17 11:41	
2,4,5-Trichlorophenol	ug/kg	ND	333	103	12/15/17 11:41	
2,4,6-Trichlorophenol	ug/kg	ND	333	73.7	12/15/17 11:41	
2,4-Dichlorophenol	ug/kg	ND	333	72.7	12/15/17 11:41	
2,4-Dimethylphenol	ug/kg	ND	333	131	12/15/17 11:41	
2,4-Dinitrophenol	ug/kg	ND	1670	54.5	12/15/17 11:41	
2,4-Dinitrotoluene	ug/kg	ND	333	62.6	12/15/17 11:41	
2,6-Dinitrotoluene	ug/kg	ND	333	69.7	12/15/17 11:41	
2-Chloronaphthalene	ug/kg	ND	333	65.7	12/15/17 11:41	
2-Chlorophenol	ug/kg	ND	333	90.9	12/15/17 11:41	
2-Methylnaphthalene	ug/kg	ND	333	71.7	12/15/17 11:41	
2-Methylphenol(o-Cresol)	ug/kg	ND	333	101	12/15/17 11:41	
2-Nitroaniline	ug/kg	ND	1670	103	12/15/17 11:41	
2-Nitrophenol	ug/kg	ND	333	80.8	12/15/17 11:41	
3&4-Methylphenol(m&p Cresol)	ug/kg	ND	333	131	12/15/17 11:41	
3,3'-Dichlorobenzidine	ug/kg	ND	1670	72.7	12/15/17 11:41	
3-Nitroaniline	ug/kg	ND	1670	90.9	12/15/17 11:41	
4,6-Dinitro-2-methylphenol	ug/kg	ND	667	66.7	12/15/17 11:41	
4-Bromophenylphenyl ether	ug/kg	ND	333	60.6	12/15/17 11:41	
4-Chloro-3-methylphenol	ug/kg	ND	667	68.7	12/15/17 11:41	
4-Chloroaniline	ug/kg	ND	1670	92.9	12/15/17 11:41	
4-Chlorophenylphenyl ether	ug/kg	ND	333	68.7	12/15/17 11:41	
4-Nitroaniline	ug/kg	ND	667	93.9	12/15/17 11:41	
4-Nitrophenol	ug/kg	ND	1670	59.6	12/15/17 11:41	
Acenaphthene	ug/kg	ND	333	76.8	12/15/17 11:41	
Acenaphthylene	ug/kg	ND	333	78.8	12/15/17 11:41	
Aniline	ug/kg	ND	333	89.9	12/15/17 11:41	
Anthracene	ug/kg	ND	333	74.7	12/15/17 11:41	
Benzo(a)anthracene	ug/kg	ND	333	61.6	12/15/17 11:41	
Benzo(a)pyrene	ug/kg	ND	333	63.6	12/15/17 11:41	
Benzo(b)fluoranthene	ug/kg	ND	333	57.6	12/15/17 11:41	
Benzo(g,h,i)perylene	ug/kg	ND	333	84.8	12/15/17 11:41	
Benzo(k)fluoranthene	ug/kg	ND	333	65.7	12/15/17 11:41	
Benzoic Acid	ug/kg	ND	1670	60.6	12/15/17 11:41	
Benzyl alcohol	ug/kg	ND	667	66.7	12/15/17 11:41	
bis(2-Chloroethoxy)methane	ug/kg	ND	333	77.8	12/15/17 11:41	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(704)875-9092

QUALITY CONTROL DATA

Project: CTS ASHEVILLE
Pace Project No.: 92366828

METHOD BLANK: 2169021 Matrix: Solid
Associated Lab Samples: 92366828001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
bis(2-Chloroethyl) ether	ug/kg	ND	333	84.8	12/15/17 11:41	
bis(2-Ethylhexyl)phthalate	ug/kg	ND	333	90.9	12/15/17 11:41	
Butylbenzylphthalate	ug/kg	ND	333	70.7	12/15/17 11:41	
Chrysene	ug/kg	ND	333	44.4	12/15/17 11:41	
Di-n-butylphthalate	ug/kg	ND	333	54.5	12/15/17 11:41	
Di-n-octylphthalate	ug/kg	ND	333	69.7	12/15/17 11:41	
Dibenz(a,h)anthracene	ug/kg	ND	333	70.7	12/15/17 11:41	
Dibenzofuran	ug/kg	ND	333	54.5	12/15/17 11:41	
Diethylphthalate	ug/kg	ND	333	51.5	12/15/17 11:41	
Dimethylphthalate	ug/kg	ND	333	67.7	12/15/17 11:41	
Fluoranthene	ug/kg	ND	333	48.5	12/15/17 11:41	
Fluorene	ug/kg	ND	333	68.7	12/15/17 11:41	
Hexachloro-1,3-butadiene	ug/kg	ND	333	57.6	12/15/17 11:41	
Hexachlorobenzene	ug/kg	ND	333	42.4	12/15/17 11:41	
Hexachlorocyclopentadiene	ug/kg	ND	333	61.6	12/15/17 11:41	
Hexachloroethane	ug/kg	ND	333	87.9	12/15/17 11:41	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	333	68.7	12/15/17 11:41	
Isophorone	ug/kg	ND	333	74.7	12/15/17 11:41	
N-Nitroso-di-n-propylamine	ug/kg	ND	333	63.6	12/15/17 11:41	
N-Nitrosodimethylamine	ug/kg	ND	333	108	12/15/17 11:41	
N-Nitrosodiphenylamine	ug/kg	ND	333	99.0	12/15/17 11:41	
Naphthalene	ug/kg	ND	333	81.8	12/15/17 11:41	
Nitrobenzene	ug/kg	ND	333	90.9	12/15/17 11:41	
Pentachlorophenol	ug/kg	ND	1670	60.6	12/15/17 11:41	
Phenanthrene	ug/kg	ND	333	55.6	12/15/17 11:41	
Phenol	ug/kg	ND	333	100	12/15/17 11:41	
Pyrene	ug/kg	ND	333	56.6	12/15/17 11:41	
Pyridine	ug/kg	ND	333	73.7	12/15/17 11:41	
2,4,6-Tribromophenol (S)	%	70	27-110		12/15/17 11:41	
2-Fluorobiphenyl (S)	%	81	30-110		12/15/17 11:41	
2-Fluorophenol (S)	%	77	13-110		12/15/17 11:41	
Nitrobenzene-d5 (S)	%	77	23-110		12/15/17 11:41	
Phenol-d6 (S)	%	89	22-110		12/15/17 11:41	
Terphenyl-d14 (S)	%	102	28-110		12/15/17 11:41	

LABORATORY CONTROL SAMPLE: 2169022

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	1630	1320	81	36-120	
1,2-Dichlorobenzene	ug/kg	1630	1350	82	41-120	
1,3-Dichlorobenzene	ug/kg	1630	1330	82	66-120	
1,4-Dichlorobenzene	ug/kg	1630	1340	82	42-120	
1-Methylnaphthalene	ug/kg	1630	1440	88	40-120	
2,2'-Oxybis(1-chloropropane)	ug/kg	1630	1170	71	17-120	

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QUALITY CONTROL DATA

Project: CTS ASHEVILLE
Pace Project No.: 92366828

LABORATORY CONTROL SAMPLE: 2169022

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4,5-Trichlorophenol	ug/kg	1630	1390	85	37-120	
2,4,6-Trichlorophenol	ug/kg	1630	1360	83	40-120	
2,4-Dichlorophenol	ug/kg	1630	1420	87	33-120	
2,4-Dimethylphenol	ug/kg	1630	1350	83	36-120	
2,4-Dinitrophenol	ug/kg	8170	6720	82	22-121	
2,4-Dinitrotoluene	ug/kg	1630	1440	88	60-120	
2,6-Dinitrotoluene	ug/kg	1630	1440	88	54-120	
2-Chloronaphthalene	ug/kg	1630	1550	95	41-120	
2-Chlorophenol	ug/kg	1630	1410	86	39-120	
2-Methylnaphthalene	ug/kg	1630	1420	87	26-120	
2-Methylphenol(o-Cresol)	ug/kg	1630	1420	87	41-120	
2-Nitroaniline	ug/kg	3270	2880	88	45-120	
2-Nitrophenol	ug/kg	1630	1300	79	35-120	
3&4-Methylphenol(m&p Cresol)	ug/kg	1630	1400	85	35-120	
3,3'-Dichlorobenzidine	ug/kg	3270	2980	91	16-125	
3-Nitroaniline	ug/kg	3270	2960	90	45-120	
4,6-Dinitro-2-methylphenol	ug/kg	3270	3270	100	46-120	
4-Bromophenylphenyl ether	ug/kg	1630	1380	85	36-120	
4-Chloro-3-methylphenol	ug/kg	3270	2890	88	37-120	
4-Chloroaniline	ug/kg	3270	2690	82	35-120	
4-Chlorophenylphenyl ether	ug/kg	1630	1350	83	30-120	
4-Nitroaniline	ug/kg	3270	3170	97	48-120	
4-Nitrophenol	ug/kg	8170	7220	88	43-120	
Acenaphthene	ug/kg	1630	1530	94	46-120	
Acenaphthylene	ug/kg	1630	1520	93	46-120	
Aniline	ug/kg	1630	1260	77	33-120	
Anthracene	ug/kg	1630	1560	95	63-120	
Benzo(a)anthracene	ug/kg	1630	1580	96	61-120	
Benzo(a)pyrene	ug/kg	1630	1610	98	59-120	
Benzo(b)fluoranthene	ug/kg	1630	1480	91	55-120	
Benzo(g,h,i)perylene	ug/kg	1630	1500	92	57-120	
Benzo(k)fluoranthene	ug/kg	1630	1660	102	56-120	
Benzoic Acid	ug/kg	8170	4910	60	13-120	
Benzyl alcohol	ug/kg	3270	2810	86	34-120	
bis(2-Chloroethoxy)methane	ug/kg	1630	1490	91	21-120	
bis(2-Chloroethyl) ether	ug/kg	1630	1340	82	25-120	
bis(2-Ethylhexyl)phthalate	ug/kg	1630	1830	112	56-123	
Butylbenzylphthalate	ug/kg	1630	1880	115	57-120	
Chrysene	ug/kg	1630	1670	102	64-120	
Di-n-butylphthalate	ug/kg	1630	1640	100	58-120	
Di-n-octylphthalate	ug/kg	1630	1900	116	47-121	
Dibenz(a,h)anthracene	ug/kg	1630	1530	93	56-120	
Dibenzofuran	ug/kg	1630	1500	92	43-120	
Diethylphthalate	ug/kg	1630	1540	94	55-120	
Dimethylphthalate	ug/kg	1630	1500	92	54-120	
Fluoranthene	ug/kg	1630	1530	93	61-120	
Fluorene	ug/kg	1630	1490	91	51-120	

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REPORT OF LABORATORY ANALYSIS

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Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: CTS ASHEVILLE
Pace Project No.: 92366828

LABORATORY CONTROL SAMPLE: 2169022

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hexachloro-1,3-butadiene	ug/kg	1630	1240	76	22-120	
Hexachlorobenzene	ug/kg	1630	1450	89	53-120	
Hexachlorocyclopentadiene	ug/kg	1630	1230	75	18-150	
Hexachloroethane	ug/kg	1630	1330	81	39-120	
Indeno(1,2,3-cd)pyrene	ug/kg	1630	1510	93	58-120	
Isophorone	ug/kg	1630	1400	86	38-120	
N-Nitroso-di-n-propylamine	ug/kg	1630	1440	88	30-120	
N-Nitrosodimethylamine	ug/kg	1630	1490	91	32-120	
N-Nitrosodiphenylamine	ug/kg	1630	1540	94	50-120	
Naphthalene	ug/kg	1630	1410	86	38-120	
Nitrobenzene	ug/kg	1630	1360	83	37-120	
Pentachlorophenol	ug/kg	3270	2550	78	10-120	
Phenanthrene	ug/kg	1630	1540	94	62-120	
Phenol	ug/kg	1630	1500	92	37-120	
Pyrene	ug/kg	1630	1640	100	63-120	
Pyridine	ug/kg	1630	1170	71	15-120	
2,4,6-Tribromophenol (S)	%			92	27-110	
2-Fluorobiphenyl (S)	%			89	30-110	
2-Fluorophenol (S)	%			84	13-110	
Nitrobenzene-d5 (S)	%			85	23-110	
Phenol-d6 (S)	%			93	22-110	
Terphenyl-d14 (S)	%			95	28-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2169023 2169024

Parameter	Units	92367006002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2,4-Trichlorobenzene	ug/kg	ND	1920	1880	946	979	49	52	18-119	4	30	
1,2-Dichlorobenzene	ug/kg	ND	1920	1880	983	1010	51	54	50-110	2	30	
1,3-Dichlorobenzene	ug/kg	ND	1920	1880	966	992	50	53	27-110	3	30	
1,4-Dichlorobenzene	ug/kg	ND	1920	1880	963	1010	50	54	28-110	5	30	
1-Methylnaphthalene	ug/kg	ND	1920	1880	1140	1180	60	63	24-116	3	30	
2,2'-Oxybis(1-chloropropane)	ug/kg	ND	1920	1880	801	854	42	46	50-150	6	30	M1
2,4,5-Trichlorophenol	ug/kg	ND	1920	1880	1240	1290	65	69	28-110	4	30	
2,4,6-Trichlorophenol	ug/kg	ND	1920	1880	1120	1210	59	64	17-117	7	30	
2,4-Dichlorophenol	ug/kg	ND	1920	1880	1060	1120	55	60	21-128	5	30	
2,4-Dimethylphenol	ug/kg	ND	1920	1880	810	876	42	47	10-120	8	30	
2,4-Dinitrophenol	ug/kg	ND	9580	9360	6240	7590	65	81	10-107	19	30	
2,4-Dinitrotoluene	ug/kg	ND	1920	1880	1420	1510	74	81	36-109	6	30	
2,6-Dinitrotoluene	ug/kg	ND	1920	1880	1390	1480	72	79	32-110	6	30	
2-Chloronaphthalene	ug/kg	ND	1920	1880	1250	1250	65	67	30-107	0	30	
2-Chlorophenol	ug/kg	ND	1920	1880	939	1050	49	56	14-106	11	30	
2-Methylnaphthalene	ug/kg	ND	1920	1880	1120	1160	58	62	10-135	4	30	
2-Methylphenol(o-Cresol)	ug/kg	ND	1920	1880	874	1000	46	53	10-124	14	30	
2-Nitroaniline	ug/kg	ND	3830	3740	2960	3070	77	82	26-116	4	30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CTS ASHEVILLE
Pace Project No.: 92366828

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2169023 2169024

Parameter	Units	92367006002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
2-Nitrophenol	ug/kg	ND	1920	1880	929	1000	48	54	28-103	8	30	
3&4-Methylphenol(m&p Cresol)	ug/kg	ND	1920	1880	924	1040	48	55	10-109	12	30	
3,3'-Dichlorobenzidine	ug/kg	ND	3830	3740	2280	2680	60	72	10-150	16	30	
3-Nitroaniline	ug/kg	ND	3830	3740	2960	3170	77	85	22-110	7	30	
4,6-Dinitro-2-methylphenol	ug/kg	ND	3830	3740	2850	3420	74	91	13-121	18	30	
4-Bromophenylphenyl ether	ug/kg	ND	1920	1880	1320	1410	69	75	31-109	6	30	
4-Chloro-3-methylphenol	ug/kg	ND	3830	3740	2510	2710	65	72	13-128	8	30	
4-Chloroaniline	ug/kg	ND	3830	3740	2150	2290	56	61	18-102	6	30	
4-Chlorophenylphenyl ether	ug/kg	ND	1920	1880	1250	1310	65	70	29-112	4	30	
4-Nitroaniline	ug/kg	ND	3830	3740	3220	3380	84	90	16-111	5	30	
4-Nitrophenol	ug/kg	ND	9580	9360	7010	7710	73	82	14-135	9	30	
Acenaphthene	ug/kg	ND	1920	1880	1330	1380	70	74	26-114	4	30	
Acenaphthylene	ug/kg	ND	1920	1880	1310	1360	68	73	32-108	4	30	
Aniline	ug/kg	ND	1920	1880	705	830	37	44	10-107	16	30	
Anthracene	ug/kg	ND	1920	1880	1560	1640	82	87	32-111	5	30	
Benzo(a)anthracene	ug/kg	ND	1920	1880	1580	1710	82	91	25-117	8	30	
Benzo(a)pyrene	ug/kg	ND	1920	1880	1620	1750	84	94	25-106	8	30	
Benzo(b)fluoranthene	ug/kg	ND	1920	1880	1500	1640	78	87	24-110	9	30	
Benzo(g,h,i)perylene	ug/kg	ND	1920	1880	1540	1630	80	87	19-112	6	30	
Benzo(k)fluoranthene	ug/kg	ND	1920	1880	1680	1810	85	94	24-114	7	30	
Benzoic Acid	ug/kg	ND	9580	9360	4320	5600	45	60	10-110	26	30	
Benzyl alcohol	ug/kg	ND	3830	3740	2050	2270	54	61	24-106	10	30	
bis(2-Chloroethoxy)methane	ug/kg	ND	1920	1880	1080	1120	57	60	13-119	4	30	
bis(2-Chloroethyl) ether	ug/kg	ND	1920	1880	974	1050	51	56	10-134	7	30	
bis(2-Ethylhexyl)phthalate	ug/kg	ND	1920	1880	1900	2020	99	108	10-125	6	30	
Butylbenzylphthalate	ug/kg	ND	1920	1880	1970	2060	102	110	18-110	5	30	
Chrysene	ug/kg	ND	1920	1880	1720	1770	90	95	30-110	3	30	
Di-n-butylphthalate	ug/kg	ND	1920	1880	1630	1720	85	92	19-112	5	30	
Di-n-octylphthalate	ug/kg	ND	1920	1880	1800	2060	94	110	17-105	13	30	M1
Dibenz(a,h)anthracene	ug/kg	ND	1920	1880	1500	1610	78	86	23-111	7	30	
Dibenzofuran	ug/kg	ND	1920	1880	1380	1430	72	76	35-103	3	30	
Diethylphthalate	ug/kg	ND	1920	1880	1520	1600	79	85	27-113	5	30	
Dimethylphthalate	ug/kg	ND	1920	1880	1460	1510	76	81	26-111	4	30	
Fluoranthene	ug/kg	ND	1920	1880	1510	1560	79	83	33-109	3	30	
Fluorene	ug/kg	ND	1920	1880	1400	1480	73	79	32-113	5	30	
Hexachloro-1,3-butadiene	ug/kg	ND	1920	1880	863	869	45	46	16-116	1	30	
Hexachlorobenzene	ug/kg	ND	1920	1880	1410	1490	74	80	27-120	5	30	
Hexachlorocyclopentadiene	ug/kg	ND	1920	1880	737	831	38	44	10-108	12	30	
Hexachloroethane	ug/kg	ND	1920	1880	926	934	48	50	10-117	1	30	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	1920	1880	1540	1620	80	86	10-122	5	30	
Isophorone	ug/kg	ND	1920	1880	1180	1240	62	66	28-114	5	30	
N-Nitroso-di-n-propylamine	ug/kg	ND	1920	1880	1100	1200	58	64	27-113	8	30	
N-Nitrosodimethylamine	ug/kg	ND	1920	1880	1050	1120	55	60	10-109	6	30	
N-Nitrosodiphenylamine	ug/kg	ND	1920	1880	1390	1540	72	82	10-128	10	30	
Naphthalene	ug/kg	ND	1920	1880	1040	1070	54	57	25-110	3	30	

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QUALITY CONTROL DATA

Project: CTS ASHEVILLE
Pace Project No.: 92366828

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2169023 2169024

Parameter	Units	92367006002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrobenzene	ug/kg	ND	1920	1880	967	998	50	53	18-114	3	30	
Pentachlorophenol	ug/kg	ND	3830	3740	2350	2680	61	72	10-122	13	30	
Phenanthrene	ug/kg	ND	1920	1880	1550	1610	81	86	30-114	4	30	
Phenol	ug/kg	ND	1920	1880	975	1100	51	59	11-102	12	30	
Pyrene	ug/kg	ND	1920	1880	1820	1810	95	97	25-116	0	30	
2,4,6-Tribromophenol (S)	%						67	76	27-110			
2-Fluorobiphenyl (S)	%						57	60	30-110			
2-Fluorophenol (S)	%						44	50	13-110			
Nitrobenzene-d5 (S)	%						49	54	23-110			
Phenol-d6 (S)	%						50	58	22-110			
Terphenyl-d14 (S)	%						86	89	28-110			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: CTS ASHEVILLE
Pace Project No.: 92366828

QC Batch: 390761 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 92366828001, 92366828002, 92366828003, 92366828004, 92366828005, 92366828006, 92366828007, 92366828008, 92366828009, 92366828010, 92366828011, 92366828012, 92366828013

SAMPLE DUPLICATE: 2168265

Parameter	Units	92366828001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	12.7	12.8	1	25	

SAMPLE DUPLICATE: 2168266

Parameter	Units	92366933002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	20.8	19.9	5	25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: CTS ASHEVILLE
Pace Project No.: 92366828

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-A	Pace Analytical Services - Asheville
PASI-C	Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
S1	Surrogate recovery outside laboratory control limits (confirmed by re-analysis).
S2	Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).
S4	Surrogate recovery not evaluated against control limits due to sample dilution.
S5	Surrogate recovery outside control limits due to matrix interferences (not confirmed by re-analysis).

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92366828009	**IDW-Z2-3**	EPA 3050	390896	EPA 6010	390982
92366828010	**IDW-Z2-4**	EPA 6010	390982		
92366828001	**IDW-Z1-1**	EPA 3010A	392058	EPA 6010	392070
92366828002	**IDW-Z1-2**	EPA 3010A	392058	EPA 6010	392070
92366828003	**IDW-Z1-3**	EPA 3010A	392058	EPA 6010	392070
92366828004	**IDW-Z1-4**	EPA 3010A	392058	EPA 6010	392070
92366828005	**IDW-Z1-5**	EPA 3010A	392058	EPA 6010	392070
92366828006	**IDW-Z1-6**	EPA 3010A	392058	EPA 6010	392070
92366828001	**IDW-Z1-1**	EPA 7470	392059	EPA 7470	392075
92366828002	**IDW-Z1-2**	EPA 7470	392059	EPA 7470	392075
92366828003	**IDW-Z1-3**	EPA 7470	392059	EPA 7470	392075
92366828004	**IDW-Z1-4**	EPA 7470	392059	EPA 7470	392075
92366828005	**IDW-Z1-5**	EPA 7470	392059	EPA 7470	392075
92366828006	**IDW-Z1-6**	EPA 7470	392059	EPA 7470	392075
92366828001	**IDW-Z1-1**	EPA 3546	390928	EPA 8270	391070
92366828002	**IDW-Z1-2**	EPA 3546	390794	EPA 8270	390953
92366828003	**IDW-Z1-3**	EPA 3546	390794	EPA 8270	390953
92366828004	**IDW-Z1-4**	EPA 3546	390794	EPA 8270	390953
92366828005	**IDW-Z1-5**	EPA 3546	390794	EPA 8270	390953
92366828006	**IDW-Z1-6**	EPA 3546	390794	EPA 8270	390953
92366828007	**IDW-Z2-1**	EPA 3546	390794	EPA 8270	390953
92366828008	**IDW-Z2-2**	EPA 3546	390794	EPA 8270	390953
92366828009	**IDW-Z2-3**	EPA 3546	390794	EPA 8270	390953
92366828010	**IDW-Z2-4**	EPA 3546	390794	EPA 8270	390953
92366828011	**IDW-Z3-1**	EPA 3546	390794	EPA 8270	390953
92366828012	**IDW-Z3-2**	EPA 3546	390794	EPA 8270	390953
92366828013	**IDW-Z3-3**	EPA 3546	390794	EPA 8270	390953
92366828001	**IDW-Z1-1**	EPA 8260	390935		
92366828002	**IDW-Z1-2**	EPA 8260	390935		
92366828003	**IDW-Z1-3**	EPA 8260	390935		
92366828004	**IDW-Z1-4**	EPA 8260	390935		
92366828005	**IDW-Z1-5**	EPA 8260	391378		
92366828006	**IDW-Z1-6**	EPA 8260	390935		
92366828007	**IDW-Z2-1**	EPA 8260	390935		
92366828008	**IDW-Z2-2**	EPA 8260	390935		
92366828009	**IDW-Z2-3**	EPA 8260	390935		
92366828010	**IDW-Z2-4**	EPA 8260	390935		
92366828011	**IDW-Z3-1**	EPA 8260	390935		
92366828012	**IDW-Z3-2**	EPA 8260	390935		
92366828013	**IDW-Z3-3**	EPA 8260	390935		
92366828001	**IDW-Z1-1**	ASTM D2974-87	390761		
92366828002	**IDW-Z1-2**	ASTM D2974-87	390761		
92366828003	**IDW-Z1-3**	ASTM D2974-87	390761		
92366828004	**IDW-Z1-4**	ASTM D2974-87	390761		

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CTS ASHEVILLE
Pace Project No.: 92366828

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92366828005	**IDW-Z1-5**	ASTM D2974-87	390761		
92366828006	**IDW-Z1-6**	ASTM D2974-87	390761		
92366828007	**IDW-Z2-1**	ASTM D2974-87	390761		
92366828008	**IDW-Z2-2**	ASTM D2974-87	390761		
92366828009	**IDW-Z2-3**	ASTM D2974-87	390761		
92366828010	**IDW-Z2-4**	ASTM D2974-87	390761		
92366828011	**IDW-Z3-1**	ASTM D2974-87	390761		
92366828012	**IDW-Z3-2**	ASTM D2974-87	390761		
92366828013	**IDW-Z3-3**	ASTM D2974-87	390761		

Pace Analytical	Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: August 4, 2017 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.04	Issuing Authority: Pace Quality Office

Laboratory receiving samples:
Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☑ Raleigh ☐ Mechanicsville ☐

Sample Condition Upon Receipt

Client Name: AMEC Foster Wheeler

Project #:

WO#: 92366828

92366828

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other:

Custody Seal Present? ☑ Yes ☐ No **Seals Intact?** ☑ Yes ☐ No

Date/Initials Person Examining Contents: MK 12/13

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

Biological Tissue Frozen? ☐ Yes ☐ No ☑ N/A

Thermometer: ☑ IR Gun ID: T1704

Type of Ice: ☑ Wet ☐ Blue ☐ None

Correction Factor: **Cooler Temp Corrected (°C):** 2.9 ; 0.7

Temp should be above freezing to 6°C
☐ Samples out of temp criteria. Samples on ice, cooling process has begun

USDA Regulated Soil (☐ N/A, water sample)
Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☑ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☑ No

				Comments/Discrepancy:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	2.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☑ No	☐ N/A	3.
Rush Turn Around Time Requested?	☑ Yes	☐ No	☐ N/A	4.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	5.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	7.
Dissolved analysis: Samples Field Filtered?	☐ Yes	☐ No	☑ N/A	8.
Sample Labels Match COC?	☑ Yes	☐ No	☐ N/A	9. IDW-23-1 4/Kit not labeled
-Includes Date/Time/ID/Analysis Matrix: SL				
Headspace in VOA Vials (>5-6mm)?	☐ Yes	☐ No	☑ N/A	10.
Trip Blank Present?	☐ Yes	☑ No	☐ N/A	11.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Sample Discrepancy: _____

Lot ID of split containers: _____

Project Manager SCURF Review: [signature] **Date:** 12/14

Project Manager SRF Review: [signature] **Date:** 12/14

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)

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.
**Bottom half of box is to list number of bottles

Project # WO#: 92366828

PM: PTE Due Date: 12/15/17

CLIENT: 92-AMEC A

P. 1

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	Cubitainer	VSGU-20 mL Scintillation vials (N/A)	GN
1									2											4									
2									2											4									
3									2											4									
4									2											4									
5									2											4									
6									2											4									
7									1											4									
8									1											4									
9									1											4									
10									1											4									
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

**Bottom half of box is to list number of bottles

Project # WO#: 92366828

PM: PTE Due Date: 12/15/17

CLIENT: 92-AMEC A

P.2

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SPST-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	Cubitainer	VSGU-20 mL Scintillation vials (N/A)	GN
1									1											4									
2									1											4									
3									1											4									
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

CHAIN-OF-CUSTODY / Analytical Request Document

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

Pace Analytical®
www.pacelabs.com

Page: 1 of 2

2180172

Section A Required Client Information:
Company: Amec Foster wheeler
Address: 1308 Patton Ave
Asheville NC 28806
Email To: susan.avritt@amecfw.com
Phone: 828-252-8130 Fax:
Requested Due Date/TAT: (48-hr)

Section B Required Project Information:
Report To: Susan Avritt
Copy To:
Purchase Order No.:
Project Name: CTS of Asheville
Project Number: 625216 2012.05

Section C Invoice Information:
Attention: Susan Avritt
Company Name:
Address: susan.avritt@amecfw.com
Pace Quote Reference:
Pace Project Manager: Taylor Etzel
Pace Profile #:

REGULATORY AGENCY
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☒ OTHER
Site Location STATE: NC

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: 1	2	3	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		8260 VOCs	8270 SVOCs	TCLP Rver+Mercury		
1	IDW-Z1-1	SL				12/12/17	9:00		6	3						1	2	X	X	X		001
2	IDW-Z1-2	SL				12/12/17	9:05		6	3						1	2	X	X	X		002
3	IDW-Z1-3	SL				12/12/17	9:10		6	3						1	2	X	X	X		003
4	IDW-Z1-4	SL				12/12/17	9:20		6	3						1	2	X	X	X		004
5	IDW-Z1-5	SL				12/12/17	9:35		6	3						1	2	X	X	X		005
6	IDW-Z1-6	SL				12/12/17	9:45		6	3						1	2	X	X	X		006
7	IDW-Z2-1	SL				12/12/17	9:15		5	2						1	2	X	X	X		007
8	IDW-Z2-2	SL				12/12/17	9:30		5	2						1	2	X	X	X		008
9	IDW-Z2-3	SL				12/12/17	9:50		5	2						1	2	X	X	X		009
10	IDW-Z2-4	SL				12/12/17	10:15		5	2						1	2	X	X	X		010
11	IDW-Z2-5 SEA 12/12/17	SL				12/12/17																
12	IDW-Z2-6 SEA 12/12/17	SL				12/12/17																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	[signature] Amec	12/12/17	1700	Michael Le Pore	12/13	10:20

SAMPLE CONDITIONS

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

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Susan Avritt
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 12/12/17

Form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

CHAIN-OF-CUSTODY / Analytical Request Document

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

Pace Analytical®
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Page: 2 of 2

2180171

Section A Required Client Information:

Company: Amec Foster Wheeler
Address: 1500 Patton Avenue Asheville, NC 28806
Email To: susan.avritt@amecfw.com
Phone: 828-252-8130 Fax:
Requested Due Date/TAT: (48-hr)

Section B Required Project Information:

Report To: Susan Avritt
Copy To:
Purchase Order No.:
Project Name: UTS of Asheville
Project Number: 6252162012.05

Section C Invoice Information:

Attention: Susan Avritt
Company Name:
Address: susan.avritt@amecfw.com
Pace Quote Reference:
Pace Project Manager: Taylor Ezell
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☒ OTHER

Site Location STATE: NC

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	8260 VOCs	8270 SVOCs	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	1DW-Z3-1	SL				12/12/17	10:10		5	2						1	2		X	X		92366829 01
2	1DW-Z3-2	SL				12/12/17	10:35		5	2						1	2		X	X		02
3	1DW-Z3-3	SL				12/12/17	10:50		5	2						1	2		X	X		03
4	~~1DW-Z3-4~~ SEA 12/12/17	SL				12/12/17			5													
5	~~1DW-Z3-5~~ SEA 12/12/17	SL				12/12/17			5													
6	~~1DW-Z3-6~~ SEA 12/12/17	SL				12/12/17			5													
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	[signature] AMECFW	12/12/17	1700	Michael G Pace	12/13	10120	2.9 / .7 Y Y Y

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

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Susan Avritt
SIGNATURE of SAMPLER: Susan Avritt
DATE Signed (MM/DD/YY): 12/12/17

*By signing you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

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

December 28, 2017

Susan Avritt
Amec Foster Wheeler
1308 Patton Avenue
Asheville, NC 28806

RE: Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

Dear Susan Avritt:
Enclosed are the analytical results for sample(s) received by the laboratory on December 14, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Report revised 12/28/17 to add Pyridine at client request.

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

Sincerely,

Taylor Ezell
taylor.ezell@pacelabs.com
(704)875-9092
Project Manager

Enclosures

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

CERTIFICATIONS

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
Louisiana/NELAP Certification # LA170028
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
Virginia/VELAP Certification #: 460221

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92366989001	**IDW-Z2-5**	Solid	12/13/17 08:30	12/14/17 10:45
92366989002	**IDW-Z2-6**	Solid	12/13/17 08:55	12/14/17 10:45
92366989003	**IDW-Z3-4**	Solid	12/13/17 09:05	12/14/17 10:45
92366989004	**IDW-Z3-5**	Solid	12/13/17 09:20	12/14/17 10:45
92366989005	**IDW-Z3-6**	Solid	12/13/17 11:40	12/14/17 10:45

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92366989001	**IDW-Z2-5**	EPA 8270	BPJ	75	PASI-C
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92366989002	**IDW-Z2-6**	EPA 8270	BPJ	75	PASI-C
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92366989003	**IDW-Z3-4**	EPA 8270	BPJ	75	PASI-C
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92366989004	**IDW-Z3-5**	EPA 8270	BPJ	75	PASI-C
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92366989005	**IDW-Z3-6**	EPA 8270	BPJ	75	PASI-C
		EPA 8260	DLK	70	PASI-C
		ASTM D2974-87	KDF	1	PASI-C

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SUMMARY OF DETECTION

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92366989001	**IDW-Z2-5**					
EPA 8270	Fluorene	1750J	ug/kg	3940	12/18/17 10:30	
EPA 8270	1-Methylnaphthalene	16900	ug/kg	3940	12/18/17 10:30	
EPA 8270	2-Methylnaphthalene	13100	ug/kg	3940	12/18/17 10:30	
EPA 8270	Phenanthrene	5820	ug/kg	3940	12/18/17 10:30	
EPA 8260	sec-Butylbenzene	976	ug/kg	263	12/14/17 19:52	
EPA 8260	tert-Butylbenzene	223J	ug/kg	263	12/14/17 19:52	
EPA 8260	Ethylbenzene	1270	ug/kg	263	12/14/17 19:52	
EPA 8260	Isopropylbenzene (Cumene)	588	ug/kg	263	12/14/17 19:52	
EPA 8260	p-Isopropyltoluene	5520	ug/kg	263	12/14/17 19:52	
EPA 8260	Naphthalene	1540	ug/kg	263	12/14/17 19:52	
EPA 8260	n-Propylbenzene	969	ug/kg	263	12/14/17 19:52	
EPA 8260	1,1,1-Trichloroethane	195J	ug/kg	263	12/14/17 19:52	
EPA 8260	Trichloroethene	25900	ug/kg	1310	12/15/17 16:14	
EPA 8260	1,2,4-Trimethylbenzene	2640	ug/kg	263	12/14/17 19:52	
EPA 8260	1,3,5-Trimethylbenzene	7840	ug/kg	263	12/14/17 19:52	
EPA 8260	Xylene (Total)	3860	ug/kg	525	12/14/17 19:52	
EPA 8260	m&p-Xylene	770	ug/kg	525	12/14/17 19:52	
EPA 8260	o-Xylene	3090	ug/kg	263	12/14/17 19:52	
ASTM D2974-87	Percent Moisture	14.4	%	0.10	12/15/17 11:31	
92366989002	**IDW-Z2-6**					
EPA 8260	Naphthalene	3.1J	ug/kg	4.7	12/14/17 20:12	
EPA 8260	Trichloroethene	4.2J	ug/kg	4.7	12/14/17 20:12	
EPA 8260	1,3,5-Trimethylbenzene	1.9J	ug/kg	4.7	12/14/17 20:12	
ASTM D2974-87	Percent Moisture	19.9	%	0.10	12/15/17 11:31	
92366989003	**IDW-Z3-4**					
EPA 8270	1-Methylnaphthalene	1650	ug/kg	445	12/17/17 18:59	
EPA 8270	2-Methylnaphthalene	2520	ug/kg	445	12/17/17 18:59	
EPA 8270	Naphthalene	603	ug/kg	445	12/17/17 18:59	
EPA 8270	Phenanthrene	264J	ug/kg	445	12/17/17 18:59	
EPA 8260	Benzene	57.2J	ug/kg	135	12/14/17 20:32	
EPA 8260	n-Butylbenzene	296	ug/kg	135	12/14/17 20:32	
EPA 8260	sec-Butylbenzene	242	ug/kg	135	12/14/17 20:32	
EPA 8260	Ethylbenzene	353	ug/kg	135	12/14/17 20:32	
EPA 8260	Isopropylbenzene (Cumene)	180	ug/kg	135	12/14/17 20:32	
EPA 8260	p-Isopropyltoluene	542	ug/kg	135	12/14/17 20:32	
EPA 8260	Naphthalene	1340	ug/kg	135	12/14/17 20:32	
EPA 8260	n-Propylbenzene	352	ug/kg	135	12/14/17 20:32	
EPA 8260	Toluene	207	ug/kg	135	12/14/17 20:32	
EPA 8260	1,1,1-Trichloroethane	151	ug/kg	135	12/14/17 20:32	
EPA 8260	Trichloroethene	13800	ug/kg	1080	12/15/17 16:34	
EPA 8260	1,2,4-Trimethylbenzene	1940	ug/kg	135	12/14/17 20:32	
EPA 8260	1,3,5-Trimethylbenzene	758	ug/kg	135	12/14/17 20:32	
EPA 8260	Xylene (Total)	1820	ug/kg	270	12/14/17 20:32	
EPA 8260	m&p-Xylene	1170	ug/kg	270	12/14/17 20:32	
EPA 8260	o-Xylene	645	ug/kg	135	12/14/17 20:32	
ASTM D2974-87	Percent Moisture	27.2	%	0.10	12/15/17 11:32	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(704)875-9092

SUMMARY OF DETECTION

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92366989004	**IDW-Z3-5**					
EPA 8260	Naphthalene	3.3J	ug/kg	6.2	12/14/17 20:52	
EPA 8260	Trichloroethene	124	ug/kg	6.2	12/14/17 20:52	
ASTM D2974-87	Percent Moisture	27.6	%	0.10	12/15/17 11:32	
92366989005	**IDW-Z3-6**					
EPA 8270	Dibenzofuran	414J	ug/kg	499	12/17/17 19:55	
EPA 8270	1-Methylnaphthalene	9950	ug/kg	2490	12/18/17 10:59	
EPA 8270	2-Methylnaphthalene	17200	ug/kg	2490	12/18/17 10:59	
EPA 8270	Naphthalene	4590	ug/kg	499	12/17/17 19:55	
EPA 8270	Phenanthrene	1820	ug/kg	499	12/17/17 19:55	
EPA 8270	Pyrene	141J	ug/kg	499	12/17/17 19:55	
EPA 8260	Benzene	2.4J	ug/kg	6.2	12/14/17 21:12	
EPA 8260	n-Butylbenzene	52.8	ug/kg	6.2	12/14/17 21:12	
EPA 8260	sec-Butylbenzene	51.6	ug/kg	6.2	12/14/17 21:12	
EPA 8260	tert-Butylbenzene	3.2J	ug/kg	6.2	12/14/17 21:12	
EPA 8260	cis-1,2-Dichloroethene	12.0	ug/kg	6.2	12/14/17 21:12	
EPA 8260	Ethylbenzene	10.3	ug/kg	6.2	12/14/17 21:12	
EPA 8260	Isopropylbenzene (Cumene)	40.6	ug/kg	6.2	12/14/17 21:12	
EPA 8260	p-Isopropyltoluene	110	ug/kg	6.2	12/14/17 21:12	
EPA 8260	Naphthalene	11000	ug/kg	5620	12/18/17 13:27	
EPA 8260	n-Propylbenzene	62.8	ug/kg	6.2	12/14/17 21:12	
EPA 8260	1,1,1-Trichloroethane	75.0	ug/kg	6.2	12/14/17 21:12	
EPA 8260	Trichloroethene	108000	ug/kg	5620	12/18/17 13:27	
EPA 8260	1,2,4-Trimethylbenzene	10700	ug/kg	5620	12/18/17 13:27	
EPA 8260	1,3,5-Trimethylbenzene	75.3	ug/kg	6.2	12/14/17 21:12	
EPA 8260	Xylene (Total)	199	ug/kg	12.3	12/14/17 21:12	
EPA 8260	m&p-Xylene	70.0	ug/kg	12.3	12/14/17 21:12	
EPA 8260	o-Xylene	129	ug/kg	6.2	12/14/17 21:12	
ASTM D2974-87	Percent Moisture	32.9	%	0.10	12/15/17 11:32	

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PROJECT NARRATIVE

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

Method: **EPA 8270**
Description: 8270 MSSV Microwave
Client: Amec Foster Wheeler, Asheville
Date: December 28, 2017

General Information:
5 samples were analyzed for EPA 8270. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

QC Batch: 390928

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

- IDW-Z2-5 (Lab ID: 92366989001)
  - 2,4,6-Tribromophenol (S)
  - 2-Fluorobiphenyl (S)
  - 2-Fluorophenol (S)
  - Nitrobenzene-d5 (S)
  - Phenol-d6 (S)
  - Terphenyl-d14 (S)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

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PROJECT NARRATIVE

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

Method: **EPA 8270**
Description: 8270 MSSV Microwave
Client: Amec Foster Wheeler, Asheville
Date: December 28, 2017

QC Batch: 390928

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92367006002

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

- MS (Lab ID: 2169023)
  - 2,2'-Oxybis(1-chloropropane)
- MSD (Lab ID: 2169024)
  - 2,2'-Oxybis(1-chloropropane)
  - Di-n-octylphthalate

Additional Comments:

Analyte Comments:

QC Batch: 390928

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- IDW-Z2-5 (Lab ID: 92366989001)
  - Nitrobenzene-d5 (S)

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PROJECT NARRATIVE

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

Method: **EPA 8260**
Description: 8260/5035A Volatile Organics
Client: Amec Foster Wheeler, Asheville
Date: December 28, 2017

General Information:
5 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

QC Batch: 390935

S1: Surrogate recovery outside laboratory control limits (confirmed by re-analysis).
- IDW-Z2-5 (Lab ID: 92366989001)
  - 4-Bromofluorobenzene (S)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 390935

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92367006002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- MS (Lab ID: 2169715)
  - Acetone

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

Method: **EPA 8260**
Description: 8260/5035A Volatile Organics
Client: Amec Foster Wheeler, Asheville
Date: December 28, 2017

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

Sample: IDW-Z2-5 **Lab ID: 92366989001** Collected: 12/13/17 08:30 Received: 12/14/17 10:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Acenaphthene	ND	ug/kg	3940	906	10	12/14/17 13:12	12/18/17 10:30	83-32-9	
Acenaphthylene	ND	ug/kg	3940	930	10	12/14/17 13:12	12/18/17 10:30	208-96-8	
Aniline	ND	ug/kg	3940	1060	10	12/14/17 13:12	12/18/17 10:30	62-53-3	
Anthracene	ND	ug/kg	3940	882	10	12/14/17 13:12	12/18/17 10:30	120-12-7	
Benzo(a)anthracene	ND	ug/kg	3940	727	10	12/14/17 13:12	12/18/17 10:30	56-55-3	
Benzo(a)pyrene	ND	ug/kg	3940	751	10	12/14/17 13:12	12/18/17 10:30	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	3940	680	10	12/14/17 13:12	12/18/17 10:30	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	3940	1000	10	12/14/17 13:12	12/18/17 10:30	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	3940	775	10	12/14/17 13:12	12/18/17 10:30	207-08-9	
Benzoic Acid	ND	ug/kg	19700	715	10	12/14/17 13:12	12/18/17 10:30	65-85-0	
Benzyl alcohol	ND	ug/kg	7870	787	10	12/14/17 13:12	12/18/17 10:30	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	3940	715	10	12/14/17 13:12	12/18/17 10:30	101-55-3	
Butylbenzylphthalate	ND	ug/kg	3940	835	10	12/14/17 13:12	12/18/17 10:30	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	7870	811	10	12/14/17 13:12	12/18/17 10:30	59-50-7	
4-Chloroaniline	ND	ug/kg	19700	1100	10	12/14/17 13:12	12/18/17 10:30	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	3940	918	10	12/14/17 13:12	12/18/17 10:30	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	3940	1000	10	12/14/17 13:12	12/18/17 10:30	111-44-4	
2-Chloronaphthalene	ND	ug/kg	3940	775	10	12/14/17 13:12	12/18/17 10:30	91-58-7	
2-Chlorophenol	ND	ug/kg	3940	1070	10	12/14/17 13:12	12/18/17 10:30	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	3940	811	10	12/14/17 13:12	12/18/17 10:30	7005-72-3	
Chrysene	ND	ug/kg	3940	525	10	12/14/17 13:12	12/18/17 10:30	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	3940	835	10	12/14/17 13:12	12/18/17 10:30	53-70-3	
Dibenzofuran	ND	ug/kg	3940	644	10	12/14/17 13:12	12/18/17 10:30	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	3940	1050	10	12/14/17 13:12	12/18/17 10:30	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	3940	894	10	12/14/17 13:12	12/18/17 10:30	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	3940	1110	10	12/14/17 13:12	12/18/17 10:30	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	19700	859	10	12/14/17 13:12	12/18/17 10:30	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	3940	859	10	12/14/17 13:12	12/18/17 10:30	120-83-2	
Diethylphthalate	ND	ug/kg	3940	608	10	12/14/17 13:12	12/18/17 10:30	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	3940	1550	10	12/14/17 13:12	12/18/17 10:30	105-67-9	
Dimethylphthalate	ND	ug/kg	3940	799	10	12/14/17 13:12	12/18/17 10:30	131-11-3	
Di-n-butylphthalate	ND	ug/kg	3940	644	10	12/14/17 13:12	12/18/17 10:30	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	7870	787	10	12/14/17 13:12	12/18/17 10:30	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	19700	644	10	12/14/17 13:12	12/18/17 10:30	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	3940	739	10	12/14/17 13:12	12/18/17 10:30	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	3940	823	10	12/14/17 13:12	12/18/17 10:30	606-20-2	
Di-n-octylphthalate	ND	ug/kg	3940	823	10	12/14/17 13:12	12/18/17 10:30	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	3940	1070	10	12/14/17 13:12	12/18/17 10:30	117-81-7	
Fluoranthene	ND	ug/kg	3940	572	10	12/14/17 13:12	12/18/17 10:30	206-44-0	
Fluorene	**1750J**	ug/kg	3940	811	10	12/14/17 13:12	12/18/17 10:30	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	3940	680	10	12/14/17 13:12	12/18/17 10:30	87-68-3	
Hexachlorobenzene	ND	ug/kg	3940	501	10	12/14/17 13:12	12/18/17 10:30	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	3940	727	10	12/14/17 13:12	12/18/17 10:30	77-47-4	
Hexachloroethane	ND	ug/kg	3940	1040	10	12/14/17 13:12	12/18/17 10:30	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	3940	811	10	12/14/17 13:12	12/18/17 10:30	193-39-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

Sample: IDW-Z2-5 **Lab ID: 92366989001** Collected: 12/13/17 08:30 Received: 12/14/17 10:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Isophorone	ND	ug/kg	3940	882	10	12/14/17 13:12	12/18/17 10:30	78-59-1	
1-Methylnaphthalene	**16900**	ug/kg	3940	1030	10	12/14/17 13:12	12/18/17 10:30	90-12-0	
2-Methylnaphthalene	**13100**	ug/kg	3940	847	10	12/14/17 13:12	12/18/17 10:30	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	3940	1190	10	12/14/17 13:12	12/18/17 10:30	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	3940	1550	10	12/14/17 13:12	12/18/17 10:30	15831-10-4	
Naphthalene	ND	ug/kg	3940	966	10	12/14/17 13:12	12/18/17 10:30	91-20-3	
2-Nitroaniline	ND	ug/kg	19700	1220	10	12/14/17 13:12	12/18/17 10:30	88-74-4	
3-Nitroaniline	ND	ug/kg	19700	1070	10	12/14/17 13:12	12/18/17 10:30	99-09-2	
4-Nitroaniline	ND	ug/kg	7870	1110	10	12/14/17 13:12	12/18/17 10:30	100-01-6	
Nitrobenzene	ND	ug/kg	3940	1070	10	12/14/17 13:12	12/18/17 10:30	98-95-3	
2-Nitrophenol	ND	ug/kg	3940	954	10	12/14/17 13:12	12/18/17 10:30	88-75-5	
4-Nitrophenol	ND	ug/kg	19700	704	10	12/14/17 13:12	12/18/17 10:30	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	3940	1280	10	12/14/17 13:12	12/18/17 10:30	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	3940	751	10	12/14/17 13:12	12/18/17 10:30	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	3940	1170	10	12/14/17 13:12	12/18/17 10:30	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/kg	3940	1050	10	12/14/17 13:12	12/18/17 10:30	108-60-1	
Pentachlorophenol	ND	ug/kg	19700	715	10	12/14/17 13:12	12/18/17 10:30	87-86-5	
Phenanthrene	**5820**	ug/kg	3940	656	10	12/14/17 13:12	12/18/17 10:30	85-01-8	
Phenol	ND	ug/kg	3940	1180	10	12/14/17 13:12	12/18/17 10:30	108-95-2	
Pyrene	ND	ug/kg	3940	668	10	12/14/17 13:12	12/18/17 10:30	129-00-0	
Pyridine	ND	ug/kg	3940	871	10	12/14/17 13:12	12/18/17 10:30	110-86-1	
1,2,4-Trichlorobenzene	ND	ug/kg	3940	763	10	12/14/17 13:12	12/18/17 10:30	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	3940	1220	10	12/14/17 13:12	12/18/17 10:30	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	3940	871	10	12/14/17 13:12	12/18/17 10:30	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	0	%	23-110		10	12/14/17 13:12	12/18/17 10:30	4165-60-0	D3,S4
2-Fluorobiphenyl (S)	0	%	30-110		10	12/14/17 13:12	12/18/17 10:30	321-60-8	S4
Terphenyl-d14 (S)	0	%	28-110		10	12/14/17 13:12	12/18/17 10:30	1718-51-0	S4
Phenol-d6 (S)	0	%	22-110		10	12/14/17 13:12	12/18/17 10:30	13127-88-3	S4
2-Fluorophenol (S)	0	%	13-110		10	12/14/17 13:12	12/18/17 10:30	367-12-4	S4
2,4,6-Tribromophenol (S)	0	%	27-110		10	12/14/17 13:12	12/18/17 10:30	118-79-6	S4
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Acetone	ND	ug/kg	5250	525	50		12/14/17 19:52	67-64-1	
Benzene	ND	ug/kg	263	84.1	50		12/14/17 19:52	71-43-2	
Bromobenzene	ND	ug/kg	263	105	50		12/14/17 19:52	108-86-1	
Bromochloromethane	ND	ug/kg	263	89.3	50		12/14/17 19:52	74-97-5	
Bromodichloromethane	ND	ug/kg	263	99.8	50		12/14/17 19:52	75-27-4	
Bromoform	ND	ug/kg	263	121	50		12/14/17 19:52	75-25-2	
Bromomethane	ND	ug/kg	525	131	50		12/14/17 19:52	74-83-9	
2-Butanone (MEK)	ND	ug/kg	5250	152	50		12/14/17 19:52	78-93-3	
n-Butylbenzene	ND	ug/kg	263	94.6	50		12/14/17 19:52	104-51-8	
sec-Butylbenzene	**976**	ug/kg	263	84.1	50		12/14/17 19:52	135-98-8	
tert-Butylbenzene	**223J**	ug/kg	263	105	50		12/14/17 19:52	98-06-6	
Carbon tetrachloride	ND	ug/kg	263	137	50		12/14/17 19:52	56-23-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

Sample: IDW-Z2-5 **Lab ID: 92366989001** Collected: 12/13/17 08:30 Received: 12/14/17 10:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Chlorobenzene	ND	ug/kg	263	99.8	50		12/14/17 19:52	108-90-7	
Chloroethane	ND	ug/kg	525	126	50		12/14/17 19:52	75-00-3	
Chloroform	ND	ug/kg	263	84.1	50		12/14/17 19:52	67-66-3	
Chloromethane	ND	ug/kg	525	126	50		12/14/17 19:52	74-87-3	
2-Chlorotoluene	ND	ug/kg	263	89.3	50		12/14/17 19:52	95-49-8	
4-Chlorotoluene	ND	ug/kg	263	94.6	50		12/14/17 19:52	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	263	189	50		12/14/17 19:52	96-12-8	
Dibromochloromethane	ND	ug/kg	263	94.6	50		12/14/17 19:52	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	263	94.6	50		12/14/17 19:52	106-93-4	
Dibromomethane	ND	ug/kg	263	131	50		12/14/17 19:52	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	263	99.8	50		12/14/17 19:52	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	263	105	50		12/14/17 19:52	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	263	89.3	50		12/14/17 19:52	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	525	189	50		12/14/17 19:52	75-71-8	
1,1-Dichloroethane	ND	ug/kg	263	78.8	50		12/14/17 19:52	75-34-3	
1,2-Dichloroethane	ND	ug/kg	263	116	50		12/14/17 19:52	107-06-2	
1,1-Dichloroethene	ND	ug/kg	263	94.6	50		12/14/17 19:52	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	263	73.6	50		12/14/17 19:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	263	99.8	50		12/14/17 19:52	156-60-5	
1,2-Dichloropropane	ND	ug/kg	263	89.3	50		12/14/17 19:52	78-87-5	
1,3-Dichloropropane	ND	ug/kg	263	99.8	50		12/14/17 19:52	142-28-9	
2,2-Dichloropropane	ND	ug/kg	263	89.3	50		12/14/17 19:52	594-20-7	
1,1-Dichloropropene	ND	ug/kg	263	78.8	50		12/14/17 19:52	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	263	94.6	50		12/14/17 19:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	263	78.8	50		12/14/17 19:52	10061-02-6	
Diisopropyl ether	ND	ug/kg	263	89.3	50		12/14/17 19:52	108-20-3	
Ethylbenzene	**1270**	ug/kg	263	94.6	50		12/14/17 19:52	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	263	105	50		12/14/17 19:52	87-68-3	
2-Hexanone	ND	ug/kg	2630	205	50		12/14/17 19:52	591-78-6	
Isopropylbenzene (Cumene)	**588**	ug/kg	263	99.8	50		12/14/17 19:52	98-82-8	
p-Isopropyltoluene	**5520**	ug/kg	263	89.3	50		12/14/17 19:52	99-87-6	
Methylene Chloride	ND	ug/kg	1050	158	50		12/14/17 19:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	2630	194	50		12/14/17 19:52	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	263	78.8	50		12/14/17 19:52	1634-04-4	
Naphthalene	**1540**	ug/kg	263	63.1	50		12/14/17 19:52	91-20-3	
n-Propylbenzene	**969**	ug/kg	263	89.3	50		12/14/17 19:52	103-65-1	
Styrene	ND	ug/kg	263	94.6	50		12/14/17 19:52	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	263	110	50		12/14/17 19:52	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	263	99.8	50		12/14/17 19:52	79-34-5	
Tetrachloroethene	ND	ug/kg	263	89.3	50		12/14/17 19:52	127-18-4	
Toluene	ND	ug/kg	263	94.6	50		12/14/17 19:52	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	263	116	50		12/14/17 19:52	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	263	84.1	50		12/14/17 19:52	120-82-1	
1,1,1-Trichloroethane	**195J**	ug/kg	263	94.6	50		12/14/17 19:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	263	110	50		12/14/17 19:52	79-00-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

Sample: IDW-Z2-5 **Lab ID: 92366989001** Collected: 12/13/17 08:30 Received: 12/14/17 10:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Trichloroethene	**25900**	ug/kg	1310	552	250		12/15/17 16:14	79-01-6	
Trichlorofluoromethane	ND	ug/kg	263	116	50		12/14/17 19:52	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	263	84.1	50		12/14/17 19:52	96-18-4	
1,2,4-Trimethylbenzene	**2640**	ug/kg	263	105	50		12/14/17 19:52	95-63-6	
1,3,5-Trimethylbenzene	**7840**	ug/kg	263	94.6	50		12/14/17 19:52	108-67-8	
Vinyl acetate	ND	ug/kg	2630	462	50		12/14/17 19:52	108-05-4	
Vinyl chloride	ND	ug/kg	525	94.6	50		12/14/17 19:52	75-01-4	
Xylene (Total)	**3860**	ug/kg	525	189	50		12/14/17 19:52	1330-20-7	
m&p-Xylene	**770**	ug/kg	525	189	50		12/14/17 19:52	179601-23-1	
o-Xylene	**3090**	ug/kg	263	99.8	50		12/14/17 19:52	95-47-6	
Surrogates									
Toluene-d8 (S)	104	%	70-130		50		12/14/17 19:52	2037-26-5	
4-Bromofluorobenzene (S)	139	%	70-130		50		12/14/17 19:52	460-00-4	S1
1,2-Dichloroethane-d4 (S)	120	%	70-132		50		12/14/17 19:52	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**14.4**	%	0.10	0.10	1		12/15/17 11:31		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

Sample: IDW-Z2-6 **Lab ID: 92366989002** Collected: 12/13/17 08:55 Received: 12/14/17 10:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Acenaphthene	ND	ug/kg	418	96.2	1	12/14/17 13:12	12/17/17 18:31	83-32-9	
Acenaphthylene	ND	ug/kg	418	98.7	1	12/14/17 13:12	12/17/17 18:31	208-96-8	
Aniline	ND	ug/kg	418	113	1	12/14/17 13:12	12/17/17 18:31	62-53-3	
Anthracene	ND	ug/kg	418	93.6	1	12/14/17 13:12	12/17/17 18:31	120-12-7	
Benzo(a)anthracene	ND	ug/kg	418	77.2	1	12/14/17 13:12	12/17/17 18:31	56-55-3	
Benzo(a)pyrene	ND	ug/kg	418	79.7	1	12/14/17 13:12	12/17/17 18:31	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	418	72.1	1	12/14/17 13:12	12/17/17 18:31	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	418	106	1	12/14/17 13:12	12/17/17 18:31	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	418	82.2	1	12/14/17 13:12	12/17/17 18:31	207-08-9	
Benzoic Acid	ND	ug/kg	2090	75.9	1	12/14/17 13:12	12/17/17 18:31	65-85-0	
Benzyl alcohol	ND	ug/kg	835	83.5	1	12/14/17 13:12	12/17/17 18:31	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	418	75.9	1	12/14/17 13:12	12/17/17 18:31	101-55-3	
Butylbenzylphthalate	ND	ug/kg	418	88.6	1	12/14/17 13:12	12/17/17 18:31	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	835	86.0	1	12/14/17 13:12	12/17/17 18:31	59-50-7	
4-Chloroaniline	ND	ug/kg	2090	116	1	12/14/17 13:12	12/17/17 18:31	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	418	97.4	1	12/14/17 13:12	12/17/17 18:31	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	418	106	1	12/14/17 13:12	12/17/17 18:31	111-44-4	
2-Chloronaphthalene	ND	ug/kg	418	82.2	1	12/14/17 13:12	12/17/17 18:31	91-58-7	
2-Chlorophenol	ND	ug/kg	418	114	1	12/14/17 13:12	12/17/17 18:31	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	418	86.0	1	12/14/17 13:12	12/17/17 18:31	7005-72-3	
Chrysene	ND	ug/kg	418	55.7	1	12/14/17 13:12	12/17/17 18:31	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	418	88.6	1	12/14/17 13:12	12/17/17 18:31	53-70-3	
Dibenzofuran	ND	ug/kg	418	68.3	1	12/14/17 13:12	12/17/17 18:31	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	418	111	1	12/14/17 13:12	12/17/17 18:31	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	418	94.9	1	12/14/17 13:12	12/17/17 18:31	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	418	118	1	12/14/17 13:12	12/17/17 18:31	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	2090	91.1	1	12/14/17 13:12	12/17/17 18:31	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	418	91.1	1	12/14/17 13:12	12/17/17 18:31	120-83-2	
Diethylphthalate	ND	ug/kg	418	64.5	1	12/14/17 13:12	12/17/17 18:31	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	418	164	1	12/14/17 13:12	12/17/17 18:31	105-67-9	
Dimethylphthalate	ND	ug/kg	418	84.8	1	12/14/17 13:12	12/17/17 18:31	131-11-3	
Di-n-butylphthalate	ND	ug/kg	418	68.3	1	12/14/17 13:12	12/17/17 18:31	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	835	83.5	1	12/14/17 13:12	12/17/17 18:31	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	2090	68.3	1	12/14/17 13:12	12/17/17 18:31	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	418	78.4	1	12/14/17 13:12	12/17/17 18:31	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	418	87.3	1	12/14/17 13:12	12/17/17 18:31	606-20-2	
Di-n-octylphthalate	ND	ug/kg	418	87.3	1	12/14/17 13:12	12/17/17 18:31	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	418	114	1	12/14/17 13:12	12/17/17 18:31	117-81-7	
Fluoranthene	ND	ug/kg	418	60.7	1	12/14/17 13:12	12/17/17 18:31	206-44-0	
Fluorene	ND	ug/kg	418	86.0	1	12/14/17 13:12	12/17/17 18:31	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	418	72.1	1	12/14/17 13:12	12/17/17 18:31	87-68-3	
Hexachlorobenzene	ND	ug/kg	418	53.1	1	12/14/17 13:12	12/17/17 18:31	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	418	77.2	1	12/14/17 13:12	12/17/17 18:31	77-47-4	
Hexachloroethane	ND	ug/kg	418	110	1	12/14/17 13:12	12/17/17 18:31	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	418	86.0	1	12/14/17 13:12	12/17/17 18:31	193-39-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

Sample: IDW-Z2-6 **Lab ID: 92366989002** Collected: 12/13/17 08:55 Received: 12/14/17 10:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Isophorone	ND	ug/kg	418	93.6	1	12/14/17 13:12	12/17/17 18:31	78-59-1	
1-Methylnaphthalene	ND	ug/kg	418	109	1	12/14/17 13:12	12/17/17 18:31	90-12-0	
2-Methylnaphthalene	ND	ug/kg	418	89.8	1	12/14/17 13:12	12/17/17 18:31	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	418	127	1	12/14/17 13:12	12/17/17 18:31	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	418	164	1	12/14/17 13:12	12/17/17 18:31	15831-10-4	
Naphthalene	ND	ug/kg	418	102	1	12/14/17 13:12	12/17/17 18:31	91-20-3	
2-Nitroaniline	ND	ug/kg	2090	129	1	12/14/17 13:12	12/17/17 18:31	88-74-4	
3-Nitroaniline	ND	ug/kg	2090	114	1	12/14/17 13:12	12/17/17 18:31	99-09-2	
4-Nitroaniline	ND	ug/kg	835	118	1	12/14/17 13:12	12/17/17 18:31	100-01-6	
Nitrobenzene	ND	ug/kg	418	114	1	12/14/17 13:12	12/17/17 18:31	98-95-3	
2-Nitrophenol	ND	ug/kg	418	101	1	12/14/17 13:12	12/17/17 18:31	88-75-5	
4-Nitrophenol	ND	ug/kg	2090	74.7	1	12/14/17 13:12	12/17/17 18:31	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	418	135	1	12/14/17 13:12	12/17/17 18:31	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	418	79.7	1	12/14/17 13:12	12/17/17 18:31	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	418	124	1	12/14/17 13:12	12/17/17 18:31	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/kg	418	111	1	12/14/17 13:12	12/17/17 18:31	108-60-1	
Pentachlorophenol	ND	ug/kg	2090	75.9	1	12/14/17 13:12	12/17/17 18:31	87-86-5	
Phenanthrene	ND	ug/kg	418	69.6	1	12/14/17 13:12	12/17/17 18:31	85-01-8	
Phenol	ND	ug/kg	418	125	1	12/14/17 13:12	12/17/17 18:31	108-95-2	
Pyrene	ND	ug/kg	418	70.9	1	12/14/17 13:12	12/17/17 18:31	129-00-0	
Pyridine	ND	ug/kg	418	92.4	1	12/14/17 13:12	12/17/17 18:31	110-86-1	
1,2,4-Trichlorobenzene	ND	ug/kg	418	81.0	1	12/14/17 13:12	12/17/17 18:31	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	418	129	1	12/14/17 13:12	12/17/17 18:31	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	418	92.4	1	12/14/17 13:12	12/17/17 18:31	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	61	%	23-110		1	12/14/17 13:12	12/17/17 18:31	4165-60-0	
2-Fluorobiphenyl (S)	66	%	30-110		1	12/14/17 13:12	12/17/17 18:31	321-60-8	
Terphenyl-d14 (S)	81	%	28-110		1	12/14/17 13:12	12/17/17 18:31	1718-51-0	
Phenol-d6 (S)	69	%	22-110		1	12/14/17 13:12	12/17/17 18:31	13127-88-3	
2-Fluorophenol (S)	66	%	13-110		1	12/14/17 13:12	12/17/17 18:31	367-12-4	
2,4,6-Tribromophenol (S)	71	%	27-110		1	12/14/17 13:12	12/17/17 18:31	118-79-6	
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Acetone	ND	ug/kg	94.7	9.5	1		12/14/17 20:12	67-64-1	
Benzene	ND	ug/kg	4.7	1.5	1		12/14/17 20:12	71-43-2	
Bromobenzene	ND	ug/kg	4.7	1.9	1		12/14/17 20:12	108-86-1	
Bromochloromethane	ND	ug/kg	4.7	1.6	1		12/14/17 20:12	74-97-5	
Bromodichloromethane	ND	ug/kg	4.7	1.8	1		12/14/17 20:12	75-27-4	
Bromoform	ND	ug/kg	4.7	2.2	1		12/14/17 20:12	75-25-2	
Bromomethane	ND	ug/kg	9.5	2.4	1		12/14/17 20:12	74-83-9	
2-Butanone (MEK)	ND	ug/kg	94.7	2.7	1		12/14/17 20:12	78-93-3	
n-Butylbenzene	ND	ug/kg	4.7	1.7	1		12/14/17 20:12	104-51-8	
sec-Butylbenzene	ND	ug/kg	4.7	1.5	1		12/14/17 20:12	135-98-8	
tert-Butylbenzene	ND	ug/kg	4.7	1.9	1		12/14/17 20:12	98-06-6	
Carbon tetrachloride	ND	ug/kg	4.7	2.5	1		12/14/17 20:12	56-23-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

Sample: IDW-Z2-6 **Lab ID: 92366989002** Collected: 12/13/17 08:55 Received: 12/14/17 10:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Chlorobenzene	ND	ug/kg	4.7	1.8	1		12/14/17 20:12	108-90-7	
Chloroethane	ND	ug/kg	9.5	2.3	1		12/14/17 20:12	75-00-3	
Chloroform	ND	ug/kg	4.7	1.5	1		12/14/17 20:12	67-66-3	
Chloromethane	ND	ug/kg	9.5	2.3	1		12/14/17 20:12	74-87-3	
2-Chlorotoluene	ND	ug/kg	4.7	1.6	1		12/14/17 20:12	95-49-8	
4-Chlorotoluene	ND	ug/kg	4.7	1.7	1		12/14/17 20:12	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	4.7	3.4	1		12/14/17 20:12	96-12-8	
Dibromochloromethane	ND	ug/kg	4.7	1.7	1		12/14/17 20:12	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	4.7	1.7	1		12/14/17 20:12	106-93-4	
Dibromomethane	ND	ug/kg	4.7	2.4	1		12/14/17 20:12	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	4.7	1.8	1		12/14/17 20:12	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	4.7	1.9	1		12/14/17 20:12	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	4.7	1.6	1		12/14/17 20:12	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	9.5	3.4	1		12/14/17 20:12	75-71-8	
1,1-Dichloroethane	ND	ug/kg	4.7	1.4	1		12/14/17 20:12	75-34-3	
1,2-Dichloroethane	ND	ug/kg	4.7	2.1	1		12/14/17 20:12	107-06-2	
1,1-Dichloroethene	ND	ug/kg	4.7	1.7	1		12/14/17 20:12	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	4.7	1.3	1		12/14/17 20:12	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	4.7	1.8	1		12/14/17 20:12	156-60-5	
1,2-Dichloropropane	ND	ug/kg	4.7	1.6	1		12/14/17 20:12	78-87-5	
1,3-Dichloropropane	ND	ug/kg	4.7	1.8	1		12/14/17 20:12	142-28-9	
2,2-Dichloropropane	ND	ug/kg	4.7	1.6	1		12/14/17 20:12	594-20-7	
1,1-Dichloropropene	ND	ug/kg	4.7	1.4	1		12/14/17 20:12	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	4.7	1.7	1		12/14/17 20:12	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	4.7	1.4	1		12/14/17 20:12	10061-02-6	
Diisopropyl ether	ND	ug/kg	4.7	1.6	1		12/14/17 20:12	108-20-3	
Ethylbenzene	ND	ug/kg	4.7	1.7	1		12/14/17 20:12	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	4.7	1.9	1		12/14/17 20:12	87-68-3	
2-Hexanone	ND	ug/kg	47.4	3.7	1		12/14/17 20:12	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	4.7	1.8	1		12/14/17 20:12	98-82-8	
p-Isopropyltoluene	ND	ug/kg	4.7	1.6	1		12/14/17 20:12	99-87-6	
Methylene Chloride	ND	ug/kg	18.9	2.8	1		12/14/17 20:12	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	47.4	3.5	1		12/14/17 20:12	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	4.7	1.4	1		12/14/17 20:12	1634-04-4	
Naphthalene	**3.1J**	ug/kg	4.7	1.1	1		12/14/17 20:12	91-20-3	
n-Propylbenzene	ND	ug/kg	4.7	1.6	1		12/14/17 20:12	103-65-1	
Styrene	ND	ug/kg	4.7	1.7	1		12/14/17 20:12	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	4.7	2.0	1		12/14/17 20:12	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.7	1.8	1		12/14/17 20:12	79-34-5	
Tetrachloroethene	ND	ug/kg	4.7	1.6	1		12/14/17 20:12	127-18-4	
Toluene	ND	ug/kg	4.7	1.7	1		12/14/17 20:12	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	4.7	2.1	1		12/14/17 20:12	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	4.7	1.5	1		12/14/17 20:12	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	4.7	1.7	1		12/14/17 20:12	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	4.7	2.0	1		12/14/17 20:12	79-00-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

Sample: IDW-Z2-6 **Lab ID: 92366989002** Collected: 12/13/17 08:55 Received: 12/14/17 10:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Trichloroethene	**4.2J**	ug/kg	4.7	2.0	1		12/14/17 20:12	79-01-6	
Trichlorofluoromethane	ND	ug/kg	4.7	2.1	1		12/14/17 20:12	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	4.7	1.5	1		12/14/17 20:12	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	4.7	1.9	1		12/14/17 20:12	95-63-6	
1,3,5-Trimethylbenzene	**1.9J**	ug/kg	4.7	1.7	1		12/14/17 20:12	108-67-8	
Vinyl acetate	ND	ug/kg	47.4	8.3	1		12/14/17 20:12	108-05-4	
Vinyl chloride	ND	ug/kg	9.5	1.7	1		12/14/17 20:12	75-01-4	
Xylene (Total)	ND	ug/kg	9.5	3.4	1		12/14/17 20:12	1330-20-7	
m&p-Xylene	ND	ug/kg	9.5	3.4	1		12/14/17 20:12	179601-23-1	
o-Xylene	ND	ug/kg	4.7	1.8	1		12/14/17 20:12	95-47-6	
Surrogates									
Toluene-d8 (S)	104	%	70-130		1		12/14/17 20:12	2037-26-5	
4-Bromofluorobenzene (S)	105	%	70-130		1		12/14/17 20:12	460-00-4	
1,2-Dichloroethane-d4 (S)	112	%	70-132		1		12/14/17 20:12	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**19.9**	%	0.10	0.10	1		12/15/17 11:31		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(704)875-9092

ANALYTICAL RESULTS

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

Sample: IDW-Z3-4 **Lab ID: 92366989003** Collected: 12/13/17 09:05 Received: 12/14/17 10:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Acenaphthene	ND	ug/kg	445	102	1	12/14/17 13:12	12/17/17 18:59	83-32-9	
Acenaphthylene	ND	ug/kg	445	105	1	12/14/17 13:12	12/17/17 18:59	208-96-8	
Aniline	ND	ug/kg	445	120	1	12/14/17 13:12	12/17/17 18:59	62-53-3	
Anthracene	ND	ug/kg	445	99.7	1	12/14/17 13:12	12/17/17 18:59	120-12-7	
Benzo(a)anthracene	ND	ug/kg	445	82.2	1	12/14/17 13:12	12/17/17 18:59	56-55-3	
Benzo(a)pyrene	ND	ug/kg	445	84.9	1	12/14/17 13:12	12/17/17 18:59	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	445	76.8	1	12/14/17 13:12	12/17/17 18:59	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	445	113	1	12/14/17 13:12	12/17/17 18:59	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	445	87.6	1	12/14/17 13:12	12/17/17 18:59	207-08-9	
Benzoic Acid	ND	ug/kg	2220	80.9	1	12/14/17 13:12	12/17/17 18:59	65-85-0	
Benzyl alcohol	ND	ug/kg	889	88.9	1	12/14/17 13:12	12/17/17 18:59	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	445	80.9	1	12/14/17 13:12	12/17/17 18:59	101-55-3	
Butylbenzylphthalate	ND	ug/kg	445	94.3	1	12/14/17 13:12	12/17/17 18:59	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	889	91.6	1	12/14/17 13:12	12/17/17 18:59	59-50-7	
4-Chloroaniline	ND	ug/kg	2220	124	1	12/14/17 13:12	12/17/17 18:59	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	445	104	1	12/14/17 13:12	12/17/17 18:59	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	445	113	1	12/14/17 13:12	12/17/17 18:59	111-44-4	
2-Chloronaphthalene	ND	ug/kg	445	87.6	1	12/14/17 13:12	12/17/17 18:59	91-58-7	
2-Chlorophenol	ND	ug/kg	445	121	1	12/14/17 13:12	12/17/17 18:59	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	445	91.6	1	12/14/17 13:12	12/17/17 18:59	7005-72-3	
Chrysene	ND	ug/kg	445	59.3	1	12/14/17 13:12	12/17/17 18:59	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	445	94.3	1	12/14/17 13:12	12/17/17 18:59	53-70-3	
Dibenzofuran	ND	ug/kg	445	72.8	1	12/14/17 13:12	12/17/17 18:59	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	445	119	1	12/14/17 13:12	12/17/17 18:59	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	445	101	1	12/14/17 13:12	12/17/17 18:59	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	445	125	1	12/14/17 13:12	12/17/17 18:59	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	2220	97.0	1	12/14/17 13:12	12/17/17 18:59	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	445	97.0	1	12/14/17 13:12	12/17/17 18:59	120-83-2	
Diethylphthalate	ND	ug/kg	445	68.7	1	12/14/17 13:12	12/17/17 18:59	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	445	175	1	12/14/17 13:12	12/17/17 18:59	105-67-9	
Dimethylphthalate	ND	ug/kg	445	90.3	1	12/14/17 13:12	12/17/17 18:59	131-11-3	
Di-n-butylphthalate	ND	ug/kg	445	72.8	1	12/14/17 13:12	12/17/17 18:59	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	889	88.9	1	12/14/17 13:12	12/17/17 18:59	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	2220	72.8	1	12/14/17 13:12	12/17/17 18:59	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	445	83.6	1	12/14/17 13:12	12/17/17 18:59	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	445	93.0	1	12/14/17 13:12	12/17/17 18:59	606-20-2	
Di-n-octylphthalate	ND	ug/kg	445	93.0	1	12/14/17 13:12	12/17/17 18:59	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	445	121	1	12/14/17 13:12	12/17/17 18:59	117-81-7	
Fluoranthene	ND	ug/kg	445	64.7	1	12/14/17 13:12	12/17/17 18:59	206-44-0	
Fluorene	ND	ug/kg	445	91.6	1	12/14/17 13:12	12/17/17 18:59	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	445	76.8	1	12/14/17 13:12	12/17/17 18:59	87-68-3	
Hexachlorobenzene	ND	ug/kg	445	56.6	1	12/14/17 13:12	12/17/17 18:59	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	445	82.2	1	12/14/17 13:12	12/17/17 18:59	77-47-4	
Hexachloroethane	ND	ug/kg	445	117	1	12/14/17 13:12	12/17/17 18:59	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	445	91.6	1	12/14/17 13:12	12/17/17 18:59	193-39-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(704)875-9092

ANALYTICAL RESULTS

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

Sample: IDW-Z3-4 **Lab ID: 92366989003** Collected: 12/13/17 09:05 Received: 12/14/17 10:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Isophorone	ND	ug/kg	445	99.7	1	12/14/17 13:12	12/17/17 18:59	78-59-1	
1-Methylnaphthalene	**1650**	ug/kg	445	116	1	12/14/17 13:12	12/17/17 18:59	90-12-0	
2-Methylnaphthalene	**2520**	ug/kg	445	95.7	1	12/14/17 13:12	12/17/17 18:59	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	445	135	1	12/14/17 13:12	12/17/17 18:59	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	445	175	1	12/14/17 13:12	12/17/17 18:59	15831-10-4	
Naphthalene	**603**	ug/kg	445	109	1	12/14/17 13:12	12/17/17 18:59	91-20-3	
2-Nitroaniline	ND	ug/kg	2220	137	1	12/14/17 13:12	12/17/17 18:59	88-74-4	
3-Nitroaniline	ND	ug/kg	2220	121	1	12/14/17 13:12	12/17/17 18:59	99-09-2	
4-Nitroaniline	ND	ug/kg	889	125	1	12/14/17 13:12	12/17/17 18:59	100-01-6	
Nitrobenzene	ND	ug/kg	445	121	1	12/14/17 13:12	12/17/17 18:59	98-95-3	
2-Nitrophenol	ND	ug/kg	445	108	1	12/14/17 13:12	12/17/17 18:59	88-75-5	
4-Nitrophenol	ND	ug/kg	2220	79.5	1	12/14/17 13:12	12/17/17 18:59	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	445	144	1	12/14/17 13:12	12/17/17 18:59	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	445	84.9	1	12/14/17 13:12	12/17/17 18:59	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	445	132	1	12/14/17 13:12	12/17/17 18:59	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/kg	445	119	1	12/14/17 13:12	12/17/17 18:59	108-60-1	
Pentachlorophenol	ND	ug/kg	2220	80.9	1	12/14/17 13:12	12/17/17 18:59	87-86-5	
Phenanthrene	**264J**	ug/kg	445	74.1	1	12/14/17 13:12	12/17/17 18:59	85-01-8	
Phenol	ND	ug/kg	445	133	1	12/14/17 13:12	12/17/17 18:59	108-95-2	
Pyrene	ND	ug/kg	445	75.5	1	12/14/17 13:12	12/17/17 18:59	129-00-0	
Pyridine	ND	ug/kg	445	98.4	1	12/14/17 13:12	12/17/17 18:59	110-86-1	
1,2,4-Trichlorobenzene	ND	ug/kg	445	86.2	1	12/14/17 13:12	12/17/17 18:59	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	445	137	1	12/14/17 13:12	12/17/17 18:59	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	445	98.4	1	12/14/17 13:12	12/17/17 18:59	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	55	%	23-110		1	12/14/17 13:12	12/17/17 18:59	4165-60-0	
2-Fluorobiphenyl (S)	41	%	30-110		1	12/14/17 13:12	12/17/17 18:59	321-60-8	
Terphenyl-d14 (S)	45	%	28-110		1	12/14/17 13:12	12/17/17 18:59	1718-51-0	
Phenol-d6 (S)	66	%	22-110		1	12/14/17 13:12	12/17/17 18:59	13127-88-3	
2-Fluorophenol (S)	63	%	13-110		1	12/14/17 13:12	12/17/17 18:59	367-12-4	
2,4,6-Tribromophenol (S)	56	%	27-110		1	12/14/17 13:12	12/17/17 18:59	118-79-6	
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Acetone	ND	ug/kg	2700	270	25		12/14/17 20:32	67-64-1	
Benzene	**57.2J**	ug/kg	135	43.2	25		12/14/17 20:32	71-43-2	
Bromobenzene	ND	ug/kg	135	53.9	25		12/14/17 20:32	108-86-1	
Bromochloromethane	ND	ug/kg	135	45.9	25		12/14/17 20:32	74-97-5	
Bromodichloromethane	ND	ug/kg	135	51.2	25		12/14/17 20:32	75-27-4	
Bromoform	ND	ug/kg	135	62.0	25		12/14/17 20:32	75-25-2	
Bromomethane	ND	ug/kg	270	67.4	25		12/14/17 20:32	74-83-9	
2-Butanone (MEK)	ND	ug/kg	2700	78.2	25		12/14/17 20:32	78-93-3	
n-Butylbenzene	**296**	ug/kg	135	48.6	25		12/14/17 20:32	104-51-8	
sec-Butylbenzene	**242**	ug/kg	135	43.2	25		12/14/17 20:32	135-98-8	
tert-Butylbenzene	ND	ug/kg	135	53.9	25		12/14/17 20:32	98-06-6	
Carbon tetrachloride	ND	ug/kg	135	70.1	25		12/14/17 20:32	56-23-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

Sample: IDW-Z3-4 **Lab ID: 92366989003** Collected: 12/13/17 09:05 Received: 12/14/17 10:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Chlorobenzene	ND	ug/kg	135	51.2	25		12/14/17 20:32	108-90-7	
Chloroethane	ND	ug/kg	270	64.7	25		12/14/17 20:32	75-00-3	
Chloroform	ND	ug/kg	135	43.2	25		12/14/17 20:32	67-66-3	
Chloromethane	ND	ug/kg	270	64.7	25		12/14/17 20:32	74-87-3	
2-Chlorotoluene	ND	ug/kg	135	45.9	25		12/14/17 20:32	95-49-8	
4-Chlorotoluene	ND	ug/kg	135	48.6	25		12/14/17 20:32	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	135	97.1	25		12/14/17 20:32	96-12-8	
Dibromochloromethane	ND	ug/kg	135	48.6	25		12/14/17 20:32	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	135	48.6	25		12/14/17 20:32	106-93-4	
Dibromomethane	ND	ug/kg	135	67.4	25		12/14/17 20:32	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	135	51.2	25		12/14/17 20:32	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	135	53.9	25		12/14/17 20:32	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	135	45.9	25		12/14/17 20:32	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	270	97.1	25		12/14/17 20:32	75-71-8	
1,1-Dichloroethane	ND	ug/kg	135	40.5	25		12/14/17 20:32	75-34-3	
1,2-Dichloroethane	ND	ug/kg	135	59.3	25		12/14/17 20:32	107-06-2	
1,1-Dichloroethene	ND	ug/kg	135	48.6	25		12/14/17 20:32	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	135	37.8	25		12/14/17 20:32	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	135	51.2	25		12/14/17 20:32	156-60-5	
1,2-Dichloropropane	ND	ug/kg	135	45.9	25		12/14/17 20:32	78-87-5	
1,3-Dichloropropane	ND	ug/kg	135	51.2	25		12/14/17 20:32	142-28-9	
2,2-Dichloropropane	ND	ug/kg	135	45.9	25		12/14/17 20:32	594-20-7	
1,1-Dichloropropene	ND	ug/kg	135	40.5	25		12/14/17 20:32	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	135	48.6	25		12/14/17 20:32	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	135	40.5	25		12/14/17 20:32	10061-02-6	
Diisopropyl ether	ND	ug/kg	135	45.9	25		12/14/17 20:32	108-20-3	
Ethylbenzene	**353**	ug/kg	135	48.6	25		12/14/17 20:32	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	135	53.9	25		12/14/17 20:32	87-68-3	
2-Hexanone	ND	ug/kg	1350	105	25		12/14/17 20:32	591-78-6	
Isopropylbenzene (Cumene)	**180**	ug/kg	135	51.2	25		12/14/17 20:32	98-82-8	
p-Isopropyltoluene	**542**	ug/kg	135	45.9	25		12/14/17 20:32	99-87-6	
Methylene Chloride	ND	ug/kg	539	80.9	25		12/14/17 20:32	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	1350	99.8	25		12/14/17 20:32	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	135	40.5	25		12/14/17 20:32	1634-04-4	
Naphthalene	**1340**	ug/kg	135	32.4	25		12/14/17 20:32	91-20-3	
n-Propylbenzene	**352**	ug/kg	135	45.9	25		12/14/17 20:32	103-65-1	
Styrene	ND	ug/kg	135	48.6	25		12/14/17 20:32	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	135	56.6	25		12/14/17 20:32	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	135	51.2	25		12/14/17 20:32	79-34-5	
Tetrachloroethene	ND	ug/kg	135	45.9	25		12/14/17 20:32	127-18-4	
Toluene	**207**	ug/kg	135	48.6	25		12/14/17 20:32	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	135	59.3	25		12/14/17 20:32	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	135	43.2	25		12/14/17 20:32	120-82-1	
1,1,1-Trichloroethane	**151**	ug/kg	135	48.6	25		12/14/17 20:32	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	135	56.6	25		12/14/17 20:32	79-00-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

Sample: IDW-Z3-4 **Lab ID: 92366989003** Collected: 12/13/17 09:05 Received: 12/14/17 10:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Trichloroethene	**13800**	ug/kg	1080	453	200		12/15/17 16:34	79-01-6	
Trichlorofluoromethane	ND	ug/kg	135	59.3	25		12/14/17 20:32	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	135	43.2	25		12/14/17 20:32	96-18-4	
1,2,4-Trimethylbenzene	**1940**	ug/kg	135	53.9	25		12/14/17 20:32	95-63-6	
1,3,5-Trimethylbenzene	**758**	ug/kg	135	48.6	25		12/14/17 20:32	108-67-8	
Vinyl acetate	ND	ug/kg	1350	237	25		12/14/17 20:32	108-05-4	
Vinyl chloride	ND	ug/kg	270	48.6	25		12/14/17 20:32	75-01-4	
Xylene (Total)	**1820**	ug/kg	270	97.1	25		12/14/17 20:32	1330-20-7	
m&p-Xylene	**1170**	ug/kg	270	97.1	25		12/14/17 20:32	179601-23-1	
o-Xylene	**645**	ug/kg	135	51.2	25		12/14/17 20:32	95-47-6	
Surrogates									
Toluene-d8 (S)	102	%	70-130		25		12/14/17 20:32	2037-26-5	
4-Bromofluorobenzene (S)	115	%	70-130		25		12/14/17 20:32	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	70-132		25		12/14/17 20:32	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**27.2**	%	0.10	0.10	1		12/15/17 11:32		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

Sample: IDW-Z3-5 **Lab ID: 92366989004** Collected: 12/13/17 09:20 Received: 12/14/17 10:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Acenaphthene	ND	ug/kg	443	102	1	12/14/17 13:12	12/17/17 19:27	83-32-9	
Acenaphthylene	ND	ug/kg	443	105	1	12/14/17 13:12	12/17/17 19:27	208-96-8	
Aniline	ND	ug/kg	443	119	1	12/14/17 13:12	12/17/17 19:27	62-53-3	
Anthracene	ND	ug/kg	443	99.2	1	12/14/17 13:12	12/17/17 19:27	120-12-7	
Benzo(a)anthracene	ND	ug/kg	443	81.8	1	12/14/17 13:12	12/17/17 19:27	56-55-3	
Benzo(a)pyrene	ND	ug/kg	443	84.5	1	12/14/17 13:12	12/17/17 19:27	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	443	76.4	1	12/14/17 13:12	12/17/17 19:27	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	443	113	1	12/14/17 13:12	12/17/17 19:27	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	443	87.2	1	12/14/17 13:12	12/17/17 19:27	207-08-9	
Benzoic Acid	ND	ug/kg	2210	80.5	1	12/14/17 13:12	12/17/17 19:27	65-85-0	
Benzyl alcohol	ND	ug/kg	885	88.5	1	12/14/17 13:12	12/17/17 19:27	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	443	80.5	1	12/14/17 13:12	12/17/17 19:27	101-55-3	
Butylbenzylphthalate	ND	ug/kg	443	93.9	1	12/14/17 13:12	12/17/17 19:27	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	885	91.2	1	12/14/17 13:12	12/17/17 19:27	59-50-7	
4-Chloroaniline	ND	ug/kg	2210	123	1	12/14/17 13:12	12/17/17 19:27	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	443	103	1	12/14/17 13:12	12/17/17 19:27	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	443	113	1	12/14/17 13:12	12/17/17 19:27	111-44-4	
2-Chloronaphthalene	ND	ug/kg	443	87.2	1	12/14/17 13:12	12/17/17 19:27	91-58-7	
2-Chlorophenol	ND	ug/kg	443	121	1	12/14/17 13:12	12/17/17 19:27	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	443	91.2	1	12/14/17 13:12	12/17/17 19:27	7005-72-3	
Chrysene	ND	ug/kg	443	59.0	1	12/14/17 13:12	12/17/17 19:27	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	443	93.9	1	12/14/17 13:12	12/17/17 19:27	53-70-3	
Dibenzofuran	ND	ug/kg	443	72.4	1	12/14/17 13:12	12/17/17 19:27	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	443	118	1	12/14/17 13:12	12/17/17 19:27	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	443	101	1	12/14/17 13:12	12/17/17 19:27	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	443	125	1	12/14/17 13:12	12/17/17 19:27	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	2210	96.6	1	12/14/17 13:12	12/17/17 19:27	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	443	96.6	1	12/14/17 13:12	12/17/17 19:27	120-83-2	
Diethylphthalate	ND	ug/kg	443	68.4	1	12/14/17 13:12	12/17/17 19:27	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	443	174	1	12/14/17 13:12	12/17/17 19:27	105-67-9	
Dimethylphthalate	ND	ug/kg	443	89.9	1	12/14/17 13:12	12/17/17 19:27	131-11-3	
Di-n-butylphthalate	ND	ug/kg	443	72.4	1	12/14/17 13:12	12/17/17 19:27	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	885	88.5	1	12/14/17 13:12	12/17/17 19:27	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	2210	72.4	1	12/14/17 13:12	12/17/17 19:27	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	443	83.1	1	12/14/17 13:12	12/17/17 19:27	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	443	92.5	1	12/14/17 13:12	12/17/17 19:27	606-20-2	
Di-n-octylphthalate	ND	ug/kg	443	92.5	1	12/14/17 13:12	12/17/17 19:27	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	443	121	1	12/14/17 13:12	12/17/17 19:27	117-81-7	
Fluoranthene	ND	ug/kg	443	64.4	1	12/14/17 13:12	12/17/17 19:27	206-44-0	
Fluorene	ND	ug/kg	443	91.2	1	12/14/17 13:12	12/17/17 19:27	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	443	76.4	1	12/14/17 13:12	12/17/17 19:27	87-68-3	
Hexachlorobenzene	ND	ug/kg	443	56.3	1	12/14/17 13:12	12/17/17 19:27	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	443	81.8	1	12/14/17 13:12	12/17/17 19:27	77-47-4	
Hexachloroethane	ND	ug/kg	443	117	1	12/14/17 13:12	12/17/17 19:27	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	443	91.2	1	12/14/17 13:12	12/17/17 19:27	193-39-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
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(704)875-9092

ANALYTICAL RESULTS

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

Sample: IDW-Z3-5 **Lab ID: 92366989004** Collected: 12/13/17 09:20 Received: 12/14/17 10:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Isophorone	ND	ug/kg	443	99.2	1	12/14/17 13:12	12/17/17 19:27	78-59-1	
1-Methylnaphthalene	ND	ug/kg	443	115	1	12/14/17 13:12	12/17/17 19:27	90-12-0	
2-Methylnaphthalene	ND	ug/kg	443	95.2	1	12/14/17 13:12	12/17/17 19:27	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	443	134	1	12/14/17 13:12	12/17/17 19:27	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	443	174	1	12/14/17 13:12	12/17/17 19:27	15831-10-4	
Naphthalene	ND	ug/kg	443	109	1	12/14/17 13:12	12/17/17 19:27	91-20-3	
2-Nitroaniline	ND	ug/kg	2210	137	1	12/14/17 13:12	12/17/17 19:27	88-74-4	
3-Nitroaniline	ND	ug/kg	2210	121	1	12/14/17 13:12	12/17/17 19:27	99-09-2	
4-Nitroaniline	ND	ug/kg	885	125	1	12/14/17 13:12	12/17/17 19:27	100-01-6	
Nitrobenzene	ND	ug/kg	443	121	1	12/14/17 13:12	12/17/17 19:27	98-95-3	
2-Nitrophenol	ND	ug/kg	443	107	1	12/14/17 13:12	12/17/17 19:27	88-75-5	
4-Nitrophenol	ND	ug/kg	2210	79.1	1	12/14/17 13:12	12/17/17 19:27	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	443	143	1	12/14/17 13:12	12/17/17 19:27	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	443	84.5	1	12/14/17 13:12	12/17/17 19:27	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	443	131	1	12/14/17 13:12	12/17/17 19:27	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/kg	443	118	1	12/14/17 13:12	12/17/17 19:27	108-60-1	
Pentachlorophenol	ND	ug/kg	2210	80.5	1	12/14/17 13:12	12/17/17 19:27	87-86-5	
Phenanthrene	ND	ug/kg	443	73.8	1	12/14/17 13:12	12/17/17 19:27	85-01-8	
Phenol	ND	ug/kg	443	133	1	12/14/17 13:12	12/17/17 19:27	108-95-2	
Pyrene	ND	ug/kg	443	75.1	1	12/14/17 13:12	12/17/17 19:27	129-00-0	
Pyridine	ND	ug/kg	443	97.9	1	12/14/17 13:12	12/17/17 19:27	110-86-1	
1,2,4-Trichlorobenzene	ND	ug/kg	443	85.8	1	12/14/17 13:12	12/17/17 19:27	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	443	137	1	12/14/17 13:12	12/17/17 19:27	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	443	97.9	1	12/14/17 13:12	12/17/17 19:27	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	34	%	23-110		1	12/14/17 13:12	12/17/17 19:27	4165-60-0	
2-Fluorobiphenyl (S)	48	%	30-110		1	12/14/17 13:12	12/17/17 19:27	321-60-8	
Terphenyl-d14 (S)	59	%	28-110		1	12/14/17 13:12	12/17/17 19:27	1718-51-0	
Phenol-d6 (S)	58	%	22-110		1	12/14/17 13:12	12/17/17 19:27	13127-88-3	
2-Fluorophenol (S)	53	%	13-110		1	12/14/17 13:12	12/17/17 19:27	367-12-4	
2,4,6-Tribromophenol (S)	51	%	27-110		1	12/14/17 13:12	12/17/17 19:27	118-79-6	
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Acetone	ND	ug/kg	124	12.4	1		12/14/17 20:52	67-64-1	
Benzene	ND	ug/kg	6.2	2.0	1		12/14/17 20:52	71-43-2	
Bromobenzene	ND	ug/kg	6.2	2.5	1		12/14/17 20:52	108-86-1	
Bromochloromethane	ND	ug/kg	6.2	2.1	1		12/14/17 20:52	74-97-5	
Bromodichloromethane	ND	ug/kg	6.2	2.4	1		12/14/17 20:52	75-27-4	
Bromoform	ND	ug/kg	6.2	2.9	1		12/14/17 20:52	75-25-2	
Bromomethane	ND	ug/kg	12.4	3.1	1		12/14/17 20:52	74-83-9	
2-Butanone (MEK)	ND	ug/kg	124	3.6	1		12/14/17 20:52	78-93-3	
n-Butylbenzene	ND	ug/kg	6.2	2.2	1		12/14/17 20:52	104-51-8	
sec-Butylbenzene	ND	ug/kg	6.2	2.0	1		12/14/17 20:52	135-98-8	
tert-Butylbenzene	ND	ug/kg	6.2	2.5	1		12/14/17 20:52	98-06-6	
Carbon tetrachloride	ND	ug/kg	6.2	3.2	1		12/14/17 20:52	56-23-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

Sample: IDW-Z3-5 **Lab ID: 92366989004** Collected: 12/13/17 09:20 Received: 12/14/17 10:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Chlorobenzene	ND	ug/kg	6.2	2.4	1		12/14/17 20:52	108-90-7	
Chloroethane	ND	ug/kg	12.4	3.0	1		12/14/17 20:52	75-00-3	
Chloroform	ND	ug/kg	6.2	2.0	1		12/14/17 20:52	67-66-3	
Chloromethane	ND	ug/kg	12.4	3.0	1		12/14/17 20:52	74-87-3	
2-Chlorotoluene	ND	ug/kg	6.2	2.1	1		12/14/17 20:52	95-49-8	
4-Chlorotoluene	ND	ug/kg	6.2	2.2	1		12/14/17 20:52	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	6.2	4.5	1		12/14/17 20:52	96-12-8	
Dibromochloromethane	ND	ug/kg	6.2	2.2	1		12/14/17 20:52	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	6.2	2.2	1		12/14/17 20:52	106-93-4	
Dibromomethane	ND	ug/kg	6.2	3.1	1		12/14/17 20:52	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	6.2	2.4	1		12/14/17 20:52	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	6.2	2.5	1		12/14/17 20:52	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	6.2	2.1	1		12/14/17 20:52	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	12.4	4.5	1		12/14/17 20:52	75-71-8	
1,1-Dichloroethane	ND	ug/kg	6.2	1.9	1		12/14/17 20:52	75-34-3	
1,2-Dichloroethane	ND	ug/kg	6.2	2.7	1		12/14/17 20:52	107-06-2	
1,1-Dichloroethene	ND	ug/kg	6.2	2.2	1		12/14/17 20:52	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	6.2	1.7	1		12/14/17 20:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	6.2	2.4	1		12/14/17 20:52	156-60-5	
1,2-Dichloropropane	ND	ug/kg	6.2	2.1	1		12/14/17 20:52	78-87-5	
1,3-Dichloropropane	ND	ug/kg	6.2	2.4	1		12/14/17 20:52	142-28-9	
2,2-Dichloropropane	ND	ug/kg	6.2	2.1	1		12/14/17 20:52	594-20-7	
1,1-Dichloropropene	ND	ug/kg	6.2	1.9	1		12/14/17 20:52	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	6.2	2.2	1		12/14/17 20:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	6.2	1.9	1		12/14/17 20:52	10061-02-6	
Diisopropyl ether	ND	ug/kg	6.2	2.1	1		12/14/17 20:52	108-20-3	
Ethylbenzene	ND	ug/kg	6.2	2.2	1		12/14/17 20:52	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	6.2	2.5	1		12/14/17 20:52	87-68-3	
2-Hexanone	ND	ug/kg	62.1	4.8	1		12/14/17 20:52	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	6.2	2.4	1		12/14/17 20:52	98-82-8	
p-Isopropyltoluene	ND	ug/kg	6.2	2.1	1		12/14/17 20:52	99-87-6	
Methylene Chloride	ND	ug/kg	24.8	3.7	1		12/14/17 20:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	62.1	4.6	1		12/14/17 20:52	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	6.2	1.9	1		12/14/17 20:52	1634-04-4	
Naphthalene	**3.3J**	ug/kg	6.2	1.5	1		12/14/17 20:52	91-20-3	
n-Propylbenzene	ND	ug/kg	6.2	2.1	1		12/14/17 20:52	103-65-1	
Styrene	ND	ug/kg	6.2	2.2	1		12/14/17 20:52	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	6.2	2.6	1		12/14/17 20:52	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.2	2.4	1		12/14/17 20:52	79-34-5	
Tetrachloroethene	ND	ug/kg	6.2	2.1	1		12/14/17 20:52	127-18-4	
Toluene	ND	ug/kg	6.2	2.2	1		12/14/17 20:52	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	6.2	2.7	1		12/14/17 20:52	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	6.2	2.0	1		12/14/17 20:52	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	6.2	2.2	1		12/14/17 20:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	6.2	2.6	1		12/14/17 20:52	79-00-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

Sample: IDW-Z3-5 **Lab ID: 92366989004** Collected: 12/13/17 09:20 Received: 12/14/17 10:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Trichloroethene	**124**	ug/kg	6.2	2.6	1		12/14/17 20:52	79-01-6	
Trichlorofluoromethane	ND	ug/kg	6.2	2.7	1		12/14/17 20:52	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	6.2	2.0	1		12/14/17 20:52	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	6.2	2.5	1		12/14/17 20:52	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	6.2	2.2	1		12/14/17 20:52	108-67-8	
Vinyl acetate	ND	ug/kg	62.1	10.9	1		12/14/17 20:52	108-05-4	
Vinyl chloride	ND	ug/kg	12.4	2.2	1		12/14/17 20:52	75-01-4	
Xylene (Total)	ND	ug/kg	12.4	4.5	1		12/14/17 20:52	1330-20-7	
m&p-Xylene	ND	ug/kg	12.4	4.5	1		12/14/17 20:52	179601-23-1	
o-Xylene	ND	ug/kg	6.2	2.4	1		12/14/17 20:52	95-47-6	
Surrogates									
Toluene-d8 (S)	102	%	70-130		1		12/14/17 20:52	2037-26-5	
4-Bromofluorobenzene (S)	106	%	70-130		1		12/14/17 20:52	460-00-4	
1,2-Dichloroethane-d4 (S)	113	%	70-132		1		12/14/17 20:52	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**27.6**	%	0.10	0.10	1		12/15/17 11:32		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

Sample: IDW-Z3-6 **Lab ID: 92366989005** Collected: 12/13/17 11:40 Received: 12/14/17 10:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Acenaphthene	ND	ug/kg	499	115	1	12/14/17 13:12	12/17/17 19:55	83-32-9	
Acenaphthylene	ND	ug/kg	499	118	1	12/14/17 13:12	12/17/17 19:55	208-96-8	
Aniline	ND	ug/kg	499	134	1	12/14/17 13:12	12/17/17 19:55	62-53-3	
Anthracene	ND	ug/kg	499	112	1	12/14/17 13:12	12/17/17 19:55	120-12-7	
Benzo(a)anthracene	ND	ug/kg	499	92.2	1	12/14/17 13:12	12/17/17 19:55	56-55-3	
Benzo(a)pyrene	ND	ug/kg	499	95.2	1	12/14/17 13:12	12/17/17 19:55	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	499	86.1	1	12/14/17 13:12	12/17/17 19:55	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	499	127	1	12/14/17 13:12	12/17/17 19:55	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	499	98.2	1	12/14/17 13:12	12/17/17 19:55	207-08-9	
Benzoic Acid	ND	ug/kg	2490	90.7	1	12/14/17 13:12	12/17/17 19:55	65-85-0	
Benzyl alcohol	ND	ug/kg	997	99.7	1	12/14/17 13:12	12/17/17 19:55	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	499	90.7	1	12/14/17 13:12	12/17/17 19:55	101-55-3	
Butylbenzylphthalate	ND	ug/kg	499	106	1	12/14/17 13:12	12/17/17 19:55	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	997	103	1	12/14/17 13:12	12/17/17 19:55	59-50-7	
4-Chloroaniline	ND	ug/kg	2490	139	1	12/14/17 13:12	12/17/17 19:55	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	499	116	1	12/14/17 13:12	12/17/17 19:55	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	499	127	1	12/14/17 13:12	12/17/17 19:55	111-44-4	
2-Chloronaphthalene	ND	ug/kg	499	98.2	1	12/14/17 13:12	12/17/17 19:55	91-58-7	
2-Chlorophenol	ND	ug/kg	499	136	1	12/14/17 13:12	12/17/17 19:55	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/kg	499	103	1	12/14/17 13:12	12/17/17 19:55	7005-72-3	
Chrysene	ND	ug/kg	499	66.5	1	12/14/17 13:12	12/17/17 19:55	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	499	106	1	12/14/17 13:12	12/17/17 19:55	53-70-3	
Dibenzofuran	**414J**	ug/kg	499	81.6	1	12/14/17 13:12	12/17/17 19:55	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	499	133	1	12/14/17 13:12	12/17/17 19:55	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	499	113	1	12/14/17 13:12	12/17/17 19:55	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	499	141	1	12/14/17 13:12	12/17/17 19:55	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	2490	109	1	12/14/17 13:12	12/17/17 19:55	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	499	109	1	12/14/17 13:12	12/17/17 19:55	120-83-2	
Diethylphthalate	ND	ug/kg	499	77.1	1	12/14/17 13:12	12/17/17 19:55	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	499	196	1	12/14/17 13:12	12/17/17 19:55	105-67-9	
Dimethylphthalate	ND	ug/kg	499	101	1	12/14/17 13:12	12/17/17 19:55	131-11-3	
Di-n-butylphthalate	ND	ug/kg	499	81.6	1	12/14/17 13:12	12/17/17 19:55	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	997	99.7	1	12/14/17 13:12	12/17/17 19:55	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	2490	81.6	1	12/14/17 13:12	12/17/17 19:55	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	499	93.7	1	12/14/17 13:12	12/17/17 19:55	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	499	104	1	12/14/17 13:12	12/17/17 19:55	606-20-2	
Di-n-octylphthalate	ND	ug/kg	499	104	1	12/14/17 13:12	12/17/17 19:55	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	499	136	1	12/14/17 13:12	12/17/17 19:55	117-81-7	
Fluoranthene	ND	ug/kg	499	72.5	1	12/14/17 13:12	12/17/17 19:55	206-44-0	
Fluorene	ND	ug/kg	499	103	1	12/14/17 13:12	12/17/17 19:55	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	499	86.1	1	12/14/17 13:12	12/17/17 19:55	87-68-3	
Hexachlorobenzene	ND	ug/kg	499	63.5	1	12/14/17 13:12	12/17/17 19:55	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	499	92.2	1	12/14/17 13:12	12/17/17 19:55	77-47-4	
Hexachloroethane	ND	ug/kg	499	131	1	12/14/17 13:12	12/17/17 19:55	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	499	103	1	12/14/17 13:12	12/17/17 19:55	193-39-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

Sample: IDW-Z3-6 **Lab ID: 92366989005** Collected: 12/13/17 11:40 Received: 12/14/17 10:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Microwave	Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Isophorone	ND	ug/kg	499	112	1	12/14/17 13:12	12/17/17 19:55	78-59-1	
1-Methylnaphthalene	**9950**	ug/kg	2490	650	5	12/14/17 13:12	12/18/17 10:59	90-12-0	
2-Methylnaphthalene	**17200**	ug/kg	2490	536	5	12/14/17 13:12	12/18/17 10:59	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	499	151	1	12/14/17 13:12	12/17/17 19:55	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	499	196	1	12/14/17 13:12	12/17/17 19:55	15831-10-4	
Naphthalene	**4590**	ug/kg	499	122	1	12/14/17 13:12	12/17/17 19:55	91-20-3	
2-Nitroaniline	ND	ug/kg	2490	154	1	12/14/17 13:12	12/17/17 19:55	88-74-4	
3-Nitroaniline	ND	ug/kg	2490	136	1	12/14/17 13:12	12/17/17 19:55	99-09-2	
4-Nitroaniline	ND	ug/kg	997	141	1	12/14/17 13:12	12/17/17 19:55	100-01-6	
Nitrobenzene	ND	ug/kg	499	136	1	12/14/17 13:12	12/17/17 19:55	98-95-3	
2-Nitrophenol	ND	ug/kg	499	121	1	12/14/17 13:12	12/17/17 19:55	88-75-5	
4-Nitrophenol	ND	ug/kg	2490	89.2	1	12/14/17 13:12	12/17/17 19:55	100-02-7	
N-Nitrosodimethylamine	ND	ug/kg	499	162	1	12/14/17 13:12	12/17/17 19:55	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	499	95.2	1	12/14/17 13:12	12/17/17 19:55	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	499	148	1	12/14/17 13:12	12/17/17 19:55	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/kg	499	133	1	12/14/17 13:12	12/17/17 19:55	108-60-1	
Pentachlorophenol	ND	ug/kg	2490	90.7	1	12/14/17 13:12	12/17/17 19:55	87-86-5	
Phenanthrene	**1820**	ug/kg	499	83.1	1	12/14/17 13:12	12/17/17 19:55	85-01-8	
Phenol	ND	ug/kg	499	150	1	12/14/17 13:12	12/17/17 19:55	108-95-2	
Pyrene	**141J**	ug/kg	499	84.6	1	12/14/17 13:12	12/17/17 19:55	129-00-0	
Pyridine	ND	ug/kg	499	110	1	12/14/17 13:12	12/17/17 19:55	110-86-1	
1,2,4-Trichlorobenzene	ND	ug/kg	499	96.7	1	12/14/17 13:12	12/17/17 19:55	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	499	154	1	12/14/17 13:12	12/17/17 19:55	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	499	110	1	12/14/17 13:12	12/17/17 19:55	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	61	%	23-110		1	12/14/17 13:12	12/17/17 19:55	4165-60-0	
2-Fluorobiphenyl (S)	46	%	30-110		1	12/14/17 13:12	12/17/17 19:55	321-60-8	
Terphenyl-d14 (S)	56	%	28-110		1	12/14/17 13:12	12/17/17 19:55	1718-51-0	
Phenol-d6 (S)	60	%	22-110		1	12/14/17 13:12	12/17/17 19:55	13127-88-3	
2-Fluorophenol (S)	55	%	13-110		1	12/14/17 13:12	12/17/17 19:55	367-12-4	
2,4,6-Tribromophenol (S)	66	%	27-110		1	12/14/17 13:12	12/17/17 19:55	118-79-6	
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Acetone	ND	ug/kg	123	12.3	1		12/14/17 21:12	67-64-1	
Benzene	**2.4J**	ug/kg	6.2	2.0	1		12/14/17 21:12	71-43-2	
Bromobenzene	ND	ug/kg	6.2	2.5	1		12/14/17 21:12	108-86-1	
Bromochloromethane	ND	ug/kg	6.2	2.1	1		12/14/17 21:12	74-97-5	
Bromodichloromethane	ND	ug/kg	6.2	2.3	1		12/14/17 21:12	75-27-4	
Bromoform	ND	ug/kg	6.2	2.8	1		12/14/17 21:12	75-25-2	
Bromomethane	ND	ug/kg	12.3	3.1	1		12/14/17 21:12	74-83-9	
2-Butanone (MEK)	ND	ug/kg	123	3.6	1		12/14/17 21:12	78-93-3	
n-Butylbenzene	**52.8**	ug/kg	6.2	2.2	1		12/14/17 21:12	104-51-8	
sec-Butylbenzene	**51.6**	ug/kg	6.2	2.0	1		12/14/17 21:12	135-98-8	
tert-Butylbenzene	**3.2J**	ug/kg	6.2	2.5	1		12/14/17 21:12	98-06-6	
Carbon tetrachloride	ND	ug/kg	6.2	3.2	1		12/14/17 21:12	56-23-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

Sample: IDW-Z3-6 **Lab ID: 92366989005** Collected: 12/13/17 11:40 Received: 12/14/17 10:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Chlorobenzene	ND	ug/kg	6.2	2.3	1		12/14/17 21:12	108-90-7	
Chloroethane	ND	ug/kg	12.3	3.0	1		12/14/17 21:12	75-00-3	
Chloroform	ND	ug/kg	6.2	2.0	1		12/14/17 21:12	67-66-3	
Chloromethane	ND	ug/kg	12.3	3.0	1		12/14/17 21:12	74-87-3	
2-Chlorotoluene	ND	ug/kg	6.2	2.1	1		12/14/17 21:12	95-49-8	
4-Chlorotoluene	ND	ug/kg	6.2	2.2	1		12/14/17 21:12	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	6.2	4.4	1		12/14/17 21:12	96-12-8	
Dibromochloromethane	ND	ug/kg	6.2	2.2	1		12/14/17 21:12	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	6.2	2.2	1		12/14/17 21:12	106-93-4	
Dibromomethane	ND	ug/kg	6.2	3.1	1		12/14/17 21:12	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	6.2	2.3	1		12/14/17 21:12	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	6.2	2.5	1		12/14/17 21:12	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	6.2	2.1	1		12/14/17 21:12	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	12.3	4.4	1		12/14/17 21:12	75-71-8	
1,1-Dichloroethane	ND	ug/kg	6.2	1.8	1		12/14/17 21:12	75-34-3	
1,2-Dichloroethane	ND	ug/kg	6.2	2.7	1		12/14/17 21:12	107-06-2	
1,1-Dichloroethene	ND	ug/kg	6.2	2.2	1		12/14/17 21:12	75-35-4	
cis-1,2-Dichloroethene	**12.0**	ug/kg	6.2	1.7	1		12/14/17 21:12	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	6.2	2.3	1		12/14/17 21:12	156-60-5	
1,2-Dichloropropane	ND	ug/kg	6.2	2.1	1		12/14/17 21:12	78-87-5	
1,3-Dichloropropane	ND	ug/kg	6.2	2.3	1		12/14/17 21:12	142-28-9	
2,2-Dichloropropane	ND	ug/kg	6.2	2.1	1		12/14/17 21:12	594-20-7	
1,1-Dichloropropene	ND	ug/kg	6.2	1.8	1		12/14/17 21:12	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	6.2	2.2	1		12/14/17 21:12	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	6.2	1.8	1		12/14/17 21:12	10061-02-6	
Diisopropyl ether	ND	ug/kg	6.2	2.1	1		12/14/17 21:12	108-20-3	
Ethylbenzene	**10.3**	ug/kg	6.2	2.2	1		12/14/17 21:12	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	6.2	2.5	1		12/14/17 21:12	87-68-3	
2-Hexanone	ND	ug/kg	61.6	4.8	1		12/14/17 21:12	591-78-6	
Isopropylbenzene (Cumene)	**40.6**	ug/kg	6.2	2.3	1		12/14/17 21:12	98-82-8	
p-Isopropyltoluene	**110**	ug/kg	6.2	2.1	1		12/14/17 21:12	99-87-6	
Methylene Chloride	ND	ug/kg	24.6	3.7	1		12/14/17 21:12	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	61.6	4.6	1		12/14/17 21:12	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	6.2	1.8	1		12/14/17 21:12	1634-04-4	
Naphthalene	**11000**	ug/kg	5620	1350	1000		12/18/17 13:27	91-20-3	
n-Propylbenzene	**62.8**	ug/kg	6.2	2.1	1		12/14/17 21:12	103-65-1	
Styrene	ND	ug/kg	6.2	2.2	1		12/14/17 21:12	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	6.2	2.6	1		12/14/17 21:12	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.2	2.3	1		12/14/17 21:12	79-34-5	
Tetrachloroethene	ND	ug/kg	6.2	2.1	1		12/14/17 21:12	127-18-4	
Toluene	ND	ug/kg	6.2	2.2	1		12/14/17 21:12	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	6.2	2.7	1		12/14/17 21:12	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	6.2	2.0	1		12/14/17 21:12	120-82-1	
1,1,1-Trichloroethane	**75.0**	ug/kg	6.2	2.2	1		12/14/17 21:12	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	6.2	2.6	1		12/14/17 21:12	79-00-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

Sample: IDW-Z3-6 **Lab ID: 92366989005** Collected: 12/13/17 11:40 Received: 12/14/17 10:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260/5035A Volatile Organics	Analytical Method: EPA 8260								
Trichloroethene	**108000**	ug/kg	5620	2360	1000		12/18/17 13:27	79-01-6	
Trichlorofluoromethane	ND	ug/kg	6.2	2.7	1		12/14/17 21:12	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	6.2	2.0	1		12/14/17 21:12	96-18-4	
1,2,4-Trimethylbenzene	**10700**	ug/kg	5620	2250	1000		12/18/17 13:27	95-63-6	
1,3,5-Trimethylbenzene	**75.3**	ug/kg	6.2	2.2	1		12/14/17 21:12	108-67-8	
Vinyl acetate	ND	ug/kg	61.6	10.8	1		12/14/17 21:12	108-05-4	
Vinyl chloride	ND	ug/kg	12.3	2.2	1		12/14/17 21:12	75-01-4	
Xylene (Total)	**199**	ug/kg	12.3	4.4	1		12/14/17 21:12	1330-20-7	
m&p-Xylene	**70.0**	ug/kg	12.3	4.4	1		12/14/17 21:12	179601-23-1	
o-Xylene	**129**	ug/kg	6.2	2.3	1		12/14/17 21:12	95-47-6	
Surrogates									
Toluene-d8 (S)	103	%	70-130		1		12/14/17 21:12	2037-26-5	
4-Bromofluorobenzene (S)	115	%	70-130		1		12/14/17 21:12	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	70-132		1		12/14/17 21:12	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**32.9**	%	0.10	0.10	1		12/15/17 11:32		

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

QC Batch: 390935 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5035A Volatile Organics
Associated Lab Samples: 92366989001, 92366989002, 92366989003, 92366989004, 92366989005

METHOD BLANK: 2169077 Matrix: Solid
Associated Lab Samples: 92366989001, 92366989002, 92366989003, 92366989004, 92366989005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	5.6	2.4	12/14/17 13:54	
1,1,1-Trichloroethane	ug/kg	ND	5.6	2.0	12/14/17 13:54	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.6	2.1	12/14/17 13:54	
1,1,2-Trichloroethane	ug/kg	ND	5.6	2.4	12/14/17 13:54	
1,1-Dichloroethane	ug/kg	ND	5.6	1.7	12/14/17 13:54	
1,1-Dichloroethene	ug/kg	ND	5.6	2.0	12/14/17 13:54	
1,1-Dichloropropene	ug/kg	ND	5.6	1.7	12/14/17 13:54	
1,2,3-Trichlorobenzene	ug/kg	ND	5.6	2.5	12/14/17 13:54	
1,2,3-Trichloropropane	ug/kg	ND	5.6	1.8	12/14/17 13:54	
1,2,4-Trichlorobenzene	ug/kg	ND	5.6	1.8	12/14/17 13:54	
1,2,4-Trimethylbenzene	ug/kg	ND	5.6	2.2	12/14/17 13:54	
1,2-Dibromo-3-chloropropane	ug/kg	ND	5.6	4.0	12/14/17 13:54	
1,2-Dibromoethane (EDB)	ug/kg	ND	5.6	2.0	12/14/17 13:54	
1,2-Dichlorobenzene	ug/kg	ND	5.6	2.1	12/14/17 13:54	
1,2-Dichloroethane	ug/kg	ND	5.6	2.5	12/14/17 13:54	
1,2-Dichloropropane	ug/kg	ND	5.6	1.9	12/14/17 13:54	
1,3,5-Trimethylbenzene	ug/kg	ND	5.6	2.0	12/14/17 13:54	
1,3-Dichlorobenzene	ug/kg	ND	5.6	2.2	12/14/17 13:54	
1,3-Dichloropropane	ug/kg	ND	5.6	2.1	12/14/17 13:54	
1,4-Dichlorobenzene	ug/kg	ND	5.6	1.9	12/14/17 13:54	
2,2-Dichloropropane	ug/kg	ND	5.6	1.9	12/14/17 13:54	
2-Butanone (MEK)	ug/kg	ND	112	3.3	12/14/17 13:54	
2-Chlorotoluene	ug/kg	ND	5.6	1.9	12/14/17 13:54	
2-Hexanone	ug/kg	ND	56.1	4.4	12/14/17 13:54	
4-Chlorotoluene	ug/kg	ND	5.6	2.0	12/14/17 13:54	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	56.1	4.1	12/14/17 13:54	
Acetone	ug/kg	ND	112	11.2	12/14/17 13:54	
Benzene	ug/kg	ND	5.6	1.8	12/14/17 13:54	
Bromobenzene	ug/kg	ND	5.6	2.2	12/14/17 13:54	
Bromochloromethane	ug/kg	ND	5.6	1.9	12/14/17 13:54	
Bromodichloromethane	ug/kg	ND	5.6	2.1	12/14/17 13:54	
Bromoform	ug/kg	ND	5.6	2.6	12/14/17 13:54	
Bromomethane	ug/kg	ND	11.2	2.8	12/14/17 13:54	
Carbon tetrachloride	ug/kg	ND	5.6	2.9	12/14/17 13:54	
Chlorobenzene	ug/kg	ND	5.6	2.1	12/14/17 13:54	
Chloroethane	ug/kg	ND	11.2	2.7	12/14/17 13:54	
Chloroform	ug/kg	ND	5.6	1.8	12/14/17 13:54	
Chloromethane	ug/kg	ND	11.2	2.7	12/14/17 13:54	
cis-1,2-Dichloroethene	ug/kg	ND	5.6	1.6	12/14/17 13:54	
cis-1,3-Dichloropropene	ug/kg	ND	5.6	2.0	12/14/17 13:54	
Dibromochloromethane	ug/kg	ND	5.6	2.0	12/14/17 13:54	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

METHOD BLANK: 2169077 Matrix: Solid
Associated Lab Samples: 92366989001, 92366989002, 92366989003, 92366989004, 92366989005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dibromomethane	ug/kg	ND	5.6	2.8	12/14/17 13:54	
Dichlorodifluoromethane	ug/kg	ND	11.2	4.0	12/14/17 13:54	
Diisopropyl ether	ug/kg	ND	5.6	1.9	12/14/17 13:54	
Ethylbenzene	ug/kg	ND	5.6	2.0	12/14/17 13:54	
Hexachloro-1,3-butadiene	ug/kg	ND	5.6	2.2	12/14/17 13:54	
Isopropylbenzene (Cumene)	ug/kg	ND	5.6	2.1	12/14/17 13:54	
m&p-Xylene	ug/kg	ND	11.2	4.0	12/14/17 13:54	
Methyl-tert-butyl ether	ug/kg	ND	5.6	1.7	12/14/17 13:54	
Methylene Chloride	ug/kg	ND	22.4	3.4	12/14/17 13:54	
n-Butylbenzene	ug/kg	ND	5.6	2.0	12/14/17 13:54	
n-Propylbenzene	ug/kg	ND	5.6	1.9	12/14/17 13:54	
Naphthalene	ug/kg	ND	5.6	1.3	12/14/17 13:54	
o-Xylene	ug/kg	ND	5.6	2.1	12/14/17 13:54	
p-Isopropyltoluene	ug/kg	ND	5.6	1.9	12/14/17 13:54	
sec-Butylbenzene	ug/kg	ND	5.6	1.8	12/14/17 13:54	
Styrene	ug/kg	ND	5.6	2.0	12/14/17 13:54	
tert-Butylbenzene	ug/kg	ND	5.6	2.2	12/14/17 13:54	
Tetrachloroethene	ug/kg	ND	5.6	1.9	12/14/17 13:54	
Toluene	ug/kg	ND	5.6	2.0	12/14/17 13:54	
trans-1,2-Dichloroethene	ug/kg	ND	5.6	2.1	12/14/17 13:54	
trans-1,3-Dichloropropene	ug/kg	ND	5.6	1.7	12/14/17 13:54	
Trichloroethene	ug/kg	ND	5.6	2.4	12/14/17 13:54	
Trichlorofluoromethane	ug/kg	ND	5.6	2.5	12/14/17 13:54	
Vinyl acetate	ug/kg	ND	56.1	9.9	12/14/17 13:54	
Vinyl chloride	ug/kg	ND	11.2	2.0	12/14/17 13:54	
Xylene (Total)	ug/kg	ND	11.2	4.0	12/14/17 13:54	
1,2-Dichloroethane-d4 (S)	%	113	70-132		12/14/17 13:54	
4-Bromofluorobenzene (S)	%	101	70-130		12/14/17 13:54	
Toluene-d8 (S)	%	100	70-130		12/14/17 13:54	

LABORATORY CONTROL SAMPLE: 2169078

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	58.4	55.0	94	74-137	
1,1,1-Trichloroethane	ug/kg	58.4	57.9	99	67-140	
1,1,2,2-Tetrachloroethane	ug/kg	58.4	52.8	90	72-141	
1,1,2-Trichloroethane	ug/kg	58.4	55.6	95	78-138	
1,1-Dichloroethane	ug/kg	58.4	59.7	102	69-134	
1,1-Dichloroethene	ug/kg	58.4	62.2	106	67-138	
1,1-Dichloropropene	ug/kg	58.4	55.2	95	69-139	
1,2,3-Trichlorobenzene	ug/kg	58.4	51.7	89	70-146	
1,2,3-Trichloropropane	ug/kg	58.4	59.1	101	69-144	
1,2,4-Trichlorobenzene	ug/kg	58.4	52.4	90	68-148	
1,2,4-Trimethylbenzene	ug/kg	58.4	56.7	97	74-137	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

LABORATORY CONTROL SAMPLE: 2169078

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromo-3-chloropropane	ug/kg	58.4	52.4	90	65-140	
1,2-Dibromoethane (EDB)	ug/kg	58.4	56.3	96	77-135	
1,2-Dichlorobenzene	ug/kg	58.4	54.1	93	77-141	
1,2-Dichloroethane	ug/kg	58.4	60.4	103	65-137	
1,2-Dichloropropane	ug/kg	58.4	57.4	98	72-136	
1,3,5-Trimethylbenzene	ug/kg	58.4	56.7	97	76-133	
1,3-Dichlorobenzene	ug/kg	58.4	54.8	94	74-138	
1,3-Dichloropropane	ug/kg	58.4	58.4	100	71-139	
1,4-Dichlorobenzene	ug/kg	58.4	54.4	93	76-138	
2,2-Dichloropropane	ug/kg	58.4	57.5	99	68-137	
2-Butanone (MEK)	ug/kg	117	114J	97	58-147	
2-Chlorotoluene	ug/kg	58.4	56.7	97	73-139	
2-Hexanone	ug/kg	117	118	101	62-145	
4-Chlorotoluene	ug/kg	58.4	56.8	97	76-141	
4-Methyl-2-pentanone (MIBK)	ug/kg	117	120	103	64-149	
Acetone	ug/kg	117	128	109	53-153	
Benzene	ug/kg	58.4	54.3	93	73-135	
Bromobenzene	ug/kg	58.4	55.6	95	75-133	
Bromochloromethane	ug/kg	58.4	52.4	90	73-134	
Bromodichloromethane	ug/kg	58.4	58.0	99	71-135	
Bromoform	ug/kg	58.4	54.7	94	66-141	
Bromomethane	ug/kg	58.4	63.8	109	53-160	
Carbon tetrachloride	ug/kg	58.4	59.5	102	60-145	
Chlorobenzene	ug/kg	58.4	55.9	96	78-130	
Chloroethane	ug/kg	58.4	67.4	115	64-149	
Chloroform	ug/kg	58.4	60.3	103	70-134	
Chloromethane	ug/kg	58.4	66.7	114	52-150	
cis-1,2-Dichloroethene	ug/kg	58.4	62.2	106	70-133	
cis-1,3-Dichloropropene	ug/kg	58.4	59.0	101	68-134	
Dibromochloromethane	ug/kg	58.4	56.2	96	71-138	
Dibromomethane	ug/kg	58.4	58.8	101	74-130	
Dichlorodifluoromethane	ug/kg	58.4	59.5	102	40-160	
Diisopropyl ether	ug/kg	58.4	59.1	101	69-141	
Ethylbenzene	ug/kg	58.4	56.8	97	75-133	
Hexachloro-1,3-butadiene	ug/kg	58.4	52.9	91	68-143	
Isopropylbenzene (Cumene)	ug/kg	58.4	57.4	98	76-143	
m&p-Xylene	ug/kg	117	115	98	75-136	
Methyl-tert-butyl ether	ug/kg	58.4	54.7	94	68-144	
Methylene Chloride	ug/kg	58.4	63.6	109	45-154	
n-Butylbenzene	ug/kg	58.4	56.6	97	72-137	
n-Propylbenzene	ug/kg	58.4	58.0	99	76-136	
Naphthalene	ug/kg	58.4	53.7	92	68-151	
o-Xylene	ug/kg	58.4	56.4	97	76-141	
p-Isopropyltoluene	ug/kg	58.4	56.5	97	76-140	
sec-Butylbenzene	ug/kg	58.4	56.9	97	79-139	
Styrene	ug/kg	58.4	55.8	95	79-137	
tert-Butylbenzene	ug/kg	58.4	50.9	87	74-143	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

LABORATORY CONTROL SAMPLE: 2169078

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tetrachloroethene	ug/kg	58.4	48.9	84	71-138	
Toluene	ug/kg	58.4	56.6	97	74-131	
trans-1,2-Dichloroethene	ug/kg	58.4	61.5	105	67-135	
trans-1,3-Dichloropropene	ug/kg	58.4	58.3	100	65-146	
Trichloroethene	ug/kg	58.4	57.8	99	67-135	
Trichlorofluoromethane	ug/kg	58.4	58.2	100	59-144	
Vinyl acetate	ug/kg	117	89.4	77	40-160	
Vinyl chloride	ug/kg	58.4	64.1	110	56-141	
Xylene (Total)	ug/kg	175	171	98	76-137	
1,2-Dichloroethane-d4 (S)	%			108	70-132	
4-Bromofluorobenzene (S)	%			102	70-130	
Toluene-d8 (S)	%			102	70-130	

MATRIX SPIKE SAMPLE: 2169715

Parameter	Units	92367006002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	16.7	16.5	98	70-130	
1,1,1-Trichloroethane	ug/kg	ND	16.7	17.4	104	70-130	
1,1,2,2-Tetrachloroethane	ug/kg	ND	16.7	15.9	94	70-130	
1,1,2-Trichloroethane	ug/kg	ND	16.7	15.9	95	70-130	
1,1-Dichloroethane	ug/kg	ND	16.7	17.6	105	70-130	
1,1-Dichloroethene	ug/kg	ND	16.7	18.5	110	49-180	
1,1-Dichloropropene	ug/kg	ND	16.7	16.7	99	70-130	
1,2,3-Trichlorobenzene	ug/kg	ND	16.7	14.7	88	70-130	
1,2,3-Trichloropropane	ug/kg	ND	16.7	17.6	105	70-130	
1,2,4-Trichlorobenzene	ug/kg	ND	16.7	15.3	91	70-130	
1,2,4-Trimethylbenzene	ug/kg	ND	16.7	18.0	107	70-130	
1,2-Dibromo-3-chloropropane	ug/kg	ND	16.7	15.2	91	70-130	
1,2-Dibromoethane (EDB)	ug/kg	ND	16.7	16.1	96	70-130	
1,2-Dichlorobenzene	ug/kg	ND	16.7	16.1	96	70-130	
1,2-Dichloroethane	ug/kg	ND	16.7	17.7	106	70-130	
1,2-Dichloropropane	ug/kg	ND	16.7	16.8	100	70-130	
1,3,5-Trimethylbenzene	ug/kg	ND	16.7	17.9	107	70-130	
1,3-Dichlorobenzene	ug/kg	ND	16.7	16.4	98	70-130	
1,3-Dichloropropane	ug/kg	ND	16.7	17.0	101	70-130	
1,4-Dichlorobenzene	ug/kg	ND	16.7	16.5	98	70-130	
2,2-Dichloropropane	ug/kg	ND	16.7	17.3	103	70-130	
2-Butanone (MEK)	ug/kg	ND	33.6	33.3J	89	70-130	
2-Chlorotoluene	ug/kg	ND	16.7	18.0	107	70-130	
2-Hexanone	ug/kg	ND	33.6	33.1J	98	70-130	
4-Chlorotoluene	ug/kg	ND	16.7	17.8	106	70-130	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	33.6	33.2J	99	70-130	
Acetone	ug/kg	137	33.6	105	-95	70-130	M1
Benzene	ug/kg	ND	16.7	16.2	97	50-166	
Bromobenzene	ug/kg	ND	16.7	16.9	101	70-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(704)875-9092

QUALITY CONTROL DATA

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

MATRIX SPIKE SAMPLE: 2169715

Parameter	Units	92367006002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromochloromethane	ug/kg	ND	16.7	16.4	97	70-130	
Bromodichloromethane	ug/kg	ND	16.7	16.4	98	70-130	
Bromoform	ug/kg	ND	16.7	15.1	90	70-130	
Bromomethane	ug/kg	ND	16.7	18.2	108	70-130	
Carbon tetrachloride	ug/kg	ND	16.7	17.1	102	70-130	
Chlorobenzene	ug/kg	ND	16.7	16.8	100	43-169	
Chloroethane	ug/kg	ND	16.7	20.2	120	70-130	
Chloroform	ug/kg	ND	16.7	17.7	105	70-130	
Chloromethane	ug/kg	ND	16.7	18.9	113	70-130	
cis-1,2-Dichloroethene	ug/kg	ND	16.7	18.0	107	70-130	
cis-1,3-Dichloropropene	ug/kg	ND	16.7	16.4	98	70-130	
Dibromochloromethane	ug/kg	ND	16.7	15.7	94	70-130	
Dibromomethane	ug/kg	ND	16.7	15.6	93	70-130	
Dichlorodifluoromethane	ug/kg	ND	16.7	17.2	102	70-130	
Diisopropyl ether	ug/kg	ND	16.7	17.6	105	70-130	
Ethylbenzene	ug/kg	ND	16.7	17.6	105	70-130	
Hexachloro-1,3-butadiene	ug/kg	ND	16.7	16.9	101	70-130	
Isopropylbenzene (Cumene)	ug/kg	ND	16.7	17.6	105	70-130	
m&p-Xylene	ug/kg	ND	33.6	35.3	105	70-130	
Methyl-tert-butyl ether	ug/kg	ND	16.7	16.0	95	70-130	
Methylene Chloride	ug/kg	ND	16.7	17.4	103	70-130	
n-Butylbenzene	ug/kg	ND	16.7	18.0	107	70-130	
n-Propylbenzene	ug/kg	ND	16.7	18.5	110	70-130	
Naphthalene	ug/kg	ND	16.7	16.5	98	70-130	
o-Xylene	ug/kg	ND	16.7	17.3	103	70-130	
p-Isopropyltoluene	ug/kg	ND	16.7	17.9	107	70-130	
sec-Butylbenzene	ug/kg	ND	16.7	18.1	108	70-130	
Styrene	ug/kg	ND	16.7	16.3	97	70-130	
tert-Butylbenzene	ug/kg	ND	16.7	16.4	98	70-130	
Tetrachloroethene	ug/kg	ND	16.7	15.1	90	70-130	
Toluene	ug/kg	ND	16.7	16.7	99	52-163	
trans-1,2-Dichloroethene	ug/kg	ND	16.7	18.2	108	70-130	
trans-1,3-Dichloropropene	ug/kg	ND	16.7	15.7	93	70-130	
Trichloroethene	ug/kg	ND	16.7	16.2	96	49-167	
Trichlorofluoromethane	ug/kg	ND	16.7	17.8	106	70-130	
Vinyl acetate	ug/kg	ND	33.6	23.4J	70	70-130	
Vinyl chloride	ug/kg	ND	16.7	18.9	113	70-130	
1,2-Dichloroethane-d4 (S)	%				107	70-132	
4-Bromofluorobenzene (S)	%				104	70-130	
Toluene-d8 (S)	%				101	70-130	

SAMPLE DUPLICATE: 2169714

Parameter	Units	92366828002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	ND		30	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

SAMPLE DUPLICATE: 2169714

Parameter	Units	92366828002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/kg	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/kg	ND	ND		30	
1,1,2-Trichloroethane	ug/kg	ND	ND		30	
1,1-Dichloroethane	ug/kg	ND	ND		30	
1,1-Dichloroethene	ug/kg	ND	ND		30	
1,1-Dichloropropene	ug/kg	ND	ND		30	
1,2,3-Trichlorobenzene	ug/kg	ND	ND		30	
1,2,3-Trichloropropane	ug/kg	ND	ND		30	
1,2,4-Trichlorobenzene	ug/kg	ND	ND		30	
1,2,4-Trimethylbenzene	ug/kg	ND	ND		30	
1,2-Dibromo-3-chloropropane	ug/kg	ND	ND		30	
1,2-Dibromoethane (EDB)	ug/kg	ND	ND		30	
1,2-Dichlorobenzene	ug/kg	ND	ND		30	
1,2-Dichloroethane	ug/kg	ND	ND		30	
1,2-Dichloropropane	ug/kg	ND	ND		30	
1,3,5-Trimethylbenzene	ug/kg	ND	ND		30	
1,3-Dichlorobenzene	ug/kg	ND	ND		30	
1,3-Dichloropropane	ug/kg	ND	ND		30	
1,4-Dichlorobenzene	ug/kg	ND	ND		30	
2,2-Dichloropropane	ug/kg	ND	ND		30	
2-Butanone (MEK)	ug/kg	ND	ND		30	
2-Chlorotoluene	ug/kg	ND	ND		30	
2-Hexanone	ug/kg	ND	ND		30	
4-Chlorotoluene	ug/kg	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	ND		30	
Acetone	ug/kg	ND	ND		30	
Benzene	ug/kg	ND	ND		30	
Bromobenzene	ug/kg	ND	ND		30	
Bromochloromethane	ug/kg	ND	ND		30	
Bromodichloromethane	ug/kg	ND	ND		30	
Bromoform	ug/kg	ND	ND		30	
Bromomethane	ug/kg	ND	ND		30	
Carbon tetrachloride	ug/kg	ND	ND		30	
Chlorobenzene	ug/kg	ND	ND		30	
Chloroethane	ug/kg	ND	ND		30	
Chloroform	ug/kg	ND	ND		30	
Chloromethane	ug/kg	ND	ND		30	
cis-1,2-Dichloroethene	ug/kg	ND	ND		30	
cis-1,3-Dichloropropene	ug/kg	ND	ND		30	
Dibromochloromethane	ug/kg	ND	ND		30	
Dibromomethane	ug/kg	ND	ND		30	
Dichlorodifluoromethane	ug/kg	ND	ND		30	
Diisopropyl ether	ug/kg	ND	ND		30	
Ethylbenzene	ug/kg	ND	ND		30	
Hexachloro-1,3-butadiene	ug/kg	ND	ND		30	
Isopropylbenzene (Cumene)	ug/kg	ND	ND		30	
m&p-Xylene	ug/kg	ND	ND		30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

SAMPLE DUPLICATE: 2169714

Parameter	Units	92366828002 Result	Dup Result	RPD	Max RPD	Qualifiers
Methyl-tert-butyl ether	ug/kg	ND	ND		30	
Methylene Chloride	ug/kg	ND	ND		30	
n-Butylbenzene	ug/kg	ND	ND		30	
n-Propylbenzene	ug/kg	ND	ND		30	
Naphthalene	ug/kg	ND	ND		30	
o-Xylene	ug/kg	ND	ND		30	
p-Isopropyltoluene	ug/kg	ND	ND		30	
sec-Butylbenzene	ug/kg	ND	ND		30	
Styrene	ug/kg	ND	ND		30	
tert-Butylbenzene	ug/kg	ND	ND		30	
Tetrachloroethene	ug/kg	ND	ND		30	
Toluene	ug/kg	ND	ND		30	
trans-1,2-Dichloroethene	ug/kg	ND	ND		30	
trans-1,3-Dichloropropene	ug/kg	ND	ND		30	
Trichloroethene	ug/kg	ND	ND		30	
Trichlorofluoromethane	ug/kg	ND	ND		30	
Vinyl acetate	ug/kg	ND	ND		30	
Vinyl chloride	ug/kg	ND	ND		30	
Xylene (Total)	ug/kg	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	111	111	0		
4-Bromofluorobenzene (S)	%	104	103	2		
Toluene-d8 (S)	%	101	101	1		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

QC Batch: 390928 Analysis Method: EPA 8270
QC Batch Method: EPA 3546 Analysis Description: 8270 Solid MSSV Microwave
Associated Lab Samples: 92366989001, 92366989002, 92366989003, 92366989004, 92366989005

METHOD BLANK: 2169021 Matrix: Solid
Associated Lab Samples: 92366989001, 92366989002, 92366989003, 92366989004, 92366989005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	ND	333	64.6	12/15/17 11:41	
1,2-Dichlorobenzene	ug/kg	ND	333	88.9	12/15/17 11:41	
1,3-Dichlorobenzene	ug/kg	ND	333	75.8	12/15/17 11:41	
1,4-Dichlorobenzene	ug/kg	ND	333	93.9	12/15/17 11:41	
1-Methylnaphthalene	ug/kg	ND	333	86.9	12/15/17 11:41	
2,2'-Oxybis(1-chloropropane)	ug/kg	ND	333	88.9	12/15/17 11:41	
2,4,5-Trichlorophenol	ug/kg	ND	333	103	12/15/17 11:41	
2,4,6-Trichlorophenol	ug/kg	ND	333	73.7	12/15/17 11:41	
2,4-Dichlorophenol	ug/kg	ND	333	72.7	12/15/17 11:41	
2,4-Dimethylphenol	ug/kg	ND	333	131	12/15/17 11:41	
2,4-Dinitrophenol	ug/kg	ND	1670	54.5	12/15/17 11:41	
2,4-Dinitrotoluene	ug/kg	ND	333	62.6	12/15/17 11:41	
2,6-Dinitrotoluene	ug/kg	ND	333	69.7	12/15/17 11:41	
2-Chloronaphthalene	ug/kg	ND	333	65.7	12/15/17 11:41	
2-Chlorophenol	ug/kg	ND	333	90.9	12/15/17 11:41	
2-Methylnaphthalene	ug/kg	ND	333	71.7	12/15/17 11:41	
2-Methylphenol(o-Cresol)	ug/kg	ND	333	101	12/15/17 11:41	
2-Nitroaniline	ug/kg	ND	1670	103	12/15/17 11:41	
2-Nitrophenol	ug/kg	ND	333	80.8	12/15/17 11:41	
3&4-Methylphenol(m&p Cresol)	ug/kg	ND	333	131	12/15/17 11:41	
3,3'-Dichlorobenzidine	ug/kg	ND	1670	72.7	12/15/17 11:41	
3-Nitroaniline	ug/kg	ND	1670	90.9	12/15/17 11:41	
4,6-Dinitro-2-methylphenol	ug/kg	ND	667	66.7	12/15/17 11:41	
4-Bromophenylphenyl ether	ug/kg	ND	333	60.6	12/15/17 11:41	
4-Chloro-3-methylphenol	ug/kg	ND	667	68.7	12/15/17 11:41	
4-Chloroaniline	ug/kg	ND	1670	92.9	12/15/17 11:41	
4-Chlorophenylphenyl ether	ug/kg	ND	333	68.7	12/15/17 11:41	
4-Nitroaniline	ug/kg	ND	667	93.9	12/15/17 11:41	
4-Nitrophenol	ug/kg	ND	1670	59.6	12/15/17 11:41	
Acenaphthene	ug/kg	ND	333	76.8	12/15/17 11:41	
Acenaphthylene	ug/kg	ND	333	78.8	12/15/17 11:41	
Aniline	ug/kg	ND	333	89.9	12/15/17 11:41	
Anthracene	ug/kg	ND	333	74.7	12/15/17 11:41	
Benzo(a)anthracene	ug/kg	ND	333	61.6	12/15/17 11:41	
Benzo(a)pyrene	ug/kg	ND	333	63.6	12/15/17 11:41	
Benzo(b)fluoranthene	ug/kg	ND	333	57.6	12/15/17 11:41	
Benzo(g,h,i)perylene	ug/kg	ND	333	84.8	12/15/17 11:41	
Benzo(k)fluoranthene	ug/kg	ND	333	65.7	12/15/17 11:41	
Benzoic Acid	ug/kg	ND	1670	60.6	12/15/17 11:41	
Benzyl alcohol	ug/kg	ND	667	66.7	12/15/17 11:41	
bis(2-Chloroethoxy)methane	ug/kg	ND	333	77.8	12/15/17 11:41	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(704)875-9092

QUALITY CONTROL DATA

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

METHOD BLANK: 2169021 Matrix: Solid
Associated Lab Samples: 92366989001, 92366989002, 92366989003, 92366989004, 92366989005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
bis(2-Chloroethyl) ether	ug/kg	ND	333	84.8	12/15/17 11:41	
bis(2-Ethylhexyl)phthalate	ug/kg	ND	333	90.9	12/15/17 11:41	
Butylbenzylphthalate	ug/kg	ND	333	70.7	12/15/17 11:41	
Chrysene	ug/kg	ND	333	44.4	12/15/17 11:41	
Di-n-butylphthalate	ug/kg	ND	333	54.5	12/15/17 11:41	
Di-n-octylphthalate	ug/kg	ND	333	69.7	12/15/17 11:41	
Dibenz(a,h)anthracene	ug/kg	ND	333	70.7	12/15/17 11:41	
Dibenzofuran	ug/kg	ND	333	54.5	12/15/17 11:41	
Diethylphthalate	ug/kg	ND	333	51.5	12/15/17 11:41	
Dimethylphthalate	ug/kg	ND	333	67.7	12/15/17 11:41	
Fluoranthene	ug/kg	ND	333	48.5	12/15/17 11:41	
Fluorene	ug/kg	ND	333	68.7	12/15/17 11:41	
Hexachloro-1,3-butadiene	ug/kg	ND	333	57.6	12/15/17 11:41	
Hexachlorobenzene	ug/kg	ND	333	42.4	12/15/17 11:41	
Hexachlorocyclopentadiene	ug/kg	ND	333	61.6	12/15/17 11:41	
Hexachloroethane	ug/kg	ND	333	87.9	12/15/17 11:41	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	333	68.7	12/15/17 11:41	
Isophorone	ug/kg	ND	333	74.7	12/15/17 11:41	
N-Nitroso-di-n-propylamine	ug/kg	ND	333	63.6	12/15/17 11:41	
N-Nitrosodimethylamine	ug/kg	ND	333	108	12/15/17 11:41	
N-Nitrosodiphenylamine	ug/kg	ND	333	99.0	12/15/17 11:41	
Naphthalene	ug/kg	ND	333	81.8	12/15/17 11:41	
Nitrobenzene	ug/kg	ND	333	90.9	12/15/17 11:41	
Pentachlorophenol	ug/kg	ND	1670	60.6	12/15/17 11:41	
Phenanthrene	ug/kg	ND	333	55.6	12/15/17 11:41	
Phenol	ug/kg	ND	333	100	12/15/17 11:41	
Pyrene	ug/kg	ND	333	56.6	12/15/17 11:41	
Pyridine	ug/kg	ND	333	73.7	12/15/17 11:41	
2,4,6-Tribromophenol (S)	%	70	27-110		12/15/17 11:41	
2-Fluorobiphenyl (S)	%	81	30-110		12/15/17 11:41	
2-Fluorophenol (S)	%	77	13-110		12/15/17 11:41	
Nitrobenzene-d5 (S)	%	77	23-110		12/15/17 11:41	
Phenol-d6 (S)	%	89	22-110		12/15/17 11:41	
Terphenyl-d14 (S)	%	102	28-110		12/15/17 11:41	

LABORATORY CONTROL SAMPLE: 2169022

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	1630	1320	81	36-120	
1,2-Dichlorobenzene	ug/kg	1630	1350	82	41-120	
1,3-Dichlorobenzene	ug/kg	1630	1330	82	66-120	
1,4-Dichlorobenzene	ug/kg	1630	1340	82	42-120	
1-Methylnaphthalene	ug/kg	1630	1440	88	40-120	
2,2'-Oxybis(1-chloropropane)	ug/kg	1630	1170	71	17-120	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

LABORATORY CONTROL SAMPLE: 2169022

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4,5-Trichlorophenol	ug/kg	1630	1390	85	37-120	
2,4,6-Trichlorophenol	ug/kg	1630	1360	83	40-120	
2,4-Dichlorophenol	ug/kg	1630	1420	87	33-120	
2,4-Dimethylphenol	ug/kg	1630	1350	83	36-120	
2,4-Dinitrophenol	ug/kg	8170	6720	82	22-121	
2,4-Dinitrotoluene	ug/kg	1630	1440	88	60-120	
2,6-Dinitrotoluene	ug/kg	1630	1440	88	54-120	
2-Chloronaphthalene	ug/kg	1630	1550	95	41-120	
2-Chlorophenol	ug/kg	1630	1410	86	39-120	
2-Methylnaphthalene	ug/kg	1630	1420	87	26-120	
2-Methylphenol(o-Cresol)	ug/kg	1630	1420	87	41-120	
2-Nitroaniline	ug/kg	3270	2880	88	45-120	
2-Nitrophenol	ug/kg	1630	1300	79	35-120	
3&4-Methylphenol(m&p Cresol)	ug/kg	1630	1400	85	35-120	
3,3'-Dichlorobenzidine	ug/kg	3270	2980	91	16-125	
3-Nitroaniline	ug/kg	3270	2960	90	45-120	
4,6-Dinitro-2-methylphenol	ug/kg	3270	3270	100	46-120	
4-Bromophenylphenyl ether	ug/kg	1630	1380	85	36-120	
4-Chloro-3-methylphenol	ug/kg	3270	2890	88	37-120	
4-Chloroaniline	ug/kg	3270	2690	82	35-120	
4-Chlorophenylphenyl ether	ug/kg	1630	1350	83	30-120	
4-Nitroaniline	ug/kg	3270	3170	97	48-120	
4-Nitrophenol	ug/kg	8170	7220	88	43-120	
Acenaphthene	ug/kg	1630	1530	94	46-120	
Acenaphthylene	ug/kg	1630	1520	93	46-120	
Aniline	ug/kg	1630	1260	77	33-120	
Anthracene	ug/kg	1630	1560	95	63-120	
Benzo(a)anthracene	ug/kg	1630	1580	96	61-120	
Benzo(a)pyrene	ug/kg	1630	1610	98	59-120	
Benzo(b)fluoranthene	ug/kg	1630	1480	91	55-120	
Benzo(g,h,i)perylene	ug/kg	1630	1500	92	57-120	
Benzo(k)fluoranthene	ug/kg	1630	1660	102	56-120	
Benzoic Acid	ug/kg	8170	4910	60	13-120	
Benzyl alcohol	ug/kg	3270	2810	86	34-120	
bis(2-Chloroethoxy)methane	ug/kg	1630	1490	91	21-120	
bis(2-Chloroethyl) ether	ug/kg	1630	1340	82	25-120	
bis(2-Ethylhexyl)phthalate	ug/kg	1630	1830	112	56-123	
Butylbenzylphthalate	ug/kg	1630	1880	115	57-120	
Chrysene	ug/kg	1630	1670	102	64-120	
Di-n-butylphthalate	ug/kg	1630	1640	100	58-120	
Di-n-octylphthalate	ug/kg	1630	1900	116	47-121	
Dibenz(a,h)anthracene	ug/kg	1630	1530	93	56-120	
Dibenzofuran	ug/kg	1630	1500	92	43-120	
Diethylphthalate	ug/kg	1630	1540	94	55-120	
Dimethylphthalate	ug/kg	1630	1500	92	54-120	
Fluoranthene	ug/kg	1630	1530	93	61-120	
Fluorene	ug/kg	1630	1490	91	51-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

LABORATORY CONTROL SAMPLE: 2169022

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hexachloro-1,3-butadiene	ug/kg	1630	1240	76	22-120	
Hexachlorobenzene	ug/kg	1630	1450	89	53-120	
Hexachlorocyclopentadiene	ug/kg	1630	1230	75	18-150	
Hexachloroethane	ug/kg	1630	1330	81	39-120	
Indeno(1,2,3-cd)pyrene	ug/kg	1630	1510	93	58-120	
Isophorone	ug/kg	1630	1400	86	38-120	
N-Nitroso-di-n-propylamine	ug/kg	1630	1440	88	30-120	
N-Nitrosodimethylamine	ug/kg	1630	1490	91	32-120	
N-Nitrosodiphenylamine	ug/kg	1630	1540	94	50-120	
Naphthalene	ug/kg	1630	1410	86	38-120	
Nitrobenzene	ug/kg	1630	1360	83	37-120	
Pentachlorophenol	ug/kg	3270	2550	78	10-120	
Phenanthrene	ug/kg	1630	1540	94	62-120	
Phenol	ug/kg	1630	1500	92	37-120	
Pyrene	ug/kg	1630	1640	100	63-120	
Pyridine	ug/kg	1630	1170	71	15-120	
2,4,6-Tribromophenol (S)	%			92	27-110	
2-Fluorobiphenyl (S)	%			89	30-110	
2-Fluorophenol (S)	%			84	13-110	
Nitrobenzene-d5 (S)	%			85	23-110	
Phenol-d6 (S)	%			93	22-110	
Terphenyl-d14 (S)	%			95	28-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2169023 2169024

Parameter	Units	92367006002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2,4-Trichlorobenzene	ug/kg	ND	1920	1880	946	979	49	52	18-119	4	30	
1,2-Dichlorobenzene	ug/kg	ND	1920	1880	983	1010	51	54	50-110	2	30	
1,3-Dichlorobenzene	ug/kg	ND	1920	1880	966	992	50	53	27-110	3	30	
1,4-Dichlorobenzene	ug/kg	ND	1920	1880	963	1010	50	54	28-110	5	30	
1-Methylnaphthalene	ug/kg	ND	1920	1880	1140	1180	60	63	24-116	3	30	
2,2'-Oxybis(1-chloropropane)	ug/kg	ND	1920	1880	801	854	42	46	50-150	6	30	M1
2,4,5-Trichlorophenol	ug/kg	ND	1920	1880	1240	1290	65	69	28-110	4	30	
2,4,6-Trichlorophenol	ug/kg	ND	1920	1880	1120	1210	59	64	17-117	7	30	
2,4-Dichlorophenol	ug/kg	ND	1920	1880	1060	1120	55	60	21-128	5	30	
2,4-Dimethylphenol	ug/kg	ND	1920	1880	810	876	42	47	10-120	8	30	
2,4-Dinitrophenol	ug/kg	ND	9580	9360	6240	7590	65	81	10-107	19	30	
2,4-Dinitrotoluene	ug/kg	ND	1920	1880	1420	1510	74	81	36-109	6	30	
2,6-Dinitrotoluene	ug/kg	ND	1920	1880	1390	1480	72	79	32-110	6	30	
2-Chloronaphthalene	ug/kg	ND	1920	1880	1250	1250	65	67	30-107	0	30	
2-Chlorophenol	ug/kg	ND	1920	1880	939	1050	49	56	14-106	11	30	
2-Methylnaphthalene	ug/kg	ND	1920	1880	1120	1160	58	62	10-135	4	30	
2-Methylphenol(o-Cresol)	ug/kg	ND	1920	1880	874	1000	46	53	10-124	14	30	
2-Nitroaniline	ug/kg	ND	3830	3740	2960	3070	77	82	26-116	4	30	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2169023 2169024

Parameter	Units	92367006002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
2-Nitrophenol	ug/kg	ND	1920	1880	929	1000	48	54	28-103	8	30	
3&4-Methylphenol(m&p Cresol)	ug/kg	ND	1920	1880	924	1040	48	55	10-109	12	30	
3,3'-Dichlorobenzidine	ug/kg	ND	3830	3740	2280	2680	60	72	10-150	16	30	
3-Nitroaniline	ug/kg	ND	3830	3740	2960	3170	77	85	22-110	7	30	
4,6-Dinitro-2-methylphenol	ug/kg	ND	3830	3740	2850	3420	74	91	13-121	18	30	
4-Bromophenylphenyl ether	ug/kg	ND	1920	1880	1320	1410	69	75	31-109	6	30	
4-Chloro-3-methylphenol	ug/kg	ND	3830	3740	2510	2710	65	72	13-128	8	30	
4-Chloroaniline	ug/kg	ND	3830	3740	2150	2290	56	61	18-102	6	30	
4-Chlorophenylphenyl ether	ug/kg	ND	1920	1880	1250	1310	65	70	29-112	4	30	
4-Nitroaniline	ug/kg	ND	3830	3740	3220	3380	84	90	16-111	5	30	
4-Nitrophenol	ug/kg	ND	9580	9360	7010	7710	73	82	14-135	9	30	
Acenaphthene	ug/kg	ND	1920	1880	1330	1380	70	74	26-114	4	30	
Acenaphthylene	ug/kg	ND	1920	1880	1310	1360	68	73	32-108	4	30	
Aniline	ug/kg	ND	1920	1880	705	830	37	44	10-107	16	30	
Anthracene	ug/kg	ND	1920	1880	1560	1640	82	87	32-111	5	30	
Benzo(a)anthracene	ug/kg	ND	1920	1880	1580	1710	82	91	25-117	8	30	
Benzo(a)pyrene	ug/kg	ND	1920	1880	1620	1750	84	94	25-106	8	30	
Benzo(b)fluoranthene	ug/kg	ND	1920	1880	1500	1640	78	87	24-110	9	30	
Benzo(g,h,i)perylene	ug/kg	ND	1920	1880	1540	1630	80	87	19-112	6	30	
Benzo(k)fluoranthene	ug/kg	ND	1920	1880	1680	1810	85	94	24-114	7	30	
Benzoic Acid	ug/kg	ND	9580	9360	4320	5600	45	60	10-110	26	30	
Benzyl alcohol	ug/kg	ND	3830	3740	2050	2270	54	61	24-106	10	30	
bis(2-Chloroethoxy)methane	ug/kg	ND	1920	1880	1080	1120	57	60	13-119	4	30	
bis(2-Chloroethyl) ether	ug/kg	ND	1920	1880	974	1050	51	56	10-134	7	30	
bis(2-Ethylhexyl)phthalate	ug/kg	ND	1920	1880	1900	2020	99	108	10-125	6	30	
Butylbenzylphthalate	ug/kg	ND	1920	1880	1970	2060	102	110	18-110	5	30	
Chrysene	ug/kg	ND	1920	1880	1720	1770	90	95	30-110	3	30	
Di-n-butylphthalate	ug/kg	ND	1920	1880	1630	1720	85	92	19-112	5	30	
Di-n-octylphthalate	ug/kg	ND	1920	1880	1800	2060	94	110	17-105	13	30	M1
Dibenz(a,h)anthracene	ug/kg	ND	1920	1880	1500	1610	78	86	23-111	7	30	
Dibenzofuran	ug/kg	ND	1920	1880	1380	1430	72	76	35-103	3	30	
Diethylphthalate	ug/kg	ND	1920	1880	1520	1600	79	85	27-113	5	30	
Dimethylphthalate	ug/kg	ND	1920	1880	1460	1510	76	81	26-111	4	30	
Fluoranthene	ug/kg	ND	1920	1880	1510	1560	79	83	33-109	3	30	
Fluorene	ug/kg	ND	1920	1880	1400	1480	73	79	32-113	5	30	
Hexachloro-1,3-butadiene	ug/kg	ND	1920	1880	863	869	45	46	16-116	1	30	
Hexachlorobenzene	ug/kg	ND	1920	1880	1410	1490	74	80	27-120	5	30	
Hexachlorocyclopentadiene	ug/kg	ND	1920	1880	737	831	38	44	10-108	12	30	
Hexachloroethane	ug/kg	ND	1920	1880	926	934	48	50	10-117	1	30	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	1920	1880	1540	1620	80	86	10-122	5	30	
Isophorone	ug/kg	ND	1920	1880	1180	1240	62	66	28-114	5	30	
N-Nitroso-di-n-propylamine	ug/kg	ND	1920	1880	1100	1200	58	64	27-113	8	30	
N-Nitrosodimethylamine	ug/kg	ND	1920	1880	1050	1120	55	60	10-109	6	30	
N-Nitrosodiphenylamine	ug/kg	ND	1920	1880	1390	1540	72	82	10-128	10	30	
Naphthalene	ug/kg	ND	1920	1880	1040	1070	54	57	25-110	3	30	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2169023 2169024

Parameter	Units	92367006002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrobenzene	ug/kg	ND	1920	1880	967	998	50	53	18-114	3	30	
Pentachlorophenol	ug/kg	ND	3830	3740	2350	2680	61	72	10-122	13	30	
Phenanthrene	ug/kg	ND	1920	1880	1550	1610	81	86	30-114	4	30	
Phenol	ug/kg	ND	1920	1880	975	1100	51	59	11-102	12	30	
Pyrene	ug/kg	ND	1920	1880	1820	1810	95	97	25-116	0	30	
2,4,6-Tribromophenol (S)	%						67	76	27-110			
2-Fluorobiphenyl (S)	%						57	60	30-110			
2-Fluorophenol (S)	%						44	50	13-110			
Nitrobenzene-d5 (S)	%						49	54	23-110			
Phenol-d6 (S)	%						50	58	22-110			
Terphenyl-d14 (S)	%						86	89	28-110			

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

QC Batch: 390967 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 92366989001, 92366989002, 92366989003, 92366989004, 92366989005

SAMPLE DUPLICATE: 2169245

Parameter	Units	92366805001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.5	16.6	1	25	

SAMPLE DUPLICATE: 2169246

Parameter	Units	92366793002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	91.2	91.2	0	25	

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REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

Pace Analytical is 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

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
S1	Surrogate recovery outside laboratory control limits (confirmed by re-analysis).
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

Pace Analytical Services, LLC
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(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CTS of Asheville-Revised Report
Pace Project No.: 92366989

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92366989001	**IDW-Z2-5**	EPA 3546	390928	EPA 8270	391070
92366989002	**IDW-Z2-6**	EPA 3546	390928	EPA 8270	391070
92366989003	**IDW-Z3-4**	EPA 3546	390928	EPA 8270	391070
92366989004	**IDW-Z3-5**	EPA 3546	390928	EPA 8270	391070
92366989005	**IDW-Z3-6**	EPA 3546	390928	EPA 8270	391070
92366989001	**IDW-Z2-5**	EPA 8260	390935		
92366989002	**IDW-Z2-6**	EPA 8260	390935		
92366989003	**IDW-Z3-4**	EPA 8260	390935		
92366989004	**IDW-Z3-5**	EPA 8260	390935		
92366989005	**IDW-Z3-6**	EPA 8260	390935		
92366989001	**IDW-Z2-5**	ASTM D2974-87	390967		
92366989002	**IDW-Z2-6**	ASTM D2974-87	390967		
92366989003	**IDW-Z3-4**	ASTM D2974-87	390967		
92366989004	**IDW-Z3-5**	ASTM D2974-87	390967		
92366989005	**IDW-Z3-6**	ASTM D2974-87	390967		

Pace Analytical	Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: August 4, 2017 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.04	Issuing Authority: Pace Quality Office

Laboratory receiving samples:
Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☑ Raleigh ☐ Mechanicsville ☐

Sample Condition Upon Receipt

Client Name: Amec foster Wheeler

Project #: **WO#: 92366989**

Courier: ☐ Commercial ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ Other:

Custody Seal Present? ☑ Yes ☐ No Seals Intact? ☑ Yes ☐ No

Date/Initials Person Examining Contents: 12-12/14

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

Thermometer: ☐ IR Gun ID: T1704

Type of Ice: ☑ Wet ☐ Blue ☐ None

Biological Tissue Frozen? ☐ Yes ☐ No ☑ N/A

Correction Factor: Cooler Temp Corrected (°C): 1.9

Temp should be above freezing to 6°C
☐ Samples out of temp criteria. Samples on ice, cooling process has begun

USDA Regulated Soil (☐ N/A, water sample)
Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ No
Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☑ No

				Comments/Discrepancy:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	2.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☑ No	☐ N/A	3.
Rush Turn Around Time Requested?	☑ Yes	☐ No	☐ N/A	4.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	5.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	7.
Dissolved analysis: Samples Field Filtered?	☐ Yes	☐ No	☑ N/A	8.
Sample Labels Match COC?	☑ Yes	☐ No	☐ N/A	9.
-Includes Date/Time/ID/Analysis Matrix: SL				
Headspace in VOA Vials (>5-6mm)?	☐ Yes	☐ No	☑ N/A	10.
Trip Blank Present?	☐ Yes	☑ No	☐ N/A	11.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Sample Discrepancy: IDW-23-6 one vial returned empty

Lot ID of split containers: _____

Project Manager SCURF Review: TC Date: 12/15

Project Manager SRF Review: TC Date: 12/15

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)

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

**Bottom half of box is to list number of bottles

Project # WO#: 92366989

PM: PTE Due Date: 12/18/17

CLIENT: 92-AMEC A

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SPST-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	Cubitainer	VSGU-20 mL Scintillation vials (N/A)	GN
1									1											4								
2									1											4								
3									1											4								
4									1											HCl B:14	4							
5									1											HCl N:14	3							
6																												
7																												
8																												
9																												
10																												
11																												
12																												

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

2180170

Section A Required Client Information:
Company: AmecFosterWheeler
Address: 1308 Patton Avenue Asheville NC 28806
Email To: susan.avrit@amecfw.com
Phone: 828 252 8138 Fax:
Requested Due Date/TAT: (4-8-hr)

Section B Required Project Information:
Report To: Susan Avrit
Copy To:
Purchase Order No.:
Project Name: LTS of Asheville
Project Number: 6252.162012.05

Section C Invoice Information:
Attention: Susan Avrit
Company Name:
Address: susan.avrit@amecfw.com
Pace Quote Reference:
Pace Project Manager: Taylor Ezell
Pace Profile #:

REGULATORY AGENCY
NPDES GROUND WATER DRINKING WATER
UST RCRA OTHER

Site Location STATE: NC

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test: 8260 VOCs	8270 SVOCs	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	IDW-22-5	SL				12/13/17	830		5	2						1	2	X	X		92366489 MC12/14 FCS 001
2	IDW-22-6	SL				12/13/17	855		5	2						1	2	X	X		002
3	IDW-23-4	SL				12/13/17	905		5	2						1	2	X	X		003
4	IDW-23-5	SL				12/13/17	920		5	2						1	2	X	X		004
5	IDW-23-6	SL				12/13/17	1140		5	2						1	2	X	X		005
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Susan Avrit / AmecFW	12/13/17	1730	Michael E Pace	12/14	0945	

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Susan Avrit
SIGNATURE of SAMPLER: Susan Avrit
DATE Signed (MM/DD/YY): 12/13/17

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

*Important Note: By signing this form you are accepting Pace® NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

APPENDIX E

WASTE MANIFESTS

90208

REPUBLIC SERVICES, INC.

NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV
If waste is **NOT** asbestos waste, complete Sections I, II and III

I. GENERATOR (Generator completes Ia-r)

a. Generator's US EPA ID Number	b. Manifest Document Number	c. Page 1 of
NCD003149556	180108-1	1

d. Generator's Name and Location:	e. Generator's Mailing Address:
CTS Corporation 235 Mills Gap Road Asheville, NC 28803 f. Phone: 828-252-8130	905 West Boulevard North Elkhart, IN 46514 g. Phone: 630-577-8879
If owner of the generating facility differs from the generator, provide: h. Owner's Name:	 i. Owner's Phone No.:

j. Waste Profile #	k. Exp. Date	l. Waste Shipping Name and Description	m. Containers No.	m. Containers Type	n. Total Quantity	o. Unit Wt/Vol
3115-18-0068	7/31/18	Soil Cuttings from Investigative Drill Work	001	CM	~15	Tons

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.

p. Generator Authorized Agent Name (Print)	q. Signature	r. Date
Rebecca M. Clark as agent for CTS Corporation		1/8/18

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

a. Transporter's Name and Address:
STAT, Incorporated
2550 Hickory Blvd.
Lenoir, NC 28645
b. Phone: 828-396-2304

c. Driver Name (Print)	d. Signature	e. Date
Jacob Beaty		1/8/18

III. DESTINATION (Generator complete IIIa-c and Destination Site completes IIId-g)

a. Disposal Facility and Site Address:	c. US EPA Number	d. Discrepancy Indication Space:
Upstate Regional MSW Landfill 868 Wildcat Road Enoree, SC 29335 b. Phone: 864-969-4460		

I herby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

e. Name of Authorized Agent (Print)	f. Signature	g. Date
		1/8/18

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

a. Operator's Name and Address:	c. Responsible Agency Name and Address:
b. Phone:	d. Phone:

e. Special Handling Instructions and Additional Information:

f. ☐ Friable ☐ Non-Friable ☐ Both % Friable % Non-Friable

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

g. Operator's Name and Title (Print)	h. Signature	i. Date

*Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or

REPUBLIC SERVICES, INC.

NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV
If waste is **NOT** asbestos waste, complete Sections I, II and III

716

I. GENERATOR (Generator completes Ia-r)

a. Generator's US EPA ID Number	b. Manifest Document Number	c. Page 1 of
NCD003149556	180115-1	1

d. Generator's Name and Location:	e. Generator's Mailing Address:
CTS Corporation 235 Mills Gap Road Asheville, NC 28803 f. Phone: 828-252-8130	905 West Boulevard North Elkhart, IN 46514 g. Phone: 630-577-8879
If owner of the generating facility differs from the generator, provide: h. Owner's Name:	i. Owner's Phone No.:

j. Waste Profile #	k. Exp. Date	l. Waste Shipping Name and Description	m. Containers No.	m. Containers Type	n. Total Quantity	o. Unit Wt/Vol
3115-18-0068	7/31/18	Soil Cuttings from Investigative Drill Work	001	CM	~10	Tons

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions. I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.

p. Generator Authorized Agent Name (Print)	q. Signature	r. Date
Rodney Clark, as agent for CTS Corporation		1/15/18

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

a. Transporter's Name and Address:
STAT, Incorporated
2550 Hickory Blvd.
Lenoir, NC 28645
b. Phone: 828-396-2304

c. Driver Name (Print)	d. Signature	e. Date
Chris Bowman		1/15/18

III. DESTINATION (Generator complete IIIa-c and Destination Site completes IIId-g)

a. Disposal Facility and Site Address:	c. US EPA Number	d. Discrepancy Indication Space:
Upstate Regional MSW Landfill 868 Wildcat Road Enoree, SC 29335 b. Phone: 864-969-4460		

I herby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

e. Name of Authorized Agent (Print)	f. Signature	g. Date
		1/15/18

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

a. Operator's Name and Address:	c. Responsible Agency Name and Address:
b. Phone:	d. Phone:

e. Special Handling Instructions and Additional Information:

f. ☐ Friable ☐ Non-Friable ☐ Both % Friable % Non-Friable

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

g. Operator's Name and Title (Print)	h. Signature	i. Date

*Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or

REPUBLIC SERVICES, INC.

NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

704066

If waste is asbestos waste, complete Sections I, II, III and IV
If waste is NOT asbestos waste, complete Sections I, II and III

710

I. GENERATOR (Generator completes Ia-r)

a. Generator's US EPA ID Number	b. Manifest Document Number	c. Page 1 of
NCD003149556	180130-1	1

d. Generator's Name and Location:	e. Generator's Mailing Address:
CTS Corporation 235 Mills Gap Road Asheville, NC 28803 f. Phone: 828-252-8130	905 West Boulevard North Elkhart, IN 46514 g. Phone: 630-577-8879
If owner of the generating facility differs from the generator, provide: h. Owner's Name:	i. Owner's Phone No.:

j. Waste Profile #	k. Exp. Date	l. Waste Shipping Name and Description	m. Containers No.	m. Containers Type	n. Total Quantity	o. Unit Wt/Vol
3115-18-0068	7/31/18	Soil Cuttings from Investigative Drill Work	001	CM		Tons
		A&D PO No: 45023				

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.

p. Generator Authorized Agent Name (Print)	q. Signature	r. Date
Rodney M. Clark, as agent for CTS Corporation		1/30/18

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

a. Transporter's Name and Address:
STAT, Incorporated
2550 Hickory Blvd.
Lenoir, NC 28645
b. Phone: 828-396-2304

c. Driver Name (Print)	d. Signature	e. Date
Jakob Beach		1/30/18

III. DESTINATION (Generator complete IIIa-c and Destination Site completes IIId-g)

a. Disposal Facility and Site Address:	c. US EPA Number	d. Discrepancy Indication Space:
Upstate Regional MSW Landfill 868 Wildcat Road Enoree, SC 29335 b. Phone: 864-969-4460		

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

e. Name of Authorized Agent (Print)	f. Signature	g. Date
		1/30/18

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

a. Operator's Name and Address:	c. Responsible Agency Name and Address:
b. Phone:	d. Phone:

e. Special Handling Instructions and Additional Information:

f. ☐ Friable ☐ Non-Friable ☐ Both % Friable % Non-Friable

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

g. Operator's Name and Title (Print)	h. Signature	i. Date

*Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or

REPUBLIC SERVICES, INC.

NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV
If waste is NOT asbestos waste, complete Sections I, II and III

7142

I. GENERATOR (Generator completes Ia-r)

a. Generator's US EPA ID Number	b. Manifest Document Number	c. Page 1 of
NCD003149556	180208-1	1

d. Generator's Name and Location:	e. Generator's Mailing Address:
CTS Corporation 235 Mills Gap Road Asheville, NC 28803 f. Phone:828-252-8130	905 West Boulevard North Elkhart, IN 46514 g. Phone:630-577-8879
If owner of the generating facility differs from the generator, provide: h. Owner's Name:	i. Owner's Phone No.:

j. Waste Profile #	k. Exp. Date	l. Waste Shipping Name and Description	m. Containers No.	m. Containers Type	n. Total Quantity	o. Unit Wt/Vol
3115-18-0068	7/31/18	Soil Cuttings from Investigative Drill Work	001	CM	~10	Tons

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, If this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions. I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.

p. Generator Authorized Agent Name (Print)	q. Signature	r. Date
Rodney M. Clark, as agent for CTS Corporation		2/8/18

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

a. Transporter's Name and Address:
A&D Environmental Services (SC), LLC
1741 Calks Ferry Road
Lexington, SC 29073
b. Phone: 803-957-9175

c. Driver Name (Print)	d. Signature	e. Date
Richard McCravey		2/8/18

III. DESTINATION (Generator complete IIIa-c and Destination Site completes IIId-g)

a. Disposal Facility and Site Address:	c. US EPA Number	d. Discrepancy Indication Space:
Upstate Regional MSW Landfill 868 Wildcat Road Enoree, SC 29335 864-969-4460 b. Phone:		

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

e. Name of Authorized Agent (Print)	f. Signature	g. Date
		2/9/18

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

a. Operator's Name and Address:	c. Responsible Agency Name and Address:
b. Phone:	d. Phone:

e. Special Handling Instructions and Additional Information:

f. ☐ Friable ☐ Non-Friable ☐ Both % Friable % Non-Friable

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

g. Operator's Name and Title (Print)	h. Signature	i. Date

*Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or

REPUBLIC SERVICES, INC.

NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV
If waste is **NOT** asbestos waste, complete Sections I, II and III

I. GENERATOR (Generator completes Ia-r)

a. Generator's US EPA ID Number	b. Manifest Document Number	c. Page 1 of
NCD003149556	180219-1	1

d. Generator's Name and Location:	e. Generator's Mailing Address:
CTS Corporation 235 Mills Gap Road Asheville, NC 28803 f. Phone: 828-252-8130	905 West Boulevard North Elkhart, IN 46514 g. Phone: 630-577-8879
If owner of the generating facility differs from the generator, provide: h. Owner's Name:	i. Owner's Phone No.:

j. Waste Profile #	k. Exp. Date	l. Waste Shipping Name and Description	m. Containers No.	m. Containers Type	n. Total Quantity	o. Unit Wt/Vol
3115-18-0068	7/31/18	Soil Cuttings from Investigative Drill Work	001	CM	14	Tons
		A&D PO No: 45023				

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.

p. Generator Authorized Agent Name (Print)	q. Signature	r. Date
Rodney M. Clark, as agent for CTS Corporation	Rodney M. Clark	2/20/18

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

a. Transporter's Name and Address:
STAT, Incorporated
2550 Hickory Blvd.
Lenoir, NC 28645
b. Phone: 828-396-2304

c. Driver Name (Print)	d. Signature	e. Date
Chris Bowman		2/20/18

III. DESTINATION (Generator complete IIIa-c and Destination Site completes IIId-g)

a. Disposal Facility and Site Address:	c. US EPA Number	d. Discrepancy Indication Space:
Upstate Regional MSW Landfill 868 Wildcat Road Enoree, SC 29335 b. Phone: 864-969-4460		

I herby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

e. Name of Authorized Agent (Print)	f. Signature	g. Date
		2/20/18

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

a. Operator's Name and Address:	c. Responsible Agency Name and Address:
b. Phone:	d. Phone:

e. Special Handling Instructions and Additional Information:

f. ☐ Friable ☐ Non-Friable ☐ Both % Friable % Non-Friable

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

g. Operator's Name and Title (Print)	h. Signature	i. Date

*Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or

NA-D7.092040

REPUBLIC SERVICES, INC.

NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

040518-1

If waste is asbestos waste, complete Sections I, II, III and IV
If waste is **NOT** asbestos waste, complete Sections I, II and III

I. GENERATOR (Generator completes Ia-r)

a. Generator's US EPA ID Number	b. Manifest Document Number	c. Page 1 of
NCD003149556	180403-1	1

d. Generator's Name and Location:	e. Generator's Mailing Address:
CTS Corporation 235 Mills Gap Road Asheville, NC 28803 f. Phone: 828-252-8130	4925 Indiana Avenue Lisle, IL 60532 g. Phone: 630-577-8879
If owner of the generating facility differs from the generator, provide: h. Owner's Name:	i. Owner's Phone No.:

j. Waste Profile #	k. Exp. Date	l. Waste Shipping Name and Description	m. Containers No.	m. Containers Type	n. Total Quantity	o. Unit Wt/Vol
3115-18-0066	7/31/18	Soil Cuttings from Investigative Drill Work	001	CM		Tons
		A&D PO No: 45023				
		716				

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions. I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.

p. Generator Authorized Agent Name (Print)	q. Signature	r. Date
Susan Arritt	Susan Arritt as agent for CTS Corporation	4/5/18

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

a. Transporter's Name and Address:
STAT, Incorporated
2550 Hickory Blvd.
Lenoir, NC 28645
b. Phone: 828-396-2304

c. Driver Name (Print)	d. Signature	e. Date
Jeffrey Chapman	Jeffrey Chapman	04/05/18

III. DESTINATION (Generator complete IIIa-c and Destination Site completes IIId-g)

a. Disposal Facility and Site Address:	c. US EPA Number	d. Discrepancy Indication Space:
Upstate Regional MSW Landfill 868 Wildcat Road Enoree, SC 29335 b. Phone: 864-969-4460		

I herby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

e. Name of Authorized Agent (Print)	f. Signature	g. Date
Carol Lee	Carol Lee	4/5/18

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

a. Operator's Name and Address:	c. Responsible Agency Name and Address:
b. Phone:	d. Phone:

e. Special Handling Instructions and Additional Information:

f. ☐ Friable ☐ Non-Friable ☐ Both % Friable % Non-Friable

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

g. Operator's Name and Title (Print)	h. Signature	i. Date

*Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or

REPUBLIC SERVICES, INC.

NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

Ser# 1804-0728

If waste is asbestos waste, complete Sections I, II, III and IV
If waste is NOT asbestos waste, complete Sections I, II and III

Box 52

I. GENERATOR (Generator completes Ia-r)

a. Generator's US EPA ID Number	b. Manifest Document Number	c. Page 1 of
NCD003149556	180507-1	1

d. Generator's Name and Location:	e. Generator's Mailing Address:
CTS Corporation 235 Mills Gap Road Asheville, NC 28803 f. Phone:828-252-8130	4925 Indiana Ave. Lisle, IL 60532 g. Phone:630-577-8879
If owner of the generating facility differs from the generator, provide: h. Owner's Name:	i. Owner's Phone No.:

j. Waste Profile #	k. Exp. Date	l. Waste Shipping Name and Description	m. Containers No.	m. Containers Type	n. Total Quantity	o. Unit Wt/Vol
3115-18-0068	7/31/18	Soil Cuttings from Investigative Drill Work	001	CM	~10	Tons
		716				

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions. I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.

p. Generator Authorized Agent Name (Print)	q. Signature	r. Date
Rodney M. Clark, as agent for CTS Corporation	Rodney M. Clark	5/7/18

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

a. Transporter's Name and Address:		
A&D Environmental Services (SC), LLC 1741 Calks Ferry Road Lexington, SC 29073 b. Phone: 803-957-9175		
c. Driver Name (Print)	d. Signature	e. Date
Richard Williams	Richard Williams	5/7/18

III. DESTINATION (Generator complete IIIa-c and Destination Site completes IIId-g)

a. Disposal Facility and Site Address:	c. US EPA Number	d. Discrepancy Indication Space:
Upstate Regional MSW Landfill 868 Wildcat Road Enoree, SC 29335 864-969-4460 b. Phone:		

I herby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

e. Name of Authorized Agent (Print)	f. Signature	g. Date
[illegible]	[illegible]	5/7/18

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

a. Operator's Name and Address:	c. Responsible Agency Name and Address:
b. Phone:	d. Phone:

e. Special Handling Instructions and Additional Information:

f. ☐ Friable ☐ Non-Friable ☐ Both % Friable % Non-Friable

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

g. Operator's Name and Title (Print)	h. Signature	i. Date

*Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or

A&D Environmental Services — Bill of Lading / Material Manifest

A&D Job No:	Generator ID Number	Page 1 of	Emergency Response Phone	Tracking Number
1807-0047		1	800-434-7750	33363

Generator's Name and Mailing Address: CTS Corporation-Skyland, 905 West Blvd North, Elkhart, IN 46514
Generator's Phone: 574-523-3800

Generator's site address (if different from mailing address): 235 Mills Gap Road, Asheville, NC 28803

Transporter 1 ☐ 2 ☐	Company Name: A&D Environmental Services, Inc.	US EPA ID No: NCD986232221
Transporter 1 ☐ 2 ☑	Company Name: A&D Environmental Services (SC), LLC	US EPA ID No: SCD987598331
Transporter 1 ☐ 2 ☐	Company Name:	US EPA ID No:

☑ Designated Facility	☐ Designated Facility	☐ Designated Facility (Please insert facility information below)
A&D Environmental Services, Inc. 2718 Uwharrie Road Archdale, NC 27263 336-434-7750 NCD986232221	A&D Environmental Services, Inc. 3149 Lear Drive Burlington, NC 27215 336-229-0058 NCR000138628	

HM	Hazardous Materials Shipping Name and Description (if applicable)	No.	Type	QTY	Wt/Vol	Profile Number
	Non-Regulated Material (IDW-Solids)	3	DM	1800	P	2015 0725

	Petroleum Products for Recycle		No.	Type	QTY	Wt/Vol	Profile Number
X	NA1993, Diesel fuel, 3, III	EGR# 128					
X	NA 1993, Fuel oil (No. 1,2,4,5 or 6), 3, III	EGR# 128					
X	UN1203, Gasoline, 3, II	EGR# 128					
	USED OIL (Not a USDOT Hazardous Material)						
	Petroleum Contact Water (Not a USDOT Hazardous Material						

Universal Waste Lamps, Batteries, Ballasts, and Electronics for Recycle

HM	No.	Type	Est. Wt.	Count	Shipping Name and Description (if applicable)		Common Name	Discrepancy
X					RQ, UN3506, Mercury contained in manufactured articles, 8 (6.1), RQ	ERG# 172	Mercury Devices	
X					RQ, UN3432, Polychlorinated biphenyls, solid, 9, II	EGR# 171	TSCA Exempt PCB Lamp Ballasts	
X					UN2800, Batteries, wet nonspillable, 8	EGR# 154	Sealed Lead Acid Batteries	
X					UN2794, Batteries, wet, filled with acid, 8	EGR# 154	Lead Acid Batteries	
X					UN2795, Batteries, wet, filled with alkali, 8	EGR# 154	Wet NiCad Batteries	
X					UN3090, Lithium metal batteries, 9	EGR# 138	Lithium Metal Batteries	
X					UN3480, Lithium ion batteries, 9	EGR# 147	Lithium Ion Batteries	
X					Batteries, dry, sealed n.o.s.		Alkaline Batteries	
X					Batteries, dry, sealed n.o.s.		Dry NiCad Batteries	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164 (e)		Florescent lamps (4-Ft. and Under)	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164 (e)		Florescent lamps (Over 4-Ft.)	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164 (e)		Circular/U-tube lamps	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164 (e)		Compact Lamps	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164 (e)		Shielded Lamps	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164 (e)		HID/MV/UV Lamps	
					Universal Waste Lamps (Not DOT-Regulated per 49 CFR 173.164 (e)		Incandescent Lamps	
					Non-PCB Light Ballasts for Recycle (Not DOT-Regulated)		Non-PCB Light Ballasts/Capacitors	
					Electronic Equipment for Recycle (Not DOT-Regulated)		e-Waste	

Generator's Certification: This is to certify that the above-named materials are properly classified, described, packaged, marked, and labeled, and are in proper condition for transport according to the applicable regulations of the Department of Transportation. I further certify that none of the materials described above are hazardous waste as defined by EPA 40CFR Part 261 or any applicable state law, and unless specifically identified above the materials contain less than 1,000 ppm total halogens and do not contain quantifiable levels (2ppm) of PCBs as defined by EPA 40 CFR Parts 279 and 761.

Generator's/ Offeror's Printed/Typed Name: Jay Hutchings agent for CTS corporation	Signature:	Month: 07	Day: 06	Year: 18
Transporter 1 Printed/Typed Name: Williams, Kyle	Signature:	Month: 07	Day: 06	Year: 18
Transporter 2 Printed/Typed Name:	Signature:	Month:	Day:	Year:

Discrepancy Indication / Additional Information:

Designated Facility Certification: I hereby acknowledge receipt of the materials covered by this manifest except for any discrepancy indicated above.

Printed/Typed Name: Chuck Elmore	Signature: Chuck Elmore	Month: 07	Day: 06	Year: 18

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
NCD003145556	1	800-255-3924 MSDS#0431	009964605 JJK

GENERATOR

5. Generator's Name and Mailing Address: CTS Corporation ~~Mills Gap Road~~ 4925 Indiana Ave. Lisle, IL 60532
Generator's Site Address (if different than mailing address): ~~Mills Gap Road~~ 295 Mills Gap Road Asheville, NC 28803
Generator's Phone: 828-252-8130

6. Transporter 1 Company Name: SIAT, Incorporated — U.S. EPA ID Number: NCD980799342

7. Transporter 2 Company Name: — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Michigan Disposal Waste Treatment Plant, 49350 North I-94 Service Drive, Belleville, MI 48111 — U.S. EPA ID Number: MID000724831
Facility's Phone: 800-592-5489

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERGM171	1	CM	~15	T	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
9b.1) Profile Tracking #: 587331 Approval #: A1880006MDI Confirmation #:
A&D Job #: 383297 PO #: 45021

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Rebecca M. Clark, as Agent for CTS Corporation — Signature — Month: 1 Day: 15 Year: 15

INTL

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name	Signature	Month	Day	Year
James Sayler		1	15	15
Transporter 2 Printed/Typed Name	Signature	Month	Day	Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space: ☒ Quantity ☐ Weight/Volume ☐ Partial Rejection ☐ Full Rejection
OK to correct Section 9b per Mike Griffin A&D Env-TC 3/7/16
Actual weight 11260 per Mike Griffin at MDE Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H070			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name	Signature	Month	Day	Year
Chris Gerson		1	16	16

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	NCD003149556	1	800-255-3925-M30007851	009964606 JJK

GENERATOR

5. Generator's Name and Mailing Address
CTS Corporation
235 Mills Gap Road
Asheville, NC 28803
Generator's Phone: 828-252-8130

Generator's Site Address (if different than mailing address)
905 West Boulevard North
Elkhart, IN 46514

6. Transporter 1 Company Name: STAT, Incorporated — U.S. EPA ID Number: NCD980799142

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Michigan Disposal Waste Treatment Plant
49350 North I-94 Service Drive
Belleville, MI 48111
Facility's Phone: 800-592-5489

U.S. EPA ID Number: MID000724831

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	~10	T	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
9a.1) Profile Tracking #: 587331 Approval #: A1abb0dMDI Confirmation #:

A&D Job #: 383297 PO #: 45021

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Rodney Clark, as agent for CTS Corporation — Signature — Month: 1 — Day: 17 — Year: 18

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: James Smith — Signature — Month: 1 — Day: 17 — Year: 18

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Actual weight 19 Tons per M. Griffin 1/19 DENVZRO 23 1/22/18 Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H070			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Jaccarron Evans — Signature — Month: 1 — Day: 18 — Year: 18

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
NCD003149556	1	800-255-3925-MIS007851	009964607 JJK

GENERATOR

5. Generator's Name and Mailing Address
CTS Corporation
235 Mills Gap Road
Asheville, NC 28803
Generator's Phone: 828-252-8130

Generator's Site Address (if different than mailing address)
905 West Boulevard North
Elkhart, IN 46514

6. Transporter 1 Company Name: STAT, Incorporated — U.S. EPA ID Number: NCD980799142

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Michigan Disposal Waste Treatment Plant
49350 North I-94 Service Drive
Belleville, MI 48111
Facility's Phone: 800-592-5489
U.S. EPA ID Number: MID000724831

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	~10	T	F001
	2.					
	3. Conf # 752398					
	4.					

14. Special Handling Instructions and Additional Information
9b.1) Profile Tracking #: 587331 Approval #: A188006MDI Confirmation #:
A&D Job #: 383297 PO #: 45021

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Rodney Clark, as agent for CTS Corporation — Signature — Month: 1 Day: 19 Year: 18

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: James Smith — Signature — Month: 1 Day: 19 Year: 18

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Actual weight = 137 obs per Mike Griffin w/ Advanced BB 1/23/18
Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H076			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: RANDY CRAW — Signature — Month: 1 Day: 22 Year: 18

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
NCD003149556	1	800-255-3825-MIS0007651	00996 4608 JJK

GENERATOR

5. Generator's Name and Mailing Address
CTS Corporation
235 Mills Gap Road
Asheville, NC 28803
Generator's Phone: 828-252-8130

Generator's Site Address (if different than mailing address)
905 West Boulevard North
Elkhart, IN 46514

6. Transporter 1 Company Name: STAT, Incorporated — U.S. EPA ID Number: NCD980799142

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Michigan Disposal Waste Treatment Plant
49350 North I-94 Service Drive
Belleville, MI 48111
Facility's Phone: 800-592-5489
U.S. EPA ID Number: MID000724831

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	~10	T	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
9b.1) Profile Tracking #: 587331 Approval #: A1R8006MDI Confirmation #:
A&D Job #: 383297 PO #: 45021

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Robert M. Charles, as agent for CTS Corporation — Signature — Month: 1 Day: 23 Year: 18

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: James Smith — Signature — Month: 1 Day: 23 Year: 18

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H070			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Andrew Craig — Signature — Month: 1 Day: 29 Year: 18

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
NCD083149556	1	800-255-2923 MSDS#07951	009964609 JJK

GENERATOR

5. Generator's Name and Mailing Address: ~~CFS Corporation~~ ~~235 Mills Gap Road~~ ~~4925 Indiana Ave~~ ~~Suite 200 Downers Grove~~ 235 Mills Gap Rd. ~~Asheville, NC 28803~~ ~~Lisle, IL 60532~~ ~~Elkhorn, WI 53121~~ Asheville, NC 28803

Generator's Site Address (if different than mailing address)

Generator's Phone: ~~828-252-3110~~

6. Transporter 1 Company Name: STAT Incorporated — U.S. EPA ID Number: ~~NCD988079147~~

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address: Michigan Disposal Waste Treatment Plant, 49350 North I-94 Service Drive, Belleville, MI 48111 — U.S. EPA ID Number: MID000724831

Facility's Phone: 800-592-5489

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	2	CM	~10	T	F001		
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information

9b.1) Profile Tracking #: 587331 Approval #: A1880005MDI Confirmation #:

A&O Job #: 383297 PO #: 45021

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Rodney Clark as agent for CFS Corporation — Signature — Month: 1 Day: 30 Year: 18

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:

TRANSPORTER

Transporter signature (for exports only):

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: James Smith — Signature — Month: 1 Day: 30 Year: 18

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy: OK to correct per Section 5 per Mike Griffin @ A&O Env. - TC 3/14/18

18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Actual weight 18 Tons per Mike Griffin @ Belleville - TC 3/14/18 — Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. H070 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: ANDREW (GATE) — Signature — Month: 3 Day: 19 Year: 18

EPA Form 8700-22 (Rev. 3-05). Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
NCD003149556	1	800-255-3924 (MIS#10781)	009964610 JJK

GENERATOR

5. Generator's Name and Mailing Address: CTS Corporation, ~~2375 Entry Corp Road~~ 4925 Indiana Ave ~~2375 West Boulevard North~~ 235 Mills Gap Rd. ~~Asheville, NC 28806~~ Lisle, IL 60532 ~~Elkhart, IN 46516~~ Asheville, NC 28803

Generator's Site Address (if different than mailing address)

Generator's Phone: ~~828-252-3130~~

6. Transporter 1 Company Name: STAT Incorporated — U.S. EPA ID Number: NCD980709342

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Michigan Disposal Waste Treatment Plant, 49350 North I-94 Service Drive, Belleville, MI 48111 — U.S. EPA ID Number: MID000721931

Facility's Phone: 800-592-5489

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	~10	T	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information: 9b.1) Profile Tracking #: 582931 Approval #: A1580UKMDI Confirmation #:

A&D Job #: 383297 PO #: 45021

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Rebecca M. Clark as agent for CTS Corporation — Signature — Month: 2 Day: 1 Year: 18

INTL

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Scott Smith — Signature — Month: 2 Day: 1 Year: 18

Transporter 2 Printed/Typed Name: Darrin Sides — Signature — Month: 02 Day: 04 Year: 18

DESIGNATED FACILITY

18. Discrepancy: JK to correct section 5 per Mike Griffin @ A&D Env. - tc 2/14/18

18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Actual weight 13760 per Mike Griffin @ A&D Env. - tc 2/14/18 — Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number:

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H020			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Mike Griffin — Signature — Month: 2 Day: 15 Year: 18

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)

Box 279759

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	NCD003149556	1	800-255-3925-MI800078	009964615 JJK

GENERATOR

5. Generator's Name and Mailing Address
CTS Corporation
235 Mills Gap Road
Asheville, NC 28803
Generator's Phone: 828-252-8130

Generator's Site Address (if different than mailing address)
905 West Boulevard North
Elkhart, IN 46514

6. Transporter 1 Company Name: A&D Environmental Services (SC), LLC — U.S. EPA ID Number: SCD987598331

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Michigan Disposal Waste Treatment Plant
49350 North I-94 Service Drive
Belleville, MI 48111
Facility's Phone: 800-592-5489

U.S. EPA ID Number: MID000724831

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	~10	T	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
9b.1) Profile Tracking #: 587331 Approval #: A1880006MDI Confirmation #:

A&D Job #: 383297 PO #: 45021

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Rodney M. Clark, as agent for CTS Corporation — Signature — Month 1 Day 15 Year 18

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Richard Williamson — Signature — Month 1 Day 15 Year 18
Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
actual weight 137 dep per Mike Gallowal Add new 33/15/18
Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H070			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Jonathan Evans — Signature — Month 1 Day 16 Year 18

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

Box 3779

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: NCD003149556
2. Page 1 of: 1
3. Emergency Response Phone: 800-255-3025-MI8000765
4. Manifest Tracking Number: 009964616 JJK

GENERATOR

5. Generator's Name and Mailing Address: CTS Corporation, 235 Mills Gap Road, Asheville, NC 28803
Generator's Phone: 828-252-8130
Generator's Site Address (if different than mailing address): 905 West Boulevard North, Elkhart, IN 46514

6. Transporter 1 Company Name: A&D Environmental Services (SC), LLC
U.S. EPA ID Number: SCD987598331

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Michigan Disposal Waste Treatment Plant, 49350 North I-94 Service Drive, Belleville, MI 48111
Facility's Phone: 800-592-5489
U.S. EPA ID Number: MID000724831

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	~10	T	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
9b.1) Profile Tracking #: 587331 Approval #: A1680006MDI Confirmation #: 752412

A&D Job #: 383297 PO #: 45021

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Rodney Cole, as agent for CTS Corporation
Signature:
Month: 1 Day: 18 Year: 18

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Richard Williams
Signature:
Month: 1 Day: 18 Year: 18

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Actual weight 9 Tridaper Mills. Upon Manifest Reference Number: BB 1/23/18
18b. Alternate Facility (or Generator) U.S. EPA ID Number:
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H070 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: ANDREW COATS
Signature:
Month: 1 Day: 22 Year: 18

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: NCD003149556
2. Page 1 of: 1
3. Emergency Response Phone: 800-255-3825-MI8000745
4. Manifest Tracking Number: 009964617 JJK

GENERATOR

5. Generator's Name and Mailing Address: CTS Corporation, 235 Mills Gap Road, Asheville, NC 28803
Generator's Phone: 828-252-8130
Generator's Site Address (if different than mailing address): 905 West Boulevard North, Elkhart, IN 46514

6. Transporter 1 Company Name: A&D Environmental Services (SC), LLC
U.S. EPA ID Number: SCD987598331

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Michigan Disposal Waste Treatment Plant, 49350 North I-94 Service Drive, Belleville, MI 48111
Facility's Phone: 800-592-5489
U.S. EPA ID Number: MID000724831

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	~10	T	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
9b.1) Profile Tracking #: 587331 Approval #: A1680006MDI Confirmation #: 754192
A&D Job #: 383297 PO #: 45021

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Rodney M. Clark as agent for CTS Corporation
Signature: Rodney M. Clark
Month: 1 Day: 25 Year: 18

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Richard Williams
Signature: Richard Williams
Month: 1 Day: 25 Year: 18

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Actual weight 14.7 as per Mike Griffin w/ A&D Manifest Reference Number: BB 1/30/18

18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H070			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Andrew Crain
Signature:
Month: 1 Day: 29

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GE'

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2060-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
NCD003349556	1	888-253-3923 M1800787	009954618 JJK

GENERATOR

5. Generator's Name and Mailing Address
CTS Corporation
~~@35 Mills Gap Road~~ 4925 Indiana Ave ~~2375 West Boulevard Mooresville~~ @ 235 Mills Gap Road
Generator's Phone: ~~828-251-8130 Asheville, NC 28806~~ Lisle, IL 60532 ~~Elkhart, IN 46516~~ Asheville, NC 28803

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: A&D Environmental Services (SC), LLC — U.S. EPA ID Number: ~~SCD987980831~~

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Michigan Disposal Waste Treatment Plant
48950 North I-94 Service Drive
Belleville, MI 48111
U.S. EPA ID Number: MID000724831
Facility's Phone: 800-592-9480

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	10	T	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
9a.1) Profile Tracking #: 587331 Approval #: A1880065MDI Confirmation #: 756313
A&D Job #: 583297 PO #: 45021

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Robert H. Clark as agent for CTS Corporation — Signature — Month 1 Day 30 Year 18

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name	Signature	Month	Day	Year
Richard W. Hayes		1	30	18
Transporter 2 Printed/Typed Name	Signature	Month	Day	Year

DESIGNATED FACILITY

18. Discrepancy OK to correct section 6 per Mike Griffin @ A&D Env. - FC 3/14/18

18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number: 2011315

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H070			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name	Signature	Month	Day	Year
		1	31	18

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: NCD003149556
2. Page 1 of: 1
3. Emergency Response Phone: 800-255-3925-MB0007951
4. Manifest Tracking Number: 009964627 JK

GENERATOR

5. Generator's Name and Mailing Address: CTS Corporation, 235 Mills Gap Road, Asheville, NC 28803
Generator's Site Address (if different than mailing address): 905 West Boulevard North, Elkhart, IN 46514
Generator's Phone: 828-252-5130

6. Transporter 1 Company Name: A&D Environmental Services, Inc.
U.S. EPA ID Number: NCD986232221

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Michigan Disposal Waste Treatment Plant, 49350 North I-94 Service Drive, Belleville, MI 48111
U.S. EPA ID Number: MID000724831
Facility's Phone: 800-592-5489

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	~10	T	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
9a.1) Profile Tracking #: 587331 Approval #: A1R8006MDI Confirmation #: 752399

A&D Job #: 383297 PO #: 45021

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Rodney Clark, as agent for CTS Corporation
Signature:
Month: 1 Day: 15 Year: 18

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Jeffrey M Swift
Signature:
Month: 1 Day: 15 Year: 18

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H070			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: ANDREW CODY
Signature:
Month: 1 Day: 22 Year: 18

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

Use print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
NCD003149556	1	800-255-3925-WB0007851	009964628 JJK

GENERATOR

5. Generator's Name and Mailing Address
CTS Corporation
235 Mills Gap Road
Asheville, NC 28803
Generator's Phone: 828-252-8130

Generator's Site Address (if different than mailing address)
905 West Boulevard North
Elkhart, IN 46514

6. Transporter 1 Company Name: A&D Environmental Services, Inc.
U.S. EPA ID Number: NCD986232221

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Michigan Disposal Waste Treatment Plant
49750 North I-94 Service Drive
Belleville, MI 48111
Facility's Phone: 800-592-5489
U.S. EPA ID Number: MID000724831

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	10	T	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
9b.1) Profile Tracking #: 587331 Approval #: A1880006MDI Confirmation #:

A&D Job #: 383297 PO #: 45021

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Susan Arritt for CTS Corporation
Signature: Susan Arritt
Month: 1 Day: 23 Year: 18

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Richard Williams
Signature:
Month: 1 Day: 23 Year: 18

Transporter 2 Printed/Typed Name
Signature
Month: Day: Year:

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Actual weight 11670 Lbs per Michelle Griffin w/ADS on 1/24/18 BB

18b. Alternate Facility (or Generator)
Manifest Reference Number:
U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H070			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Andrew Olsen
Signature:
Month: 1 Day: 24 Year: 18

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	NCD003149556	1	800-255-3025-M80007951	009964629 JJK

GENERATOR

5. Generator's Name and Mailing Address
CTS Corporation
235 Mills Gap Road
Asheville, NC 28803
Generator's Phone: 828-252-8130

Generator's Site Address (if different than mailing address)
905 West Boulevard North
Elkhart, IN 46514

6. Transporter 1 Company Name: A&D Environmental Services, Inc. — U.S. EPA ID Number: NCD986232221

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Michigan Disposal Waste Treatment Plant
49350 North I-94 Service Drive
Belleville, MI 48111
Facility's Phone: 800-592-5489

U.S. EPA ID Number: MID000724831

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	10	T	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
9b.1) Profile Tracking #: 567331 Approval #: A1880069WDI Confirmation #:

A&D Job #: 383297 PO #: 45021

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Rodney Clark, as agent for CTS Corporation — Signature — Month: 1 — Day: 23 — Year: 18

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Jeff Swift — Signature — Month: 1 — Day: 23 — Year: 18

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Actual Weight 17710 lbs per Mike Gaither at ADS on 3 3 1/2018 — Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H070			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Jonathan Evans — Signature — Month: 1 — Day: 24 — Year: 18

383297 Job #

Box # R0279754

RT 19

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	NCD003149556	1	800-255-3924-MIS0007651	009964630 JJK

GENERATOR

5. Generator's Name and Mailing Address
CTS Corporation
235 Mills Gap Road
Generator's Phone: 828-252-3130 Asheville, NC 28803

Generator's Site Address (if different than mailing address)
905 West Boulevard North
Elkhart, IN 46514

6. Transporter 1 Company Name: A&D Environmental Services, Inc.
U.S. EPA ID Number: NCD986232221

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Michigan Disposal Waste Treatment Plant
49350 North I-94 Service Drive
Facility's Phone: 800-592-5489 Belleville, MI 48111
U.S. EPA ID Number: MID000724831

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	10	T	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
9b.1) Profile Tracking #: 587331 Approval #: A1R8006MDI Confirmation #:

A&D Job #: 383297 PO #: 45021

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Rodney Clark, as agent for CTS Corporation
Signature: Rodney M. Clark
Month 1 Day 26 Year 18

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Jeff Swift
Signature:
Month 1 Day 26 Year 18

Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Arthur Wright / BT to Gary / Mike Griffin w/ A&D Manifest Reference Number: BB 1/30/18

18b. Alternate Facility (or Generator)
U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H070			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Andrew Craig
Signature:
Month 1 Day 29 Year 18

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
NCD003149556	1	800-255-3925 ~~[illegible]~~	009964631 JJK

GENERATOR

5. Generator's Name and Mailing Address: CTS Corporation
~~[illegible] Mills Gap Road~~ 4925 Indiana Ave. ~~[illegible]~~ 285 Mills Gap Road
Generator's Phone: ~~828-252-5139~~ ~~Asheville, NC 28803~~ ~~Lisle, IL 60532~~ ~~Elkhart, IN 46516~~ Asheville, NC 28803

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: A&D Environmental Services Inc. — U.S. EPA ID Number: NCD986733221

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Michigan Disposal Waste Treatment Plant
49350 North I-94 Service Drive
Belleville, MI 48111 — U.S. EPA ID Number: MID000724831
Facility's Phone: 800-592-5489

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	~~1~~ 18	T	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
9a.1) Profile Tracking #: 587331 Approval #: A1688006MDI Confirmation #:
A&D Job #: 383297 PO #: 45021

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Rodney M. Chesky as agent for CTS Corporation — Signature: [signature] — Month: 1 — Day: 30 — Year: 18

TRANSPORTER INT'L

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. — Port of entry/exit:
Transporter signature (for exports only): — Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Jeff Swift — Signature: [signature] — Month: 1 — Day: 30 — Year: 18

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

18. Discrepancy: OK to correct section 5 per Mike Griffin @ A&D Env. - TC 3/14/18

18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Original weight 12 ton per Mike Griffin @ A&D Env. - TC 3/14/18 — Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H070 — 2. — 3. — 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Donna Jean Evans — Signature: [signature] — Month: 1 — Day: 31 — Year: 18

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
NCD003149556	1	800-255-3925 MI800-851	009994666 JJK

GENERATOR

5. Generator's Name and Mailing Address: CTS Corporation, 1925 Indiana Ave, Lisle, IL 60532

Generator's Site Address (if different than mailing address): 2235 Mills Gap Rd., Asheville, NC 28803

Generator's Phone: 828-252-3139

6. Transporter 1 Company Name: AMD Environmental Services, Inc. — U.S. EPA ID Number: NCT000722772

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Michigan Disposal Waste Treatment Plant, 49350 North I-96 Service Drive, Belleville, MI 48111 — U.S. EPA ID Number: MID980728933

Facility's Phone: 800-592-9489

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3077, Waste Environmentally hazardous substances, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	~10	T	D001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information: 9b.3) Profile Tracking #: 587931 Approval #: A1880906MDI Confirmation #:

AGD Job #: 383297 PO #: 45021

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Rebecca M. Clarke as agent for CTS Corporation — Signature — Month: 2 Day: 2 Year: 18

TRANSPORTER / INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Jeff Swift — Signature — Month: 2 Day: 2 Year: 18

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy: OK to correct section 6 per Mike Griffin@ AMD Env. - TC 2/14/18

18a. Discrepancy Indication Space: ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Net weight lic. to Grace Mike Griffin AMD Env. 2/21/18 — Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H020			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name — Signature — Month: 2 Day: 25 Year: 18

EPA Form 8700-22 (Rev. 3-05). Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	NCD003149556	1	800-255-3025 MIS000765	009964675 JJK

GENERATOR

5. Generator's Name and Mailing Address: ~~CTS Corporation~~ ~~4925 Indiana Ave. Suite West Boulevard North~~ ~~Elkhart, IN 46514~~ 4925 Indiana Ave. Lisle, IL 60532 — Generator's Site Address (if different than mailing address): ~~335 Mills Gap Road~~ 335 Mills Gap Road Asheville, NC 28803

Generator's Phone: ~~828-252-8030~~ 828-252-8030

6. Transporter 1 Company Name: STAT, Incorporated — U.S. EPA ID Number: NCD980790142

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Michigan Disposal Waste Treatment Plant, 49350 North I-94 Service Drive, Belleville, MI 48111 — U.S. EPA ID Number: MID000724831

Facility's Phone: 800-592-5489

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CW	~10	T	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information: 9b.1) Profile Tracking #: 587331 Approval #: A1850066WDI Confirmation #:

A&D Job #: 383297 PO #: 45023

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Rodney M. Clark as agent for CTS Corporation — Signature: [signature] — Month: 12 Day: 9 Year: 18

INT'L

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. — Port of entry/exit: — Date leaving U.S.:

Transporter signature (for exports only):

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Jakob Beteil — Signature: [signature] — Month: 12 Day: 9 Year: 18

Transporter 2 Printed/Typed Name: James Smith — Signature: [signature] — Month: 12 Day: 11 Year: 18

DESIGNATED FACILITY

18. Discrepancy: OK to correct sections 5 per Mike Carrithers@AADEnv. -TC 3/14/18

18a. Discrepancy Indication Space: ☑ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Other's Container 15 of 15 on Manifest Reference Number: ~~B3~~ 2114133

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H070			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Sara Jean Evans — Signature: [signature] — Month: 3 Day: 15 Year: 18

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
NCD003149556	1	800-255-3925-MI8000731	009964676 JJK

GENERATOR

5. Generator's Name and Mailing Address: CTS Corporation, ~~225 Mills Gap Road~~ 4925 Indiana Ave ~~305 West Boulevard North~~ 225 Mills Gap Road, ~~Asheville, NC 28801~~ Lisle, IL 60532 ~~Elkhart, IN 46516~~ Asheville, NC 28803

Generator's Phone: ~~828 252-3130~~

6. Transporter 1 Company Name: STAT, Incorporated — U.S. EPA ID Number: NCD080799142

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Michigan Disposal Waste Treatment Plant, 49350 North I-94 Service Drive, Belleville, MI 48111 — U.S. EPA ID Number: MID007424831

Facility's Phone: 800 592-5489

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	10	T	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

9h.1) Profile Tracking #: 587331 Approval #: A188006MDI Confirmation #:

A&D Job #: 383297 PO #: 45021

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Robert M. Clark, as agent for CTS Corporation — Signature — Month: 2 — Day: 13 — Year: 18

INTL

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Jerry Smith — Signature — Month: 2 — Day: 13 — Year: 18

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

18. Discrepancy: OK to correct Section 5 per Miki Griffin @ A&D Env. - tc 3/14/18

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Extra Container 55 Gal per Michael ~~Asheville~~ Lisle, IL 60532 Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H070			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Jonathan Evans — Signature — Month: 3 — Day: 14 — Year: 18

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)

TR-139 - BOX #052

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number NCD003149556	2. Page 1 of 1	3. Emergency Response Phone 800-255-3924-(MSDS#651)	4. Manifest Tracking Number 009964677 JJK

GENERATOR

5. Generator's Name and Mailing Address: CTS Corporation
~~4925 Indiana Ave~~ 2375 Mills Gap Road
~~Lisle, IL 60532~~ Asheville, NC 28803
Generator's Phone: 828-252-8130

Generator's Site Address (if different than mailing address): ~~905 West Boulevard North Elkhart, IN 46514~~ 2375 Mills Gap Road Asheville, NC 28803

6. Transporter 1 Company Name: STAT, Incorporated — U.S. EPA ID Number: ~~NCD980739142~~

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address: Michigan Disposal Waste Treatment Plant
49350 North I-94 Service Drive
Belleville, MI 48111
Facility's Phone: 800-592-5489 — U.S. EPA ID Number: MID000748831

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	~10	T	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
9b.3) Profile Tracking #: 587331 Approval #: A1~~[illegible]~~MID Confirmation #:

A&D Job #: 383297 PO #: 45021

16. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Erica Clark, as agent for CTS Corporation — Signature — Month 12 Day 15 Year 18

INTL

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: James Smith — Signature — Month 12 Day 15 Year 18

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy OK to correct section 5 per Mike Griffin @ A&D Env. - TC 1/4/18

18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Actual weight 15T obtained from Mike A. Manifest Reference Number: ~~[illegible]~~ Addendum 1/8/18

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. H070	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Mike Griffin — Signature — Month 12 Day 19 Year 18

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)

13840

Please print or type. (Form designed for use on elite (12-pitch) typewriter)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
NCD003149556	1	800-255-3925 MI800017851	009964678 JJK

GENERATOR

5. Generator's Name and Mailing Address: CTS Corporation, ~~35 Mills Gap Road~~ 4925 Indiana Ave. ~~Asheville, NC 28803~~ Lisle, IL 60532

Generator's Site Address (if different than mailing address): ~~901 West Bendix Road Fletcher, NC 28732~~ ~~Elkhart, IN 46514~~ 235 Mills Gap Road Asheville, NC 28803

Generator's Phone: ~~828-253-8130~~

6. Transporter 1 Company Name: STAT, Incorporated — U.S. EPA ID Number: NCD980799142

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Michigan Disposal Waste Treatment Plant, 49350 North I-94 Service Drive, Belleville, MI 48111 — U.S. EPA ID Number: MID048724831

Facility's Phone: 800-592-5489

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	~10	Y	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

9b.1) Profile Tracking #: 587331 Approval #: A1880066MDI Confirmation #:

A&D Job #: 383297 PO #: 45021

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Robert M. Clarke as agent for CTS Corporation — Signature — Month: 2 Day: 16 Year: 18

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:

TRANSPORTER

Transporter signature (for exports only):

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: James Smith — Signature — Month: 2 Day: 16 Year: 18

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

18. Discrepancy: OK to correct section 5 per Mike Griffin@A&D Env. -tc 3/14/18

18a. Discrepancy Indication Space ☑ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Actual weight 147 drums M.L. for Shawn/Meagan BB 3/19/18 — Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H070			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name — Signature — Month: 2 Day: 19 Year: 18

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)

76280

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	NCD003149556	1	800-253-3025-MSD007851	00996467 9 JJK

GENERATOR

5. Generator's Name and Mailing Address: CTS Corporation, ~~905 West Boulevard North~~ 4925 INDIANA AVE, ~~Elkhart, IN 46514~~ Lisle, IL 60532

Generator's Site Address (if different than mailing address): ~~235 Mills Gap Road~~ 235 Mills Gap Rd., ~~Asheville, NC 28803~~ Asheville, NC 28803

Generator's Phone: 828-252-8130

6. Transporter 1 Company Name: STAT, Incorporated — U.S. EPA ID Number: NCD980799142

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Michigan Disposal Waste Treatment Plant, 49350 North I-94 Service Drive, Belleville, MI 48111 — U.S. EPA ID Number: MID000724831

Facility's Phone: 800-592-5489

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	15	T	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
9b.1) Profile Tracking #: 587331 Approval #: A1680066MDI Confirmation #:

A&D Job #: 383297 PO #: 45021

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Rodney M. Cloh, as agent for CTS Corporation — Signature — Month: 2 Day: 20 Year: 18

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: James Smith — Signature — Month: 2 Day: 20 Year: 18

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

OK to correct section 5 per Mike Griffin@A&D — TC 3/14/18 Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H070			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Jonathon Evans — Signature — Month: 3 Day: 21 Year: 18

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: NCD003149556
2. Page 1 of: 1
3. Emergency Response Phone: 800-255-3925-MIS0007851
4. Manifest Tracking Number: 009964680 JJK

5. Generator's Name and Mailing Address: CTS Corporation ~~~235 Mills Gap Road Asheville, NC 28803~~ 4925 Indiana Ave Lisle, IL 60532 ~~~305 West Boulevard North Elkhart, IN 46514~~ 235 Mills Gap Road Asheville, NC 28803
Generator's Phone: 828-252-8130

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: STAT, Incorporated — U.S. EPA ID Number: NCD980799142

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Michigan Disposal Waste Treatment Plant, 49350 North I-94 Service Drive, Belleville, MI 48111 — U.S. EPA ID Number: MID000724831
Facility's Phone: 800-592-5489

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	15	T	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
9b.1) Profile Tracking #: 587331 Approval #: A1880066MDI Confirmation #:
A&D Job #: 383297 PO #: 45021

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Rodney M. Clark, as agent for CTS Corporation — Signature — Month 2 Day 20 Year 18

INTL

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: DANNY ROARK — Signature — Month 02 Day 20 Year 18

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy: OK to correct section 5 per MIKE Griffin@A&Denv. TC 3/14/18

18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Actual weight 60 lbs per Mike Griffin@A&D — Manifest Reference Number: 3/22/18

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H070		ND	

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: ANDREW CRAIN — Signature — Month 2 Day 21 Year 18

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	NCD009149556	1	800-255-3825-MIS0007951	009964685 JJK

GENERATOR

5. Generator's Name and Mailing Address: CTS Corporation, ~~225 Mills Gap Road~~ 4925 Indiana Avenue, ~~Asheville, NC 28803~~ Lisle, IL 60532 — Generator's Site Address (if different than mailing address): ~~Elkhart, IN 46516~~ Asheville, NC 28803

Generator's Phone: ~~828-252-5130~~

6. Transporter 1 Company Name: A&D Environmental Services (MI), LLC — U.S. EPA ID Number: ~~MID~~ SCD987598931

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address: Michigan Disposal Waste Treatment Plant, 49350 North I-94 Service Drive, Belleville, MI 48111 — U.S. EPA ID Number: MID000724831

Facility's Phone: 800-592-5489

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	~10	T	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information: 38.1) Profile Tracking #: 587331 Approval #: AIBMDGMD1 Confirmation #:

A&D Job #: 383297 PO #: 45021

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Rodney Cook, as agent for CTS Corporation — Signature — Month: 2 Day: 1 Year: 18

INTL

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:

Transporter signature (for exports only):

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Michael McMahon — Signature — Month: 2 Day: 1 Year: 18

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy: OK to correct section 5 per Mike Griffin @ A&D Env. - TC 3/14/18

18a. Discrepancy Indication Space: ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Arrived via #137 Clipper M.D. (Griffin) A&D Env. 2/21/18 — Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H070			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Chris Grissom — Signature — Month: 2 Day Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	NCD003149556	1	800-255-3625-MSD007651	009964686 JJK

5. Generator's Name and Mailing Address: CTS Corporation, ~~2375 Mills Gap Road~~ 4925 Indiana Ave. ~~905 West Boulevard North~~ 2375 Mills Gap Road, ~~828-253-8130 Asheville, NC 28803~~ Lisle, IL 60532 ~~Elkhart, IN 46514~~ Asheville, NC 28803

Generator's Site Address (if different than mailing address):

Generator's Phone:

6. Transporter 1 Company Name: A&D Environmental Services (SC), LLC — U.S. EPA ID Number: SCD987548331

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Michigan Disposal Waste Treatment Plant, 49350 North I-94 Service Drive, Belleville, MI 48111 — U.S. EPA ID Number: MID000724831

Facility's Phone: 800-592-5489

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	~10	T	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information: 9a.1) Profile Tracking #: 587331 Approval #: A1R8005MDI Confirmation #:

A&D Job #: 383297 PO #: 45021

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Rodney M. Clark, as agent for CTS Corporation — Signature — Month: 2 Day: 6 Year: 18

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Richard Williams — Signature — Month: 2 Day: 6 Year: 18

Transporter 2 Printed/Typed Name — Signature — Month: Day: Year:

18. Discrepancy: OK to correct section 5 per Mike Griffin @ A&D Env. - JC 3/14/18

18a. Discrepancy Indication Space ☑ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Actual weight 15 Tons per Mike Griffin Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number:

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. H070 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: A. Wells (A&D) — Signature — Month: 3 Day: 7 Year: 18

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
NCD003149556	1	800-255-3924 MIS0007951	009964687 JJK

GENERATOR

5. Generator's Name and Mailing Address: CTS Corporation ~~@ 285 Mills Gap Road~~ 4925 Indiana Ave ~~Asheville, NC 28806~~ Lisle, IL 60532

Generator's Site Address (if different than mailing address): ~~555 West Boulevard North~~ @ 235 Mills Gap Road ~~Elkhart, IN 46514~~ Asheville, NC 28803

Generator's Phone: 828-252-0390

6. Transporter 1 Company Name: A&D Environmental Services (SC), LLC — U.S. EPA ID Number: SCD987592311

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Michigan Disposal Waste Treatment Plant, 49350 North I-94 Service Drive, Belleville, MI 48111 — U.S. EPA ID Number: MID980724833

Facility's Phone: 800-593-5469

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	~10	T	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information: (Pt. 1) Profile Tracking #: 587331 Approval #: A18S0004ND1 Confirmation #:

A&D Job #: 383297 PO #: 45021

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Reuben M. Clark, as agent for CTS Corporation — Signature — Month 2 Day 9 Year 18

TRANSPORTER (INT'L)

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Richard Williams — Signature — Month 2 Day 9 Year 18
Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy: OK to correct section 5 per MIKE GRIFFIN@A&DENV. - JC 3/14/18

18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Actual weight 15760 per Mike Griffin A&D ENV. 3/14/18 — Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H070			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: ANDREW GRAIN — Signature — Month 3 Day 12 Year 18

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MID003149556	1	800-255-3924-MI800718	009964688 JJK

GENERATOR

5. Generator's Name and Mailing Address: CTS Corporation, ~~25 Mills Gap Road~~ 4925 Indiana Ave ~~305 West Boulevard North~~ 295 Mills Gap Road, ~~Asheville, NC 28803~~ Lisle, IL 60532 ~~Elkhart, IN 46516~~ Asheville, NC 28803

Generator's Site Address (if different than mailing address)

Generator's Phone: ~~828-252-5139~~

6. Transporter 1 Company Name: A&D Environmental Services (SC), LLC — U.S. EPA ID Number: ~~SCD987598351~~

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address: Michigan Disposal Waste Treatment Plant, 49350 North I-94 Service Drive, Belleville, MI 48111 — U.S. EPA ID Number: MID000724831

Facility's Phone: 800-592-5489

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	~10	T	D001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information: 9b.1) Profile Tracking #: 587331 Approval #: A1B8006MDI Confirmation #:

A&D Job #: 383297 PO #: 45021

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Rebecca M. Clark as agent for CTS Corporation — Signature — Month 12 Day 13 Year 18

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Kyle Williams — Signature — Month 12 Day 13 Year 18

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy: JJK to correct section 5 per Mike Griffin @ A&D Env. - 3/14/18

18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Actual weight 1570 lbs - Made by Mich Waste — Manifest Reference Number: 383297.1.1

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Chris Gilsdorf — Signature — Month 12 Day 19 Year 18

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR STATE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
NCD003149556	1	800-255-3825-MSDS#07651	009964803 JJK

GENERATOR

5. Generator's Name and Mailing Address: CTS Corporation, 4925 Indiana Ave., Lisle, IL 60532

Generator's Site Address (if different than mailing address): 235 Mills Gap Road, Asheville, NC 28803

Generator's Phone: 828-252-8130

6. Transporter 1 Company Name: STAT, Incorporated — U.S. EPA ID Number: NCD986799142

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Michigan Disposal Waste Treatment Plant, 49350 North I-94 Service Drive, Belleville, MI 48111 — U.S. EPA ID Number: MID000724831

Facility's Phone: 800-592-5489

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	~15	T	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

9.1) Profile Tracking #: 587331 Approval #: A1000168MDI Confirmation #:

A&D Job #: PO #:

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Rodney M. Gail, as agent for CTS Corporation — Signature — Month: 3 Day: 27 Year: 18

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: LARRY GARNES — Signature — Month: 3 Day: 27 Year: 18

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H070			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: ANDREW CODY — Signature — Month: 3 Day: 29 Year: 18

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
NCD003149556	1	800-255-3025-MIS007951	009964804 JJK

GENERATOR

5. Generator's Name and Mailing Address
CTS Corporation
4925 Indiana Ave.
Lisle, IL 60532
Generator's Phone: 828-252-8130

Generator's Site Address (if different than mailing address)
235 Mills Gap Road
Asheville, NC 28803

6. Transporter 1 Company Name: STAT, Incorporated — U.S. EPA ID Number: NCD980799142

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Michigan Disposal Waste Treatment Plant
49350 North I-94 Service Drive
Belleville, MI 48111
Facility's Phone: 800-592-5489
U.S. EPA ID Number: MID000724831

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	~15	T	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
9b.1) Profile Tracking #: 587331 Approval #: A1880066MDI Confirmation #:

ARD Job #: PO #:

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Rodney Clark, as agent for CTS Corporation — Signature — Month: 3 Day: 28 Year: 18

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: LARRY GARNES — Signature — Month: 3 Day: 28 Year: 18

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H070			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Jonathan Evans — Signature — Month: 3 Day: 29 Year: 18

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

Truck #143 82

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
NCD003149556	1	800-255-3825-MB0007051	009964805 JJK

GENERATOR

5. Generator's Name and Mailing Address: CTS Corporation, 4925 Indiana Ave., Lisle, IL 60532
Generator's Phone: 828-252-5130
Generator's Site Address (if different than mailing address): 235 Mills Gap Road, Asheville, NC 28809

6. Transporter 1 Company Name: STAT, Incorporated — U.S. EPA ID Number: NCD980799142

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Michigan Disposal Waste Treatment Plant, 49350 North I-94 Service Drive, Belleville, MI 48111 — U.S. EPA ID Number: MID000724831
Facility's Phone: 800-592-5489

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	~15	T	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
9b.1) Profile Tracking #: 587331 Approval #: A1880006MID Confirmation #:

A&D Job #: PO #:

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Rodney Clark, as agent for CTS Corporation — Signature: [signature] — Month: 3 Day: 30 Year: 18

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: LARRY CARNES — Signature: [signature] — Month: 3 Day: 30 Year: 18

Transporter 2 Printed/Typed Name: Darren Sides — Signature: [signature] — Month: 04 Day: 02 Year: 18

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
actual weight 9700 lbs per Mike Griffin / Manifest Ref. No. 3 4/6/18

18b. Alternate Facility (or Generator) — U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H070			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Andrew Olson — Signature: [signature] — Month: 4 Day: 2 Year: 18

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: NCD003149556
2. Page 1 of: 1
3. Emergency Response Phone: 800-255-3925-MB0007851
4. Manifest Tracking Number: 009964806 JJK

GENERATOR

5. Generator's Name and Mailing Address
CTS Corporation
4925 Indiana Ave.
Lisle, IL 60532
Generator's Phone: 828-252-8130

Generator's Site Address (if different than mailing address)
235 Mills Gap Road
Asheville, NC 28803

6. Transporter 1 Company Name: STAT, Incorporated
U.S. EPA ID Number: NCD980709142

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Michigan Disposal Waste Treatment Plant
49350 North I-94 Service Drive
Belleville, MI 48111
Facility's Phone: 800-592-5459
U.S. EPA ID Number: MID000724831

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	EST 15	P	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
9b.1) Profile Tracking #: 587331 Approval #: A1805006MDI Confirmation #:

A&D Job #: PO #:

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable International and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Gregory Hutchens, Agent for CTS Corporation
Signature:
Month: 4 Day: 4 Year: 18

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: DANNY ROARK
Signature:
Month: 4 Day: 4 Year: 18
Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
actual weight 1770 lbs per Mike Griffin
Manifest Reference Number: U.S. EPA ID Number

18b. Alternate Facility (or Generator)
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H070 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Signature:
Month: 4 Day: 5 Year: 18

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

1803-0829
Box RT 3046

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	NCD003149556	1	800-255-3025-WB0007951	009964814 JJK

GENERATOR

5. Generator's Name and Mailing Address
CTS Corporation
4925 Indiana Ave.
Lisle, IL 60532
Generator's Phone: 828-252-8130

Generator's Site Address (if different than mailing address)
235 Mills Gap Road
Asheville, NC 28803

6. Transporter 1 Company Name: A&D Environmental Services (SC), LLC — U.S. EPA ID Number: SCD987598331

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Michigan Disposal Waste Treatment Plant
49350 North I-94 Service Drive
Belleville, MI 48111
Facility's Phone: 800-592-5489

U.S. EPA ID Number: MID000724831

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	~15	T	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
9b.1) Profile Tracking #: 587331 Approval #: A1880006MDI Confirmation #:

A&D Job #: PO #:

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Rodney M. Clark, as agent for CTS Corporation — Signature: [signature] — Month: 4 Day: 19 Year: 18

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Richard W. Williams — Signature: [signature] — Month: 4 Day: 20 Year: 18

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H010			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name — Signature — Month — Day — Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

1803-0829

Box 50

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
NCD003149556	1	800-255-3825-MSD007951	00996481 5 JJK

GENERATOR

5. Generator's Name and Mailing Address
CTS Corporation
4925 Indiana Ave.
828-252-8130 Lisle, IL 60532
Generator's Phone:

Generator's Site Address (if different than mailing address)
235 Mills Gap Road
Asheville, NC 28803

6. Transporter 1 Company Name: A&D Environmental Services (SC), LLC — U.S. EPA ID Number: SCD987598331

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Michigan Disposal Waste Treatment Plant
49350 North I-94 Service Drive
800-592-5489 Belleville, MI 48111
Facility's Phone:
U.S. EPA ID Number: MID000724831

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	~15	T	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
9b.1) Profile Tracking #: 587331 Approval #: A1880066MDI / Confirmation #:

A&D lab #: PO #:

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Rodney Clark, as agent for CTS Corporation — Signature — Month 4 Day 23 Year 18

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Rick Williams — Signature — Month 4 Day 23 Year 18

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H070			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: [illegible] — Signature — Month 4 Day 24 Year 18

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

1803-0829

Box RT-3051

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	NCD003149556	1	800-255-3924-MI8000761	009964816 JJK

GENERATOR

5. Generator's Name and Mailing Address
CTS Corporation
4925 Indiana Ave.
Lisle, IL 60532
Generator's Phone: 828-252-5130

Generator's Site Address (if different than mailing address)
135 Mills Gap Road
Asheville, NC 28805

6. Transporter 1 Company Name: A&D Environmental Services (SC), LLC — U.S. EPA ID Number: SC0987590831

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Michigan Disposal Waste Treatment Plant
49350 North I-94 Service Drive
Belleville, MI 48111
Facility's Phone: 800-592-5489

U.S. EPA ID Number: MID000724831

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	14	T	F001		
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
9b.1) Profile Tracking #: 587331 Approval #: A1680096MDH Confirmation #:

A&D Job #: 1803-0829 PO #:

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that tha waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Gregory Hutchins as agent for CTS Corporation — Signature — Month 4 Day 25 Year 18

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: K. Williams — Signature — Month 4 Day 25 Year 18

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Actual weight 127 okay M. Manifest Reference Number: AR-MDRO BB 5/3/18

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H070			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous meterials covered by the manifest except as noted in item 18a

Printed/Typed Name: Jonathan Evans — Signature — Month 4 Day 26 Year 18

Box 280654

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Sev #1804-0728

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	NCD003149556	1	800-255-3924-MIS0007851	00964817 JJK

GENERATOR

5. Generator's Name and Mailing Address
CTS Corporation
4925 Indiana Ave.
Lisle, IL 60532
Generator's Phone: 828-252-8130

Generator's Site Address (if different than mailing address)
235 Mills Gap Road
Asheville, NC 28803

6. Transporter 1 Company Name: A&D Environmental Services (SC), LLC — U.S. EPA ID Number: SCD987598331

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Michigan Disposal Waste Treatment Plant
49350 North I-94 Service Drive
Belleville, MI 48111
Facility's Phone: 800-592-5489
U.S. EPA ID Number: MIDNH0724831

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	15.0	T	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
9b.1) Profile Tracking #: 587331 Approval #: A188006MDI Confirmation #:
A&D Job #: 1804-0726 PO #:

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Gregory Hutchins as agent for CTS Corporation — Signature — Month: 4 Day: 30 Year: 18

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Richard Williams — Signature — Month: 4 Day: 30 Year: 18

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Actual weight 13,760 lbs per Mike Griffin w/ A&D Manifest Reference Number: 33 5/3/18

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H070			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Andrea Cotin — Signature — Month: 5 Day: 1 Year: 18

TCP #6804-0728 Box 280169 Load 2 of

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	NCD003149556	1	800-255-3925-MS0007851	009964818 JJK

GENERATOR

5. Generator's Name and Mailing Address
CTS Corporation
4925 Indiana Ave.
Lisle, IL 60532
Generator's Phone: 828-252-8130

Generator's Site Address (if different than mailing address)
235 Mills Gap Road
Asheville, NC 28803

6. Transporter 1 Company Name: A&D Environmental Services (SC), LLC — U.S. EPA ID Number: SCD987598331

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Michigan Disposal Waste Treatment Plant
49350 North I-94 Service Drive
Belleville, MI 48111
Facility's Phone: 800-592-5489
U.S. EPA ID Number: MID000724831

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	1	T	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
9b.1) Profile Tracking #: 587331 Approval #: A188006MDI Confirmation #:

A&D Job #: 6804-0728 PO #:

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Gregory Watkins, agent for CTS Corporation — Signature — Month 5 Day 2 Year 18

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Richard Williams — Signature — Month 5 Day 2 Year 18

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Actual weight 1070 lbs per Mike Goldman | Manifest Reference Number: ADEWLTRP 55 5/10/18

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H070			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name — Signature — Month 5 Day 3 Year 18

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

1804-0726 Box RT 3779

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	NCD003149556	1	800-255-3925-MB0007951	009964819 JJK

GENERATOR

5. Generator's Name and Mailing Address: CTS Corporation, 4925 Indiana Ave., Lisle, IL 60532
Generator's Phone: 828-252-8130

Generator's Site Address (if different than mailing address): 235 Mills Gap Road, Asheville, NC 28803

6. Transporter 1 Company Name: A&D Environmental Services (SC), LLC — U.S. EPA ID Number: SCD987598331

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Michigan Disposal Waste Treatment Plant, 49350 North I-94 Service Drive, Belleville, MI 48111
Facility's Phone: 800-592-5489 — U.S. EPA ID Number: MID000724831

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3077, Waste Environmentally hazardous substance, solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	~14	T	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
9b.1) Profile Tracking #: 587331 Approval #: A1880006MDI Confirmation #:

A&D Job #: PO #:

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Robert M. Clarke as agent for CTS Corporation — Signature: [signature] — Month: 5 Day: 7 Year: 18

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Rick Williams — Signature: [signature] — Month: 5 Day: 7 Year: 18

Transporter 2 Printed/Typed Name — Signature — Month: Day: Year:

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H070			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Jonathan Evans — Signature: [signature] — Month: 5 Day: 8 Year: 18

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: NCD003149556
2. Page 1 of: 1
3. Emergency Response Phone: 800-255-3925-MIS0007951
4. Manifest Tracking Number: 009964924 JJK

5. Generator's Name and Mailing Address: CTS Corporation-Skyland, 905 West Blvd North, Elkhart, IN 46514
Generator's Phone: 574-523-3800
Generator's Site Address (if different than mailing address): CTS Corp., 235 Mills Gap Road, Asheville, NC 28803

6. Transporter 1 Company Name: A&D Environmental Services (SC), LLC
U.S. EPA ID Number: SCD987598331

7. Transporter 2 Company Name: Clean Harbors Env. Serv.
U.S. EPA ID Number: MAD039322250

8. Designated Facility Name and Site Address: Clean Harbors Deerpark, L.P., 2027 Independence Parkway South, La Porte, TX 77571 USA
Facility's Phone: 281-930-2300
U.S. EPA ID Number: TXD055141378

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3082, Waste Environmentally Hazardous Substance, Liquid, n.o.s.(trichloroethylene), 9, PG III, ERG# 171	023	DM	9200	P	D040
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
9a.1) CH392211 23 x 55gal
802528062
Job Number: 1805-0313 PO# 1000741 Transporter 1-800-434-7750

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Rodney Clark, as agent for CTS Corporation
Signature:
Month: 05 Day: 16 Year: 18

INT'L
16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: MATT WRAY
Signature:
Month: 05 Day: 16 Year: 17
Transporter 2 Printed/Typed Name: Justin Edwards
Signature: Edwards
Month: 5 Day: 24 Year: 5

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month Day Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H040 2. 3. 4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name:
Signature:
Month: 09 Day: 14 Year: 18

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)

21. Generator ID Number: NJD003145556

22. Page: 2 of 2

23. Manifest Tracking Number: 005960424 JJK

24. Generator's Name: CTS

25. Transporter 3 Company Name: Bos'n

U.S. EPA ID Number: CTD003145[illegible]

26. Transporter 4 Company Name: Clean Harbors Env. Serv.

U.S. EPA ID Number: MAD039322250

27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No.	28. Containers Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes
	Con't					

32. Special Handling Instructions and Additional Information

TRANSPORTER

33. Transporter 3 Acknowledgment of Receipt of Materials

Printed/Typed Name: Richard Smith | Signature | Month 6 | Day 18 | Year 9

34. Transporter 4 Acknowledgment of Receipt of Materials

Printed/Typed Name: C Gray | Signature | Month 6 | Day 19 | Year 9

DESIGNATED FACILITY

35. Discrepancy

36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

EPA Form 8700-22A (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: NCD003149556
2. Page 1 of 1
3. Emergency Response Phone: 800-255-3925-MIS0007951
4. Manifest Tracking Number: 011561017 JJK

GENERATOR

5. Generator's Name and Mailing Address: CTS Corporation-Skyland, 905 West Blvd North, Elkhart, IN 46514
Generator's Phone: 574-523-3800

Generator's Site Address (if different than mailing address): 235 Mills Gap Road, Asheville, NC 28803

6. Transporter 1 Company Name: A&D Environmental Services (SC), LLC — U.S. EPA ID Number: SCD987598331

7. Transporter 2 Company Name: Clean Harbors Environ Svcs — U.S. EPA ID Number: MAD039222252

8. Designated Facility Name and Site Address: Clean Harbors Deerpark, L.P., 2027 Independence Parkway South, La Porte, TX 77571 USA
Facility's Phone: 281-930-2300 — U.S. EPA ID Number: TXD055141378

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3082, Waste Environmetally Hazardous Sunstance, Liquid, n.o.s.(trichloroethylene), 9, PG III, ERG# 171	1	DM	415	P	D040
X	2. UN3077, Waste Environmetally Hazardous Sunstance, Solid, n.o.s.(trichloroethylene), 9, PG III, ERG# 171	10	DM	6,000	P	D040
	3.					
	4.					

14. Special Handling Instructions and Additional Information
9a.1) CH392211 1 x 55gal 2) CH411115 10 x 55gal.
1803473235
Job Number: 1807-0047 PO# 100195 Transporter 1-800-434-7750

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Greg Hutchings agent for CTS Corporation — Signature: [signature] — Month 7 Day 06 Year 18

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only): [signature]

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Kyle Williams — Signature: [signature] — Month 07 Day 06 Year 18

Transporter 2 Printed/Typed Name: Chad Chambers — Signature: [signature] — Month 7 Day 13 Year 18

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator): Bobby Mumford Bobby Mumford (BC) — Month 7 Day 19 Year 18

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040	H040		

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Sandy Beach — Signature: Sandy Beach — Month 7 Day 28 Year 18

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM (REQUIRED)

Please print or type. Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)

21. Generator ID Number: NCD003149556 | 22. Page: 2/2 | 23. Manifest Tracking Number: 011526101717JK

24. Generator's Name: CTS Corp

25. Transporter 3 Company Name: Robbie D Wood Inc | U.S. EPA ID Number: ALD067138891

26. Transporter 4 Company Name: Clean Harbors Env. Srv. | U.S. EPA ID Number: MAD039322250

GENERATOR

27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No.	28. Containers Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes

32. Special Handling Instructions and Additional Information

TRANSPORTER

33. Transporter 3 Acknowledgment of Receipt of Materials
Printed/Typed Name: Bobby Mumford | Signature: Bobby Mumford | Month: 7 | Day: 19 | Year: 18

34. Transporter 4 Acknowledgment of Receipt of Materials
Printed/Typed Name: T. Woods | Signature: T. Woods | Month: 7 | Day: 23 | Year: 18

DESIGNATED FACILITY

35. Discrepancy

36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

EPA Form 8700-22A (Rev. 12-17) Previous editions are obsolete. **DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM**

APPENDIX F

TRS'S CONSTRUCTION AND START-UP REPORT

TRS Group, Inc.
Accelerating Value

July 30, 2018

Mr. George Lytwynyshyn
Director of Environmental, Health and Safety
2375 Cabot Drive
Lisle, IL 60502

Subject: **Electrical Resistance Heating System Construction and Start-up Report CTS of Asheville Superfund Site**

Dear Mr. Lytwynyshyn,

TRS Group, Inc. (TRS) has prepared this letter to provide a brief description for the construction and start-up activities for the electrical resistance heating (ERH) system at the CTS of Asheville Superfund Site in Asheville, North Carolina (the Site). This report will cover the period from December 12, 2017, through June 4, 2018, and document work performed by TRS and as-built drawings for the system. Work scope performed by CTS Corporation (CTS) or by Wood Environmental and Infrastructure Solutions, Inc. (Wood) will be documented separately.

Site Mobilization

TRS began Site mobilization and preparation the week of October 23, 2017, with a pre-design kick-off meeting with CTS and Wood project personnel to finalize Site considerations and logistics that needed final development within the ERH system design. A meeting with Duke Energy was conducted to finalize the pre-design estimate for the electrical service and the tentative power pole locations. A representative from the natural gas utility, PSNC, also met with project personnel to determine the ideal location for the gas meter on the property. TRS personnel began limited tree and brush clearing to create an access point for the gravel ramp that would be installed to access the concrete slab area west of the ERH treatment area. Trees that would require removal for electrode installation were marked to ensure limited impact to the adjacent property.

The week of October 30, 2017, TRS received the mobile site construction tool Conex box and met with vendors for cost estimates for the clearing of the entire Site. Site mobilization continued the week of November 15, 2017, with the delivery of a storage container for material storage and the first shipment of ERH electrode materials.

Site clearing activities began on November 27, 2017, with removal and chipping of all trees and brush within the ERH treatment area. In addition, TRS personnel began pre-fabrication of electrodes; Wood surveyed and marked all electrode, temperature monitoring point (TMP), and monitoring well locations for coring; the existing fence along the eastern property line was removed to facilitate the installation of a new vinyl-clad fence with access gate (this fence is located ten feet onto the adjacent property); an office trailer was delivered to the site with the integrated interior holding area fence; and a Videofied security system that records and sends videos when unauthorized personnel enter the Site was installed. The Videofied system will remain active during the entire project.

Subsurface Construction

Subsurface construction began the week of December 11, 2017, with the mobilization of four hollow stem auger drill rigs from two different drilling subcontractors. This scope was managed by Wood with technical oversight by TRS. TRS provided construction of custom electrode lengths on-demand, electrode depth tracking, and adjustments to electrode positioning due to obstructions or angled installation(s). Each electrode location was drilled to refusal at bedrock, then each electrode was constructed from bedrock to the water table. The length of the electrode element or multiple electrode elements within each location was determined by its overall length and orientation of the surrounding electrodes. While there were 227 electrode locations installed, there are 353 electrodes intervals throughout the treatment volume to provide the ability to customize power horizontally and vertically. In general, the treatment volume is thinner and has single element electrodes in the western one third of the Site, the eastern two thirds of the electrodes is composed of primarily dual element electrodes. A cross section of the electrode designs are illustrated in **Figures M-1** through **M-3**.

The 18 temperature monitoring points (TMP) and 18 monitoring wells (MW) were installed relative to the depth of the surrounding electrodes at each location. Baseline soil sampling at 15 locations was also performed by Wood after the initial electrode installation mobilization.

Two electrode locations were drilled to refusal but the bedrock interface appeared to be within one foot of the water table. There was no definable treatment volume within the saturated zone therefore the locations were abandoned which lowered the total number of electrodes from 229 to 227. These two locations were electrodes W4 and V2.

The area along the eastern property line was the final area to be installed which due to the angled installations and limited space for more than two rigs slowed the final leg of installation. This area also had two stand-alone vapor recovery (VR) screens installed to the edge of the electrodes to provide vapor capture above the bottom edge of the treatment volume. Subsurface installation was completed on May 3, 2018, with all locations grouted in place. A project Site plan depicting the as-built locations of the electrodes, TMPs, MWs, and other Site features is presented in **Figure Y-1**. The positions of the video camera positions and security system sensors are included in **Figures Y-3** and **Y-4**, respectively.

Surface Construction

Surface construction began concurrent to subsurface installation as the remaining portions of the treatment area were completed. This work began the week of February 26, 2018, with surface preparation work to level the earthen areas after the drill rigs heavily disturbed the area. Due to the amount of infrastructure within the treatment area, controlling vegetation via normal practices is very difficult. A porous black felt liner was laid down over all earthen areas to prevent native weed growth during ERH operations.

After surface preparation, the VR manifolds were constructed and connected to each of the 227 co-located and two independent VR screens. Based on anticipated loading, maximum loading of each condenser, and location of light non-aqueous phase liquid (LNAPL), the manifolds for each condenser routed the loading by 40,40, and 20 percent. Each header has a cross over pipe to allow flow to be re-directed in the event any blower goes off-line.

The electrodes are powered by nine field located stepdown transformers (SDTX) which have the ability to tailor the voltage applied and power to each of the 353 electrode elements. Each SDTX has the ability to adjust the applied voltage by 20 to 150 percent of the average load. Prior to connecting each cable to the SDTX, TRS performed soil resistivity testing at each electrode location so that each electrode's initial connection was to its optimal voltage relative to all the surrounding electrodes. Each power cable from the

ERH power control unit (PCU) to the SDTX and from the SDTX to the electrodes has a dedicated fuse for protection.

The temperature monitoring system uses 18 TMP locations with a resistance temperature detector (RTD) located one foot above the bottom of the shallowest of the three surrounding electrodes. There is an additional RTD every placed every five feet vertically until the water table is encountered were the temperature monitoring profile stops. The TMP cross sectional design is attached as **Figure M-4** with locations provided on **Figure Y-1**. All the RTDs from the subsurface, within the process piping and within the equipment is connected to a remote telemetry and logging system for monitoring and tracking.

Each of the 23 MWs in the treatment area was either sealed with sample tubing pre-installed, sealed with the ability to sample LNAPL, or sealed with only a cap as they will not be sampled as part of the remediation. The monitoring well head design is attached as **Figure M-5**.

Equipment Mobilization

The ERH system process equipment was mobilized at various times based on its availability or the status of construction. There were also several modifications to the pre-installation plan that were due to the impact of an expanded treatment volume. A summary of all equipment mobilized to the Site is provided below:

- One 4500 kilowatt (kW) PCU
- One 2000 kW PCU
- Three steam condensers and cooling towers
- Three 40 horsepower (hp) VR blowers
- One regenerative thermal oxidizer with acid gas scrubber (RTO)
- Nine SDTXs
- One 18,000-gallon oil-water separator (OWS)
- One 2,0000-gallon sodium hydroxide tank
- One Eye wash station
- Two 1,000-pound liquid granular activated carbon (GAC) vessels
- Secondary electrical cables for electrode connection to PCUs

All ERH system components managing process water were placed within secondary containment, each with a level switch providing remote indication of a high-level condition, and a pump to transfer rain and potential process water back into the water treatment system.

There were two equipment changes from the pre-installation design. The fist was the addition of one steam condenser and 40 hp blower. The second change was the removal of the air stripper from the water treatment system. The removal occurred due to the insufficient flow capacity within the RTO to accommodate the additional steam production associated with the expansion of the ERH treatment volume.

System Utilities

TRS hired Haynes Electrical, Inc. to perform engineering and construction services related to connection of the PCUs to the Duke utility drop. The final design was stamped by a licensed North Carolina Professional Electrical Engineer with all work performed in accordance to the design. There were several changes to the ERH system equipment during construction in an attempt to find the most cost-effective solution to power the system. The final approach included the mobilization of a 7.5 megavolt amp transformer to step down the 22,000-volt primary service to 12,475 volts for connection to the two TRS

PCUs. The final connection and service cut-in was completed on May 2, 2018. The ERH systems electrical one-line drawing is provided in **Figure E-1**.

All previous utilities from the former building had been abandoned. The ERH system required potable water, natural gas, and sewer to operate the heating, cooling, and treatment processes. All three mechanical utilities were connected to the system by entering the property below ground surface just east of the entry gate along Mills Gap Road and routing the utilities to the former building slab next to the RTO. All three were installed by license plumbing contractor H&M, Inc. and were tested and inspected by Buncombe County Building Department prior to final connection. All three utilities passed hydrostatic pressure testing on their first attempt.

Water Treatment System

The process water treatment system collects all water from the condensers and RTO's discharges within a OWS where the liquid is allowed to gravity separate any LNAPL prior to treatment for volatile organic compounds (VOCs). After the OWS, the water passes through two 1,000-pound liquid GAC vessels, arranged in series, prior to discharging directly to the sewer on demand. An air stripper post-liquid GAC was specified in the original design, however, due to the increased air flow requirements from the treatment volume expansion, there was inadequate air flow to operate the air stripper and it was removed from the system design. The air stripper will remain onsite and be integrated if necessary. The final process flow and instrumentation diagram is enclosed as **Figures P-1** through **P-8**.

External Interlocks

In addition to all the internal equipment interlocks within each component, there were several external interlocks integrated into the central programmable logic controller (PLC) that would de-energize the ERH electrodes in the event of any alarm condition. All external interlocks were tested for proper functionality prior to final approval of system operations. There is a perimeter security system that de-energizes the electrodes in the event of unauthorized entry into the treatment area and equipment compound. Each sensor was tested during start-up.

Each of the three VR headers has a sensor at each blower that would send an alarm in the event of malfunction. As a back-up, each header also has a vacuum switch located at the furthest point of each run. The vacuum switches trigger an alarm condition in the event that the vacuum drops below the desired set-point caused by potential rupture of the pipe or clogging that would not be indicated by either of the blowers during normal operations.

There are three emergency-stop buttons located around the Site to assist with emergency response for the large areas. Each secondary containment berm also has a high-level float switch to provide remote indication of heavy rain or process system leakage.

Wood installed four photoionization detectors (PID) around the perimeter of the property to monitor the ambient air around the system. The PIDs are being operated and managed by Wood, however, they were installed to shut down the electrodes in the event the set-point was exceeded. TRS verified the PIDs alarm functions function as configured.

System Start-up and Optimization

ERH system start-up and optimization procedures began on May 14, 2018. System start-up and optimization consisted of energizing the ERH condensers, cooling towers, and the temperature monitoring system. This was followed up with functionality testing of the ERH equipment and interlocks, and the evaluation of subsurface energy application.

The condenser cooling tower sumps were filled with water and condenser operations were initiated. Items inspected included checks for leaks, functionality (hand/off/auto switches, float switches, valves), and the ability to maintain normal operations. The inspection of the system also verified the proper operational parameters (flow, differential pressures, and applied field vacuum) on all gauges and valves. Once functionality was established as satisfactory, ERH equipment interlock testing commenced. Testing of the ERH equipment interlocks occurred between May 28, 2018, and June 7, 2018, and all interlocks performed within the design criteria. The startup checklist (SUCL) which documents the testing of all components within the ERH system is enclosed.

The initial application of energy to the subsurface, and ERH system testing, commenced on May 29, 2018. During this testing period, TRS applied electrical energy to the subsurface, via the electrodes, to evaluate the electrical characteristics of the treatment volume. This evaluation included: observations of cable/electrode amperages, applied voltages, and, an overall evaluation of the power applied to the treatment volume. Concurrent with the ERH system testing, step-and-touch voltage safety tests were performed. These tests are discussed in the following section.

Step-and-Touch Voltage Safety Tests

This test is a critical safety test for the application of ERH technology. The electrode field, upon initial power application on May 29, 2018, was surveyed for step-and-touch voltage safety testing.

The measurement used to read surface voltage potential between objects near one another at an active ERH site is referred to as a “step-and-touch” measurement. Step-and-touch measurements measure the surface voltage potential between nearby objects which personnel may contact, either between two hands, two feet, or between one hand and one foot. TRS has established **10 volts alternating current** (VAC) as the maximum allowable step-and-touch condition inside the property line fence and **1 VAC** outside the property fence line.

Voltages in excess of the TRS 10 VAC limit were initially found between the ground surface and some abandoned metal structures around the building slab and around some of the ERH system process equipment. TRS employed two remedies to resolve this issue. The first remedy was to install a grounding mat at the entry to both PCUs. The grounding mat consists of a wire mesh placed on the ground surface and then bonded with 8 American Wire Gauge (AWG) wire to the equipment frame. The wire mesh was then covered with pea gravel to prevent the mat from inadvertently decoupling with the ground surface. It also provides further protection from voltage potentials between the ground surface and the equipment by acting as an insulator. The second remedy involved painting the exposed metal pieces with di-electric insulating paint to remove the potential connection to ground. As a result of these remedies, no voltages exceeding the TRS 10 VAC limit were found in dry or wet conditions.

Surveying the performance of the electrodes was also a part of start-up testing and unfortunately, two electrodes did not perform during low power testing. The deep electrode intervals at B12 and J14 appear to have been damaged during installation. The project team decided to replace the deep J14 interval by installing a new electrode four feet from the old location. The deep B12 electrode was not replaced due to its location on the downgradient edge of the treatment area which will receive hot groundwater flow from the up gradient heated zone.

All systems were verified to be operating within design parameters and part 2 of the SUCL authorizing unattended 24/7 operations was signed by TRS’ Process Engineer. The Site was deemed electrically safe and ready for uninterrupted operations on June 8, 2018.

The full ERH System as-built design package is enclosed for reference.

Should you have any questions concerning this report, or if you would like any additional information, please contact Chris Blundy by phone at (843) 810-5310.

Sincerely,
TRS Group, Inc.

Chris Blundy
Sr Project Manager-Operations

En: ERH System As-Build Design Package
ERH System Startup Checklist

ELECTRICAL RESISTANCE HEATING DESIGN PACKAGE

CTS OF ASHEVILLE SUPERFUND SITE
235 MILLS GAP ROAD
ASHEVILLE, NORTH CAROLINA

Prepared by:

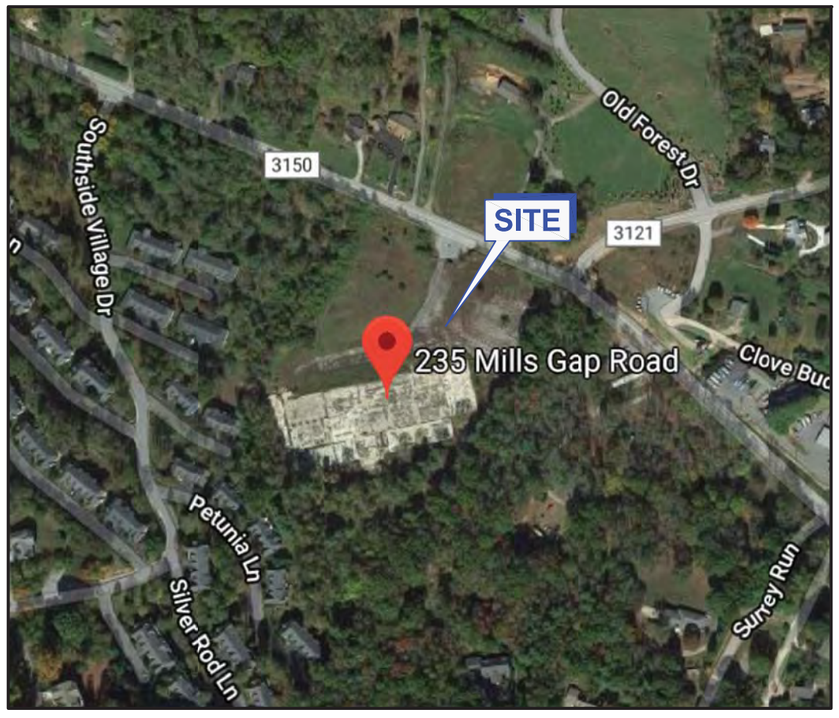
TRS Accelerating Value

JULY 2018

NORTH CAROLINA PROFESSIONAL SEAL 041303 ENGINEER DANIEL OBERLE

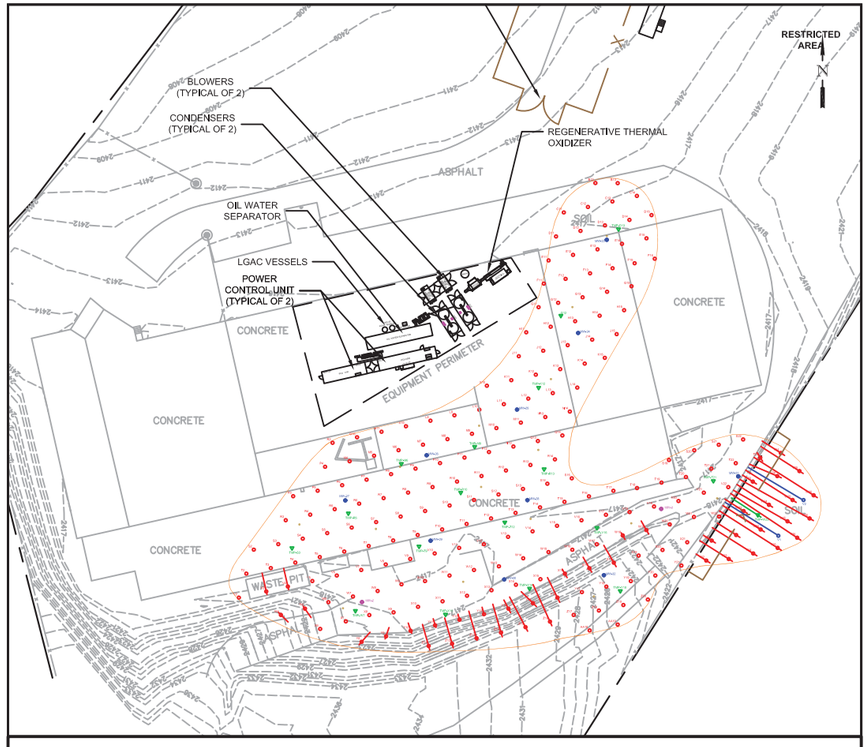
07/17/18
ENGINEER SIGNATURE / DATE

APPROVED
For Construction



SITE LOCATION MAP

SHEET INDEX	
DRAWING NUMBER	**TITLE AND DESCRIPTION**
Y-1	SITE PLAN WITH ELECTRODE LAYOUT
Y-2	ZOOMED IN SITE PLAN WITH ELECTRODE LAYOUT
Y-3	SECURITY MOTION SENSOR PLAN
Y-4	SECURITY CAMERA PLAN
M-1	SINGLE ELEMENT VERTICAL ELECTRODE DETAIL
M-2	ANGLED ELECTRODE DETAIL
M-3	DUAL ELEMENT VERTICAL ELECTRODE DETAIL
M-4	TEMPERATURE MONITORING POINT DETAIL
M-5	MONITORING WELL HEAD DETAIL
P-1	LEGEND PROCESS AND INSTRUMENTATION DIAGRAM
P-2	PROCESS FLOW DIAGRAM
P-3	PROCESS FLOW DIAGRAM STREAM LEGEND
P-4	FIELD PROCESS AND INSTRUMENTATION DIAGRAM
P-5	CONDENSER PROCESS AND INSTRUMENTATION DIAGRAM
P-6	COOLING TOWER PROCESS AND INSTRUMENTATION DIAGRAM
P-7A	BLOWER AND THERMOX PROCESS AND INSTRUMENTATION DIAGRAM
P-7B	BLOWER AND THERMOX PROCESS AND INSTRUMENTATION DIAGRAM
P-7C	BLOWER AND THERMOX PROCESS AND INSTRUMENTATION DIAGRAM
P-8	WATER TREATMENT PROCESS AND INSTRUMENTATION DIAGRAM
E-1	ELECTRICAL ONE-LINE DIAGRAM



SITE PLAN

0 100
APPROXIMATE SCALE IN FEET

AS BUILTS

NORTH CAROLINA PROFESSIONAL SEAL 041303 ENGINEER DANIEL OBERLE

2018.JUL.17

NEW FENCE LINE FOR LARGER HOLDING AREA

OFFICE TRAILER (ONE DOOR IN HOLDING AREA, ONE DOOR IN RESTRICTED AREA

HOLDING AREA

GATE FOR ACCESS TO RESTRICTED LAYDOWN AREA

RESTRICTED AREA

ASPHALT

LIQUID GRANULAR ACTIVATED CARBON VESSELS

BLOWER (TYPICAL OF 3)

CONDENSER (TYPICAL OF 3)

REGENERATIVE THERMAL OXIDIZER

OIL WATER SEPARATOR

POWER CONTROL UNIT (TYPICAL OF 2)

CONCRETE

EQUIPMENT PERIMETER

WASTE PIT

SOIL

NEW FENCE LINE FOR LARGER HOLDING AREA (WITH PRIVACY SCREEN)

LEGEND

- VERTICAL ELECTRODE (QTY. 184)
- ANGLED ELECTRODE (QTY. 43)
- TEMPERATURE MONITORING POINT (18)
- SB-1 SOIL BORING (15)
- MW-1 MONITORING WELL CLUSTER (10)
- MW-2 EXISTING MONITORING WELLS (2)
- V1 ANGLED VAPOR RECOVERY WELL (2)

0 30 60 120

SCALE IN FEET

TRS Accelerating Value

TRS GROUP, INC. 338 COMMERCE AVE., SUITE 304, LONGVIEW, WA 98632

DESIGNED BY	E. CROWNOVER
DRAWN BY	A. PEABODY
CHECKED BY	D. OBERLE
PROJECT MANAGER	C. BLUNDY
QSAT REVIEW	2017.NOV.27

SITE	CTS OF ASHEVILLE SUPERFUND SITE
LOCATION	ASHEVILLE, NORTH CAROLINA
CLIENT	CTS CORPORATION

SITE PLAN WITH ELECTRODE LAYOUT

APPROVED FOR CONSTRUCTION
BY
DATE 2017.NOV.27

DATE 2018.JUL.16

PROJECT NC.ASH.1821

SHEET Y-1

AS BUILTS

NORTH CAROLINA PROFESSIONAL SEAL 041303 ENGINEER DANIEL OBERLE

Daniel Oberle 2018.JUL.17

CONCRETE

CONCRETE

CONCRETE

CONCRETE

CONCRETE

SOIL

SOIL

ASPHALT

ASPHALT

WASTE PIT

EQUIPMENT PERIMETER

OIL WATER SEPARATOR

1,100 LB LOAC VESSELS

7500 KVA TX 22 kV-13.8 kV

POLARIS 6600 FO-4

POLARIS 6600 FO-4

POLARIS 4000 DUPLEX

ACID COOLING

N

B12 B13 C14 C13 C12 C11 D15 D14 D13 D12 D11 E15 E14 E13 E12 E11 F16 F15 F14 F13 F12 F11 G15 G14 G13 G12 G11 H15 H14 H13 H12 H11 J15 J14 J13 J12 J11 K15 K14 K13 K12 K11 L14 L13 L12 L11 L10 M14 M13 M12 M11 M10 L9 L8 L7 L6 L5 L4 M8 M9 M7 M6 M5 M4 P14 P13 P12 P11 P10 P9 P8 P7 P6 P5 P4 P3 R15 R14 R13 R12 R11 R10 R9 R8 R7 R6 R5 R4 R3 T16 T15 T14 T13 T12 T11 T10 T9 T8 T7 T6 T5 T4 T3 T2 V18 V17 V16 V15 V14 V13 V12 V11 V10 V9 V8 V7 V6 V5 V4 V3 W21 W20 W19 W18 W17 W16 W15 W14 W13 W12 W11 W10 W9 W8 W7 W6 W5 X20 X19 X18 X17 X16 X15 X14 X13 X12 X11 X10 X9 X8 X7 X6 Z20 Z19 Z18 Z17 Z16 Z15 Z14 Z13 Z12 Z11 AA19 AA18 Y19 Y18 Y17 Y16 Y15 Y14 Y13 Y12 Y11 Y10 Y9 Y8 S22 S21 S20 S19 S15 S14 S13 S12 S11 S10 S9 S8 S7 S6 S5 S4 S3 S2 T24 T23 T22 T21 T20 T19 V25 V24 V23 V22 V21 W26 W25 W24 W23 W22 X26 X25 X24 X23 X22 X21 Y26 Y25 Y24 Y23 Y22 Y21

MW-23 MW-24 MW-25 MW-26 MW-27 MW-28 MW-29 MW-30 MW-31 MW-32

V1 V2

SB-106 SB-107 SB-108 SB-109 SB-110 SB-111 SB-112 SB-113 SB-114 SB-115 SB-116 SB-117 SB-118 SB-119 SB-120

TMP-D13 TMP G12 TMP-K12 TMP-M9 TMP-M6 TMP-R13 TMP-R10 TMP-R5 TMP-T12 TMP-V16 TMP-S3 TMP-T9 TMP-X14 TMP-Y18 TMP-T21 TMP-W23 TMP-W7 TMP-X11

LEGEND

- VERTICAL ELECTRODE (QTY. 184)
- ANGLED ELECTRODE (QTY. 43)
- TEMPERATURE MONITORING POINT (18)
- SB-1 SOIL BORING (15)
- MW-1 MONITORING WELL CLUSTER (10)
- MW-2 EXISTING MONITORING WELLS (2)
- V1 ANGLED VAPOR RECOVERY WELL (2)

0 20 40 80

SCALE IN FEET

TRS Accelerating Value

TRS GROUP, INC. 338 COMMERCE AVE., SUITE 304, LONGVIEW, WA 98632

DESIGNED BY	E. CROWNOVER
DRAWN BY	A. PEABODY
CHECKED BY	D. OBERLE
PROJECT MANAGER	C. BLUNDY
QSAT REVIEW	2017.NOV.27

SITE	CTS OF ASHEVILLE SUPERFUND SITE
LOCATION	ASHEVILLE, NORTH CAROLINA
CLIENT	CTS CORPORATION

SITE PLAN WITH ELECTRODE LAYOUT

APPROVED FOR CONSTRUCTION
BY Daniel Oberle
DATE 2017.NOV.27

DATE 2018.JUL.16

PROJECT NC.ASH.1821

SHEET Y-2

AS BUILTS

NORTH CAROLINA PROFESSIONAL SEAL 041303 ENGINEER DANIEL OBERLE

Daniel Oberle 2018.JUL.17

LEGEND

- VERTICAL ELECTRODE (QTY. 184)
- ANGLED ELECTRODE (QTY. 43)
- TEMPERATURE MONITORING POINT (18)
- SB-1 SOIL BORING (15)
- MW-1 MONITORING WELL CLUSTER (10)
- V1 ANGLED VAPOR RECOVERY WELL (2)
- SECURITY SENSOR (QTY 13)
- CORNER SECURITY SENSOR (QTY 6)

0 30 60 120

SCALE IN FEET

TRS Accelerating Value

TRS GROUP, INC. 338 COMMERCE AVE., SUITE 304, LONGVIEW, WA 98632

DESIGNED BY	E. CROWNOVER
DRAWN BY	A. PEABODY
CHECKED BY	D. OBERLE
PROJECT MANAGER	C. BLUNDY
QSAT REVIEW	2017.NOV.27

SITE	CTS OF ASHEVILLE SUPERFUND SITE
LOCATION	ASHEVILLE, NORTH CAROLINA
CLIENT	CTS CORPORATION

SECURITY MOTION SENSOR PLAN

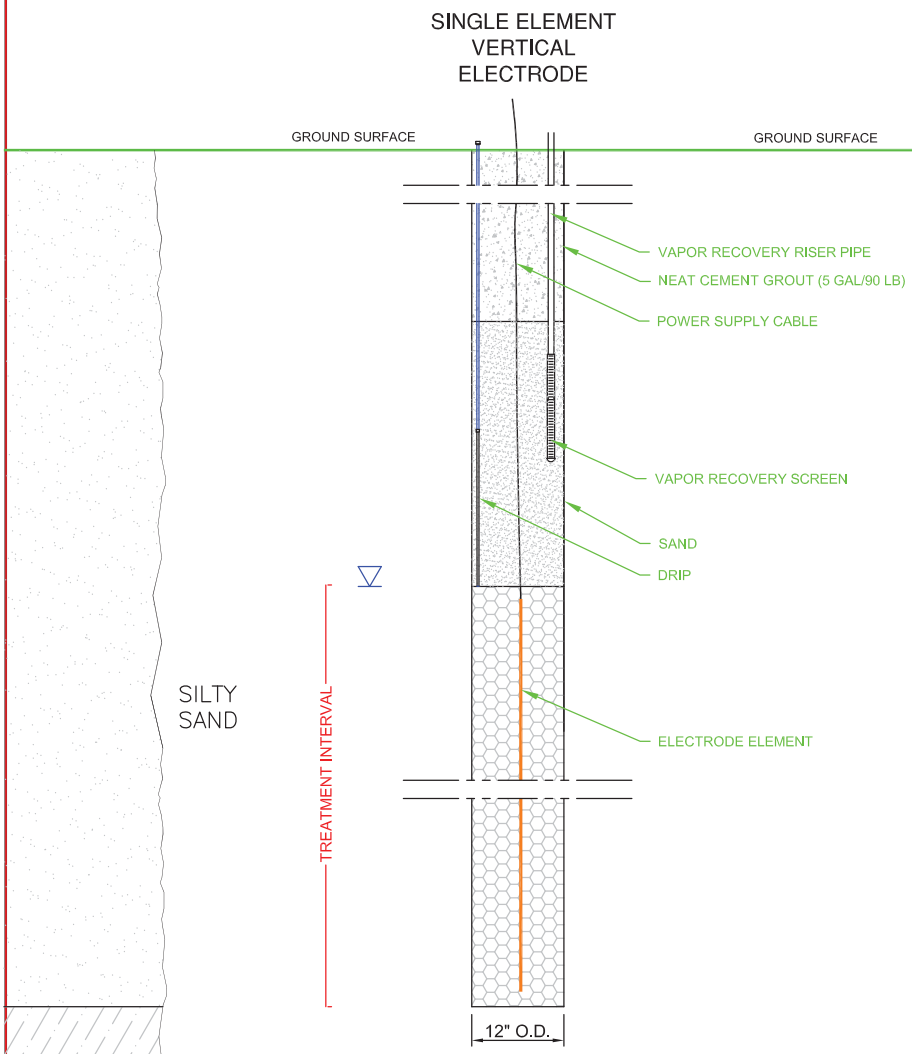
APPROVED FOR CONSTRUCTION BY	Daniel Oberle	DATE	2018.JUL.16
DATE	2017.NOV.27	SHEET	Y-3

PROJECT NC.ASH.1821

AS BUILTS

NORTH CAROLINA PROFESSIONAL SEAL 041303 ENGINEER DANIEL OBERLE

2018.JUL.17



NOTES:

1. DEPTHS IN DRAWING REPRESENT TREATMENT INTERVALS FROM TOP OF WATER TABLE TO TOP OF BEDROCK INTERFACE.
2. DEPTHS OF TREATMENT ARE DETERMINED BASED UPON FIELD OBSERVATIONS.
3. ALL ELECTRODES ARE DRILLED TO REFUSAL USING HOLLOW STEM AUGER.

TRS Accelerating Value
TRS GROUP, INC. 338 COMMERCE AVE., SUITE 304, LONGVIEW, WA 98632

0 10 20 40
SCALE IN FEET

DESIGNED BY	E. CROWNOVER
DRAWN BY	J. ERARIO
CHECKED BY	D. OBERLE
PROJECT MANAGER	C. BLUNDY
QSAT REVIEW	2017.NOV.27

SITE	CTS OF ASHEVILLE SUPERFUND SITE
LOCATION	ASHEVILLE, NORTH CAROLINA
CLIENT	CTS CORPORATION

SINGLE ELEMENT VERTICAL ELECTRODE DETAIL

APPROVED FOR CONSTRUCTION
BY
DATE 2017.NOV.27

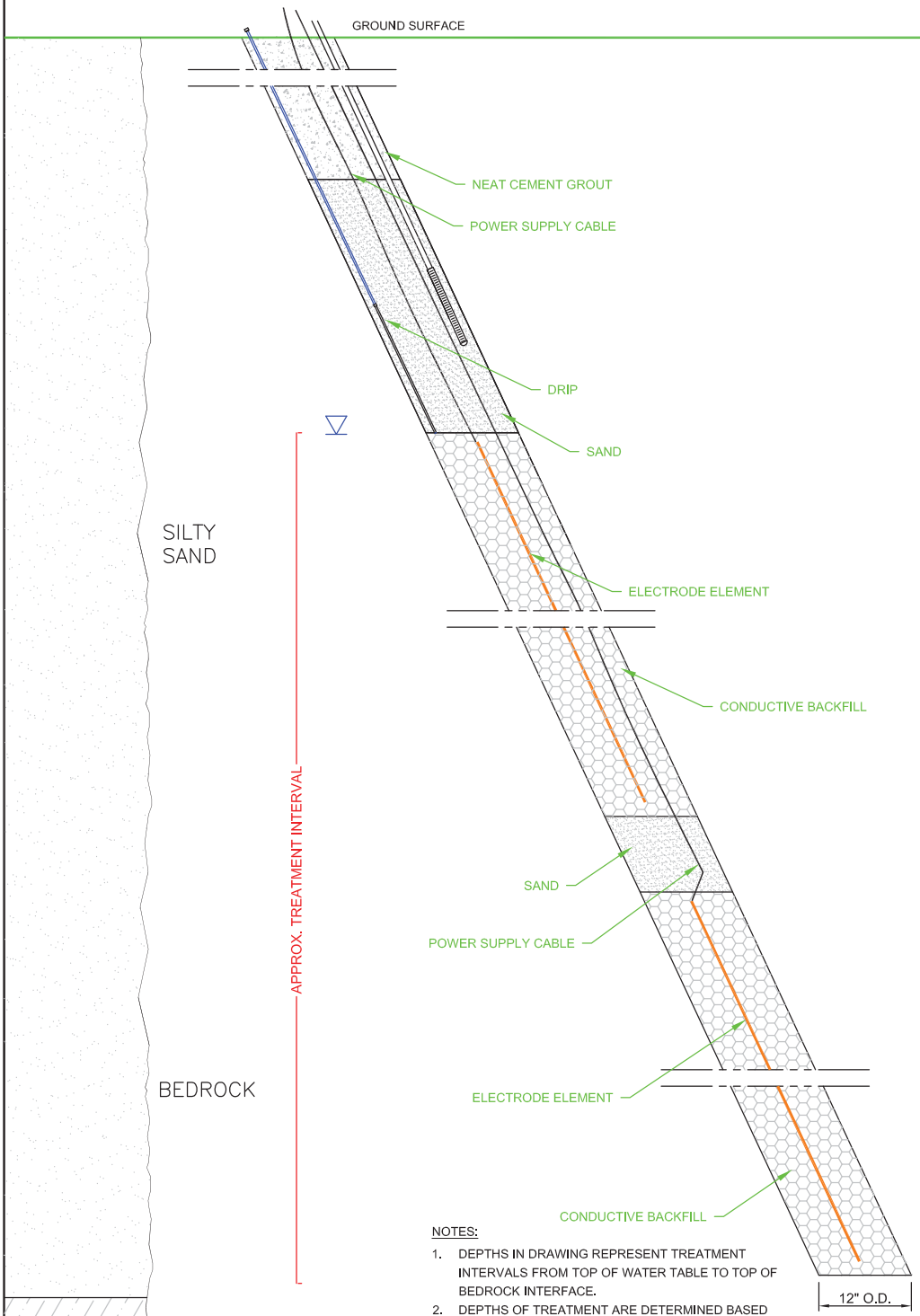
DATE 2018.JUL.16
PROJECT NC.ASH.1821
SHEET M-1

AS BUILTS

NORTH CAROLINA PROFESSIONAL SEAL 041303 ENGINEER DANIEL OBERLE

2018.JUL.17

DUAL ELEMENT ANGLED ELECTRODE



NOTES:

1. DEPTHS IN DRAWING REPRESENT TREATMENT INTERVALS FROM TOP OF WATER TABLE TO TOP OF BEDROCK INTERFACE.
2. DEPTHS OF TREATMENT ARE DETERMINED BASED UPON FIELD OBSERVATIONS.
3. ANGLES VARY BY LOCATION BASED UPON TOPOGRAPHY CHANGES AND TO MINIMIZE IMPACT TO NEIGHBORING PROPERTY.

TRS Accelerating Value

TRS GROUP, INC. 338 COMMERCE AVE., SUITE 304, LONGVIEW, WA 98632

DESIGNED BY	E. CROWNOVER
DRAWN BY	J. ERARIO
CHECKED BY	D. OBERLE
PROJECT MANAGER	C. BLUNDY
QSAT REVIEW	2017.NOV.27

SITE	CTS OF ASHEVILLE SUPERFUND SITE
LOCATION	ASHEVILLE, NORTH CAROLINA
CLIENT	CTS CORPORATION

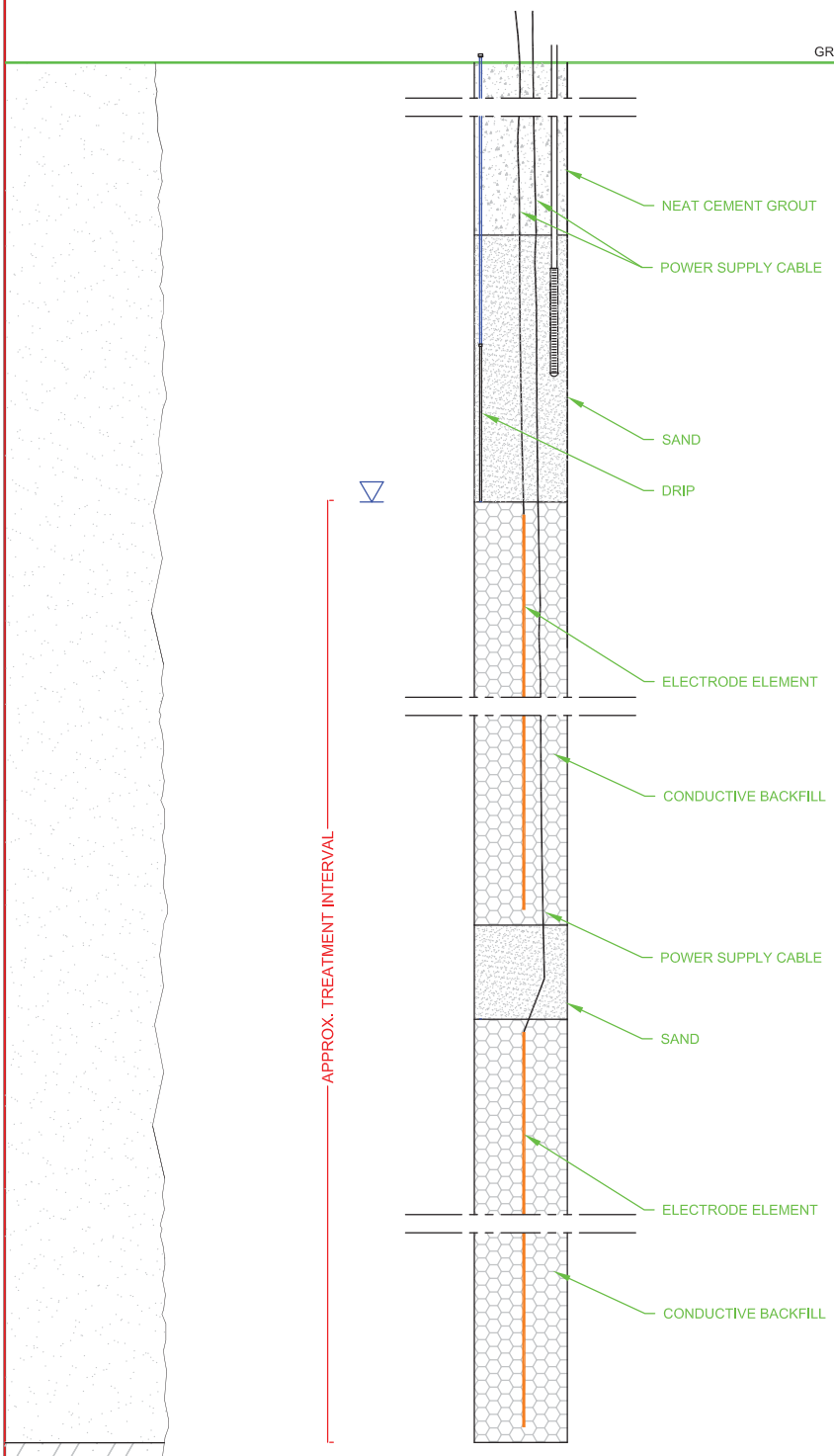
ANGLED ELECTRODE DETAIL

APPROVED FOR CONSTRUCTION BY	
DATE	2017.NOV.27
DATE	2018.JUL.16
PROJECT	NC.ASH.1821
SHEET	M-2

AS BUILTS

NORTH CAROLINA PROFESSIONAL SEAL 041303 ENGINEER DANIEL OBERLE

2018.JUL.17



NOTES:

1. DEPTHS IN DRAWING REPRESENT TREATMENT INTERVALS FROM TOP OF WATER TABLE TO TOP OF BEDROCK INTERFACE.
2. DEPTHS OF TREATMENT ARE DETERMINED BASED UPON FIELD OBSERVATIONS.
3. ALL ELECTRODES ARE DRILLED TO REFUSAL USING HOLLOW STEM AUGER.

TRS Accelerating Value

TRS GROUP, INC. 338 COMMERCE AVE., SUITE 304, LONGVIEW, WA 98632

DESIGNED BY	E. CROWNOVER
DRAWN BY	J. ERARIO
CHECKED BY	D. OBERLE
PROJECT MANAGER	C. BLUNDY
QSAT REVIEW	2018.JUL.16

SITE	CTS OF ASHEVILLE SUPERFUND SITE
LOCATION	ASHEVILLE, NORTH CAROLINA
CLIENT	CTS CORPORATION

DUAL ELEMENT VERTICAL ELECTRODE DETAIL

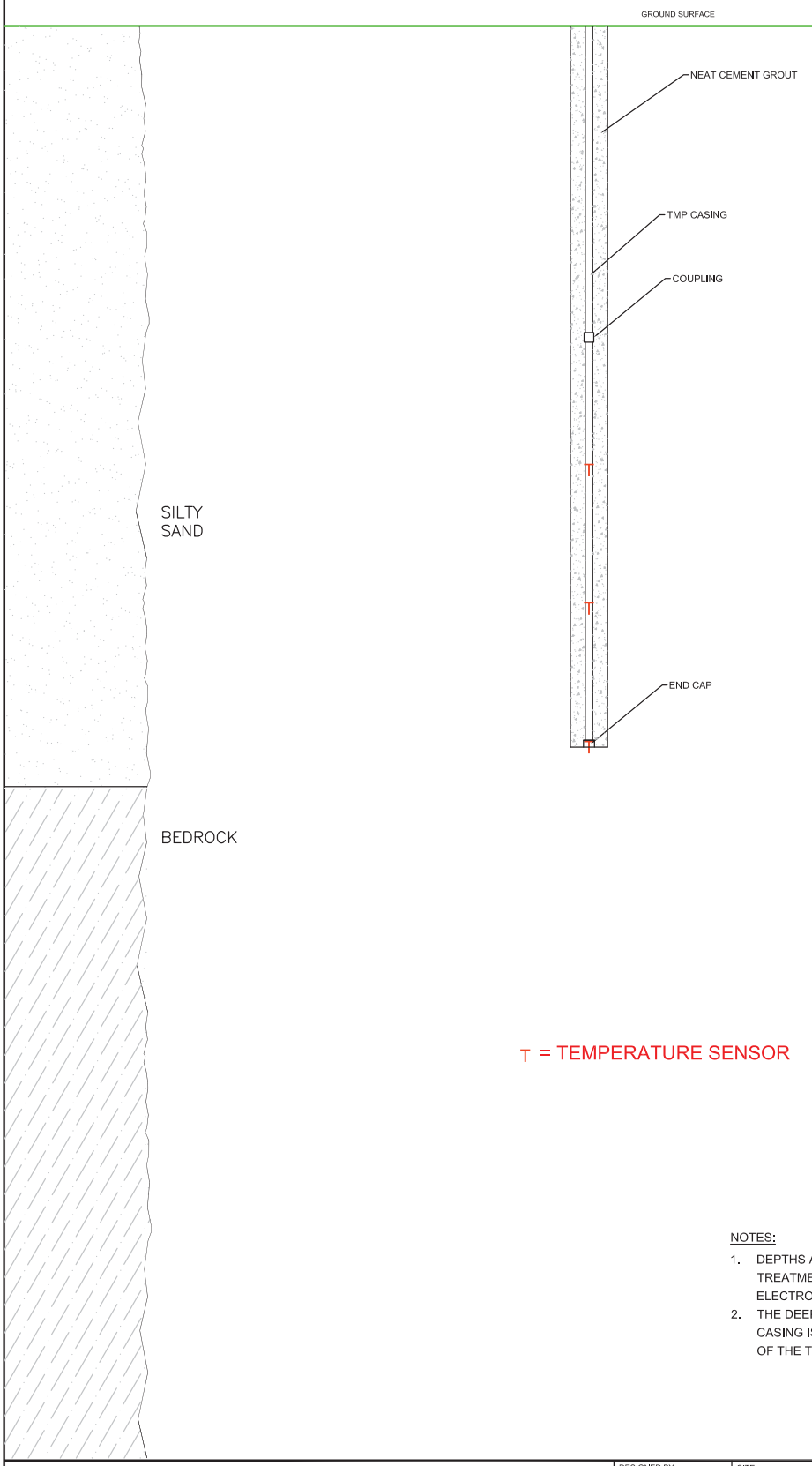
APPROVED FOR CONSTRUCTION BY	
DATE	2017.NOV.27
DATE	2017.NOV.27
PROJECT	NC.ASH.1821
SHEET	M-3

AS BUILTS

TEMPERATURE MONITORING POINT

NORTH CAROLINA PROFESSIONAL SEAL 041303 ENGINEER DANIEL OBERLE

2018.JUL.17



T = TEMPERATURE SENSOR

NOTES:

1. DEPTHS ARE DETERMINED BASED UPON TREATMENT INTERVAL EXTENTS OF SURROUNDING ELECTRODE INSTALLATIONS.
2. THE DEEPEST TEMPERATURE SENSOR WITHIN THE CASING IS SET TWO FEET ABOVE THE SHALLOWEST OF THE THREE SURROUNDING ELECTRODES.

TRS Accelerating Value
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DRAWN BY	A. PEABODY
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PROJECT MANAGER	C. BLUNDY
QSAT REVIEW	2017.NOV.27

SITE	CTS OF ASHEVILLE SUPERFUND SITE
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CLIENT	CTS CORPORATION

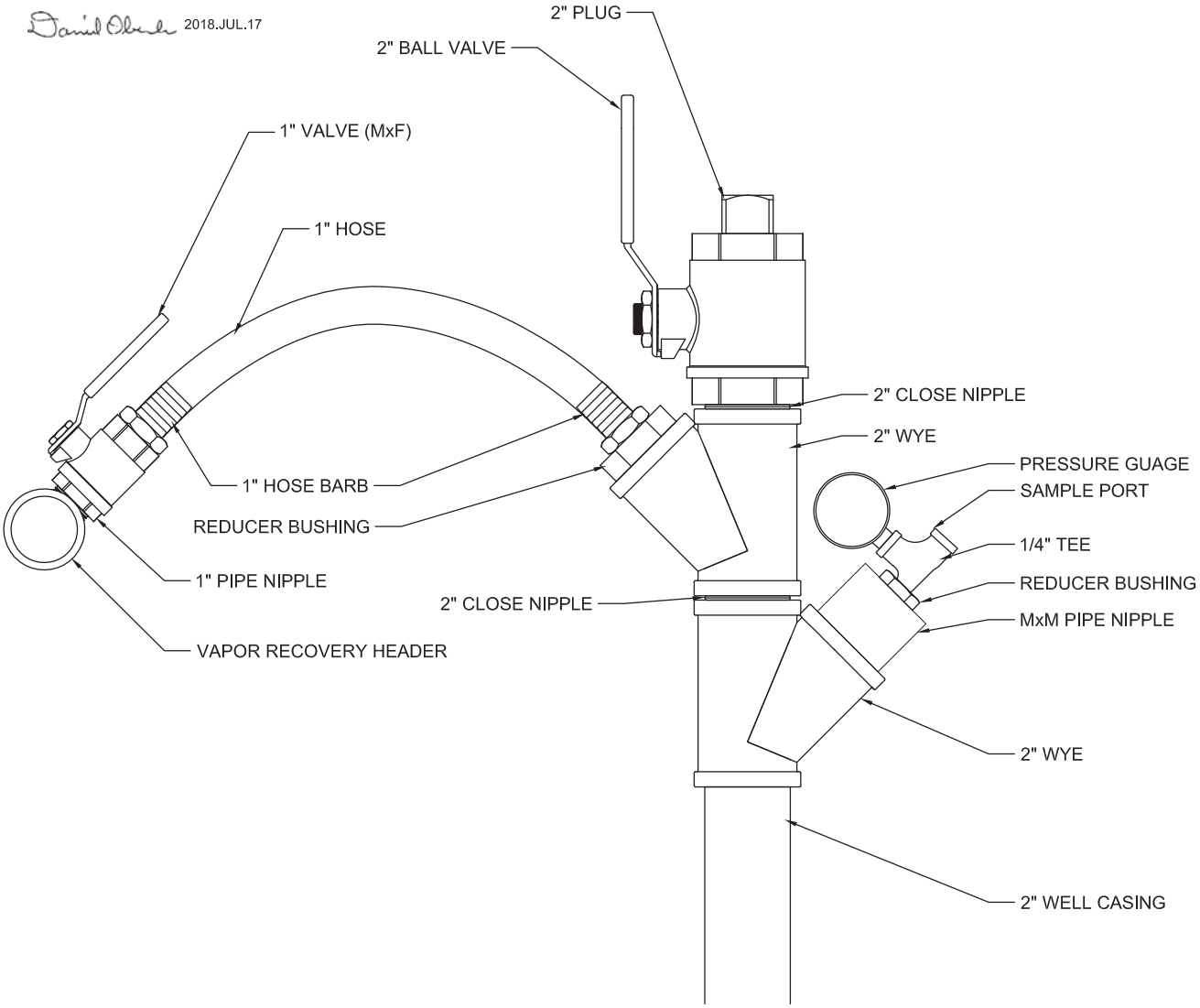
TEMPERATURE MONITORING POINT DETAIL

APPROVED FOR CONSTRUCTION		DATE	2018.JUL.16
BY		PROJECT	NC.ASH.1821
DATE	2017.NOV.27	SHEET	M-4

AS BUILTS

NORTH CAROLINA PROFESSIONAL SEAL 041303 ENGINEER DANIEL OBERLE

2018.JUL.17



TRS Accelerating Value

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PROJECT MANAGER	C. BLUNDY
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SITE	CTS OF ASHEVILLE SUPERFUND SITE
LOCATION	ASHEVILLE, NORTH CAROLINA
CLIENT	CTS CORPORATION

MONITORING WELL HEAD DETAIL

APPROVED FOR CONSTRUCTION
BY
DATE 2017.NOV.27

DATE 2018.JUL.16
PROJECT NC.ASH.1821
SHEET M-5

AS BUILTS

NORTH CAROLINA PROFESSIONAL SEAL 041303 ENGINEER DANIEL OBERLE

2018.JUL.17

LEGEND

- ELECTRONIC SIGNAL
- ELECTRICAL CABLE
- PROCESS LINE LABELING SEE SHEET P-2 FOR DESCRIPTION
- SOLENOID
- BALL VALVE
- BUTTERFLY VALVE
- ANTI-SIPHON VALVE
- PVC TRUE UNION BALL VALVE
- SAMPLE PORT
- CHECK VALVE
- SELF-CONTAINED PRESSURE REGULATOR
- SPIGOT
- BACKFLOW PREVENTER
- FLANGE
- VACUUM RELEASE VALVE
- PIPING SPEC. # CHANGE
- PUMP
- BLOWER
- ROTARY LOBE BLOWER
- DIAPHRAGM PUMP
- COMPRESSED AIR FILTER
- HEATER COIL
- STEP DOWN TRANSFORMER

	COMPUTER OPERATED MONITORING, DATA COLLECTION AND CONTROLS
	HARDWIRE CONTROLS
PI	PRESSURE INDICATOR
PCV	PRESSURE CONTROL VALVE
PSL	PRESSURE SWITCH LOW
PSH	PRESSURE SWITCH HIGH
FE	FLOW ELEMENT
FI	FLOW INDICATOR
FQI	FLOW QUANTITY INDICATOR
FT	FLOW TRANSMITTER
LI	LEVEL INDICATOR
LSH	LEVEL SWITCH HIGH
LSHH	LEVEL SWITCH HIGH-HIGH
LSL	LEVEL SWITCH LOW
LSLL	LEVEL SWITCH LOW-LOW
TAH	TEMPERATURE ALARM HIGH
TE	TEMPERATURE ELEMENT
TSL	TEMPERATURE SWITCH LOW
TI	TEMPERATURE INDICATOR
TSH	TEMPERATURE SWITCH HIGH
YC	CONTROLLER
T	TEMPERATURE SENSOR
CS	CARBON STEEL
CPVC	SCH 40. CPVC PIPE
PEX	PEX TUBING
FCV	FLOW CONTROL VALVE

P&ID LINE COLORS

- SOFTENED/POTABLE/CLEAN WATER
- PROCESS WATER
- AIR
- STEAM
- AIR/STEAM MIX
- SOLVENT/CHEMICALS
- BLOWDOWN
- FUEL
- COMPUTER OPERATED CONTROLS
- HARDWIRE CONTROLS

NOTES

1. THIS IS AN ALL INCLUSIVE LEGEND SHEET. NOT ALL SYMBOLS WILL APPEAR ON EACH SHEET.

TRS Accelerating Value
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SITE	CTS OF ASHEVILLE SUPERFUND SITE
LOCATION	ASHEVILLE, NORTH CAROLINA
CLIENT	CTS CORPORATION

LEGEND
PROCESS AND INSTRUMENTATION DIAGRAMS

APPROVED FOR CONSTRUCTION BY		DATE	2017.JUL.16
DATE	2017.NOV.27	PROJECT	NC.ASH.1821
		SHEET	P-1

AS BUILTS

NORTH CAROLINA PROFESSIONAL SEAL 041303 ENGINEER DANIEL OBERLE

2018.JUL.17

REFER TO DRAWING SHEET P-7

NATURAL GAS

18

COMBUSTION AIR

16

BLEED AIR

4

BLOWER (TYPICAL OF 3)

5

THERMAL OXIDIZER

17

SCRUBBER

6

DISCHARGE TO ATMOSPHERE

15

TO SANITARY SEWER

2

REFER TO DRAWING SHEET P-4

1

TYPICAL OF 227 CO-LOCATED VAPOR RECOVERY WELLS

TYPICAL OF 2 VAPOR RECOVERY WELLS

REFER TO DRAWING SHEET P-5 & P-8

CONDENSER (TYPICAL OF 3)

12

19

OIL WATER SEPARATOR

3

LGAC-1

LGAC-2

13

TO SANITARY SEWER

REFER TO DRAWING SHEET P-6

9

14

8

AIR OUT

DUPLEX WATER SOFTENER

COOLING TOWER

10

11

MAKE-UP WATER

AIR IN

7

P&ID LINE COLORS

- SOFTENED/POTABLE/CLEAN WATER
- PROCESS WATER
- AIR
- AIR/STEAM MIX
- BLOWDOWN
- FUEL

TRS Accelerating Value

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SITE	CTS OF ASHEVILLE SUPERFUND SITE
LOCATION	ASHEVILLE, NORTH CAROLINA
CLIENT	CTS CORPORATION

PROCESS FLOW DIAGRAM

APPROVED FOR CONSTRUCTION
BY
DATE 2017.NOV.27

DATE 2018.JUL.16

PROJECT NC.ASH.1821

SHEET P-2

AS BUILTS

NORTH CAROLINA PROFESSIONAL SEAL 041303 ENGINEER DANIEL OBERLE

2018.JUL.17

Process Stream	Location
Description	#
Extracted air and steam from vapor recovery system	1
Discharge air from condenser after steam removal	2
Condensate discharge from oil water separator to LGAC	3
Bleed air to rotary lobe blower	4
Discharge air from rotary lobe blower	5
Discharge air from scrubber to atmosphere	6
Cooling air into cooling tower	7
Air exhaust from cooling tower	8
Recirculation water from condenser to cooling tower	9
Recirculation water from cooling tower to condenser	10
Make-up water for cooling tower from potable source	11
Condensate discharge to oil water separator	12
Condensate discharge after LGAC treatment	13
Scrubber make-up water	14
Scrubber blowdown water	15
Combustion air to regenerative thermal oxidizer	16
Discharge air from regenerative thermal oxidizer to scrubber	17
Natural gas to regenerative thermal oxidizer	18
Cooling tower blowdown	19

TRS Accelerating Value

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PROJECT MANAGER	C. BLUNDY
QSAT REVIEW	2017.NOV.27

SITE	CTS OF ASHEVILLE SUPERFUND SITE
LOCATION	ASHEVILLE, NORTH CAROLINA
CLIENT	CTS CORPORATION

PROCESS FLOW DIAGRAM STREAM LEGEND

APPROVED FOR CONSTRUCTION
BY
DATE 2017.NOV.27

DATE 2018.JUL.16

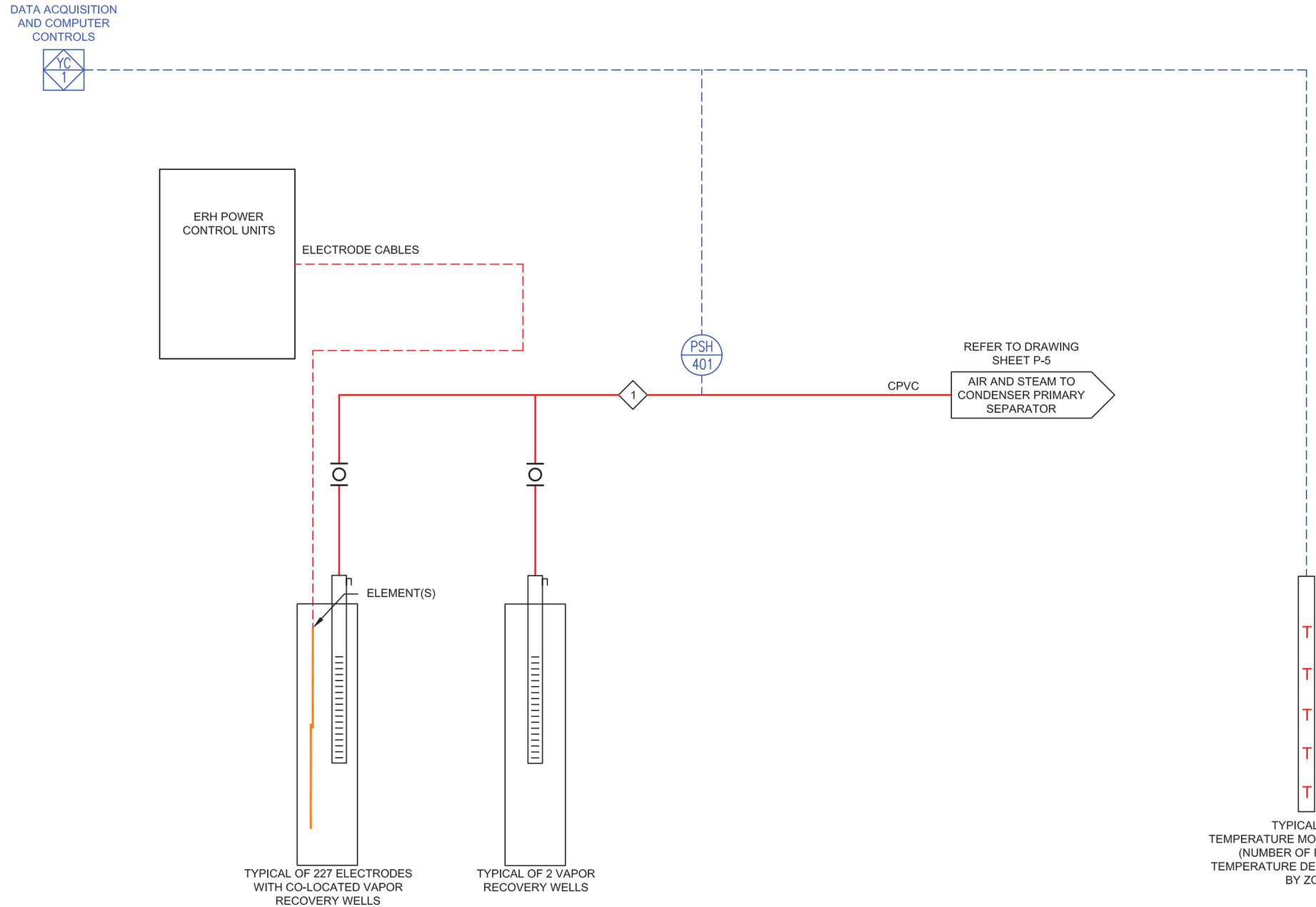
PROJECT NC.ASH.1821

SHEET P-3

AS BUILTS

NORTH CAROLINA PROFESSIONAL SEAL 041303 ENGINEER DANIEL OBERLE

2018.JUL.17



TYPICAL OF 227 ELECTRODES WITH CO-LOCATED VAPOR RECOVERY WELLS

TYPICAL OF 2 VAPOR RECOVERY WELLS

TYPICAL OF 18 TEMPERATURE MONITORING POINTS (NUMBER OF RESISTANCE TEMPERATURE DETECTORS VARIES BY ZONE)

NOTES

1. SEE THE ELECTRODE AND TEMPERATURE MONITORING POINT DETAILS FOR MORE INFORMATION ON THEIR CONSTRUCTION.

2. PSH-401 WILL SHUT DOWN THE PCU IN THE EVENT OF A LOW FIELD VACUUM (LESS THAN 2" H_20).

TRS Accelerating Value

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SITE	CTS OF ASHEVILLE SUPERFUND SITE
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FIELD PROCESS AND INSTRUMENTATION DIAGRAM

APPROVED FOR CONSTRUCTION
BY
DATE 2017.NOV.27

DATE 2018.JUL.16

PROJECT NC.ASH.1821

SHEET P-4

AS BUILTS

NORTH CAROLINA PROFESSIONAL SEAL 041303 ENGINEER DANIEL OBERLE

Daniel Oberle 2018.JUL.17

CONDENSER SKID

REFER TO DRAWING SHEET P-6

COOLING WATER TO COOLING TOWER

9

AUTOMATED CONTROLS AND SHUTDOWNS

YC 2

YC 1

DATA ACQUISITION AND COMPUTER CONTROLS

PI 511

COOLING WATER OUT

AIR AND CONDENSED STEAM OUT

TE 501

TI 501

PI 501

HEAT EXCHANGER

TI 502

PI 502

TSH 502

FT 503

FE 503

TE 503

REFER TO DRAWING SHEET P-7A

COOLED AIR TO BLOWER

2

6" SS — CPVC

V-501

PRIMARY SEPARATOR

AIR AND STEAM FROM VAPOR RECOVERY

1

REFER TO DRAWING SHEET P-4

CPVC — 8" SS

STEAM AND AIR

COOLING WATER IN

WATER LEVEL EQUALIZATION LINE

V-502

SECONDARY SEPARATOR

LSHH 501

LSH 501

LSL 501

PI 510

REFER TO DRAWING SHEET P-6

COOLING WATER FROM COOLING TOWER

10

P-501

STRAINER

P-502

FILTER

12

FQI 504

REFER TO DRAWING SHEET P-8

TO WATER TREATMENT SYSTEM

TI 510

19

BLOWDOWN

TO SEWER DISCHARGE

NOTES:
1. LSHH-501 WILL SHUT DOWN THE VAPOR RECOVERY BLOWER AND POWER TO THE ELECTRODES.
2. TSH-502 WILL SHUT DOWN THE VAPOR RECOVERY BLOWER. TEMPERATURE SET POINT IS 140°F.
3. PROCESS LINE 9 SPLITS WITH HALF THE TOTAL FLOW (PROCESS LINE 9A) GOING TO EACH COOLING TOWER (SEE P-6).
4. THE HEAT EXCHANGER IS ASME 2 RATED.

TRS Accelerating Value
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CONDENSER PROCESS AND INSTRUMENTATION DIAGRAM

APPROVED FOR CONSTRUCTION
BY Daniel Oberle
DATE 2017.NOV.27

DATE 2018.JUL.16

PROJECT NC.ASH.1821

SHEET P-5

CONDENSER SKID

REFER TO DRAWING SHEET P-5

COOLING WATER FROM CONDENSER

9

9A

8A

AIR EXITING COOLING TOWER

COOLING TOWER CT–1

COOLING TOWER CT–2

AIR INTO COOLING TOWER

7A

BLOWER (B–601)

BLOWER (B–602)

DATA ACQUISITION AND COMPUTER CONTROLS

YC 1

YC 2

TSL 601

TSL 602

LI 601

REFER TO NOTE 1

LSHH 601

LSH 601

LSL 601

LSLL 601

REFER TO NOTE 2

REFER TO NOTE 3

SOLENOID OPENS ON LOW LEVEL ALARM

FQI 601

ALARM SHUTS DOWN PUMPS P-501 AND P-502 REFER TO DRAWING SHEET P-5

COOLING WATER SUMP TANK

DUPLEX WATER SOFTENER

14

REFER TO DRAWING SHEET P-7B

SOFTENED POTABLE WATER TO SCRUBBER

REFER TO DRAWING SHEET P-5

COOLING WATER TO CONDENSER HEAT EXCHANGER

10

11

S

REFER TO DRAWING SHEET P-2

POTABLE WATER FOR MAKEUP

AS BUILTS

NORTH CAROLINA PROFESSIONAL SEAL 041303 ENGINEER DANIEL OBERLE

2018.JUL.17

NOTES

1. TSL-601 AUTOMATICALLY SHUTS DOWN THE COOLING TOWER FAN AT 45° F. TSL-602 TURNS ON AN IMMERSION HEATER IN THE COOLING TOWER SUMP.
2. LSHH-601 SHUTS DOWN SYSTEM
3. LSH-601 OPENS BLOWDOWN SOLENOID AT CONDENSER.
4. LSL-601 MUST BE AT LEAST 2 FEET ABOVE PUMP INTAKE.
5. POTABLE MAKEUP WATER IS SUPPLIED TO THE COOLING WATER SUMP TANK, AS NEEDED, AT AN AVERAGE RATE OF 3-5 GPM IN 30 SECOND INCREMENTS.
6. PROCESS LINE 7 SPLITS WITH HALF THE TOTAL FLOW (PROCESS LINE 7A) GOING TO EACH COOLING TOWER (SEE P-2).
7. PROCESS LINE 8 IS THE COMBINATION OF PROCESS LINES 8A (ONE FROM EACH COOLING TOWER, SEE P-2).
8. PROCESS LINE 9 SPLITS WITH HALF THE TOTAL FLOW (PROCESS LINE 9A) GOING TO EACH COOLING TOWER (SEE P-2)

TRS GROUP, INC. 338 COMMERCE AVE., SUITE 304, LONGVIEW, WA 98632

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QSAT REVIEW	2017.NOV.27

SITE	CTS OF ASHEVILLE SUPERFUND SITE
LOCATION	ASHEVILLE, NORTH CAROLINA
CLIENT	CTS CORPORATION

COOLING TOWER PROCESS AND INSTRUMENTATION DIAGRAM

APPROVED FOR CONSTRUCTION
BY
DATE 2017.NOV.27

DATE 2018.JUL.16

PROJECT NC.ASH.1821

SHEET P-6

AS BUILTS

NORTH CAROLINA PROFESSIONAL SEAL 041303 ENGINEER DANIEL OBERLE

2018.JUL.17

RTO (THIS DRAWING SUPPLEMENTS P-7B & P-7C)

REFER TO SHEET P-7C

INSTRUMENT AIR

INSTRUMENT AIR

FROM ATMOSPHERE

P-102 COMBUSTION AIR BLOWER

FUEL NATURAL GAS

BURNER

BLEED AIR

FILTER SILENCER

VACUUM RELIEF VALVE

SAMPLE PORT

CS

FILTER

TAG LOOP

VFD CONTROL

TYPICAL OF 2

REFER TO SHEET P-5

PROCESS AIR

PROCESS AIR

INLET RTO

P-101 PROCESS FAN

REFER TO SHEET P-7C

PROCESS AIR

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PROJECT MANAGER	C. BLUNDY
QSAT REVIEW	2017.NOV.27

SITE	CTS OF ASHEVILLE SUPERFUND SITE
LOCATION	ASHEVILLE, NORTH CAROLINA
CLIENT	CTS CORPORATION

BLOWER AND THERMOX PROCESS AND INSTRUMENTATION DIAGRAM

APPROVED FOR CONSTRUCTION

BY Daniel Oberle

DATE 2017.NOV.27

DATE 2017.JUL.16

PROJECT NC.ASH.1821

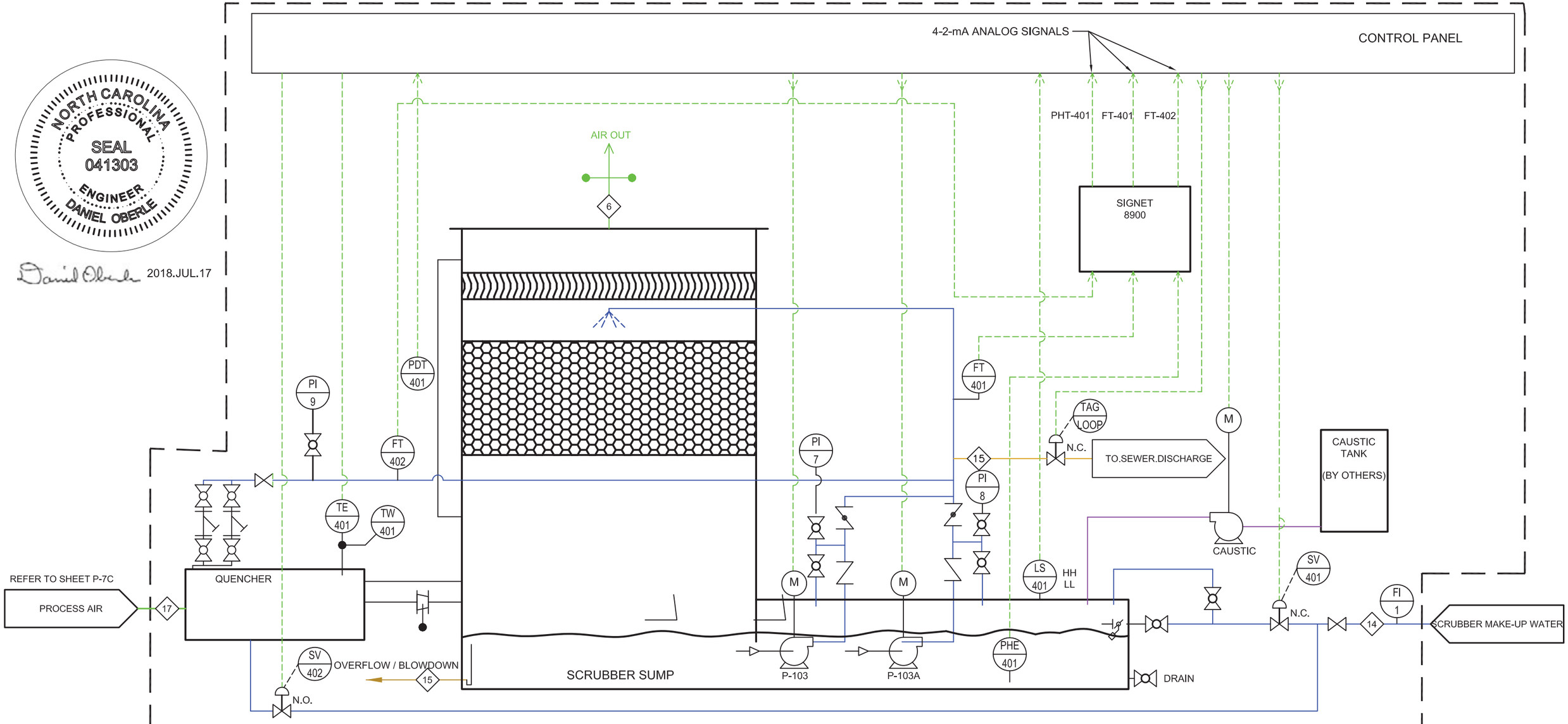
SHEET P-7A

AS BUILTS

NORTH CAROLINA PROFESSIONAL SEAL 041303 ENGINEER DANIEL OBERLE

2018.JUL.17

RTO SCRUBBER (THIS DRAWING SUPPLEMENTS P-7A & P-7C)



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BLOWER AND THERMOX PROCESS AND INSTRUMENTATION DIAGRAM

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BY
DATE 2017.NOV.27

DATE 2018.JUL.16

PROJECT NC.ASH.1821

SHEET P-7B

AS BUILTS

NORTH CAROLINA PROFESSIONAL SEAL 041303 ENGINEER DANIEL OBERLE

2018.JUL.17

RTO (THIS DRAWING SUPPLEMENTS P-7A & P-7C)

OTHERS ADWEST

1/2"

AMBIENT INSTRUMENT AIR 720 CFH @ 90 PSI

PI 6 PCV 201 DI PSL 202

T-101 ACCUMULATOR TANK

SERVICE PORT [HOSE CONN.]

REFER TO SHEET P-7A

INSTRUMENT AIR

PI 7 DO FY 201 S

PI 8 DO FY 202 S

REFER TO SHEET P-7B

17

SCRUBBER

AI TE 105

REFER TO SHEET P-7A

BURNER

DI HIGH DPSL 202 LOW

LOW DPSL 201 HIGH

DPI 2

I TSL 101 TSL 101 TE 103C TE 103B TE 103 TE 103A

AI TR 101

AI TE 104A TE 104 TE 104B

I TSL 101

HIGH

BURNER

I DI DPSL 203

AO M FCV 206

DI ZSO 201 FCV 201 SSC 201

LOW

BED 1

AI TE 109 TE 108 AI

BED 2

ZSO 202 FCV 202 SSC 202 DI DI

I DI PSL 201 I DI PSH 201

AI TE 101

PI 5

DPI 1

REFER TO SHEET P-7A

PROCESS AIR

5

H-101 REGENERATIVE THERMAL OXIDIZER
(SPLIT BED)

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CLIENT	CTS CORPORATION

BLOWER AND THERMOX PROCESS AND INSTRUMENTATION DIAGRAM

APPROVED FOR CONSTRUCTION

BY David Oberle

DATE 2017.NOV.27

DATE 2018.JUL.16

PROJECT NC.ASH.1821

SHEET P-7C

AS BUILTS

NORTH CAROLINA PROFESSIONAL SEAL 041303 ENGINEER DANIEL OBERLE

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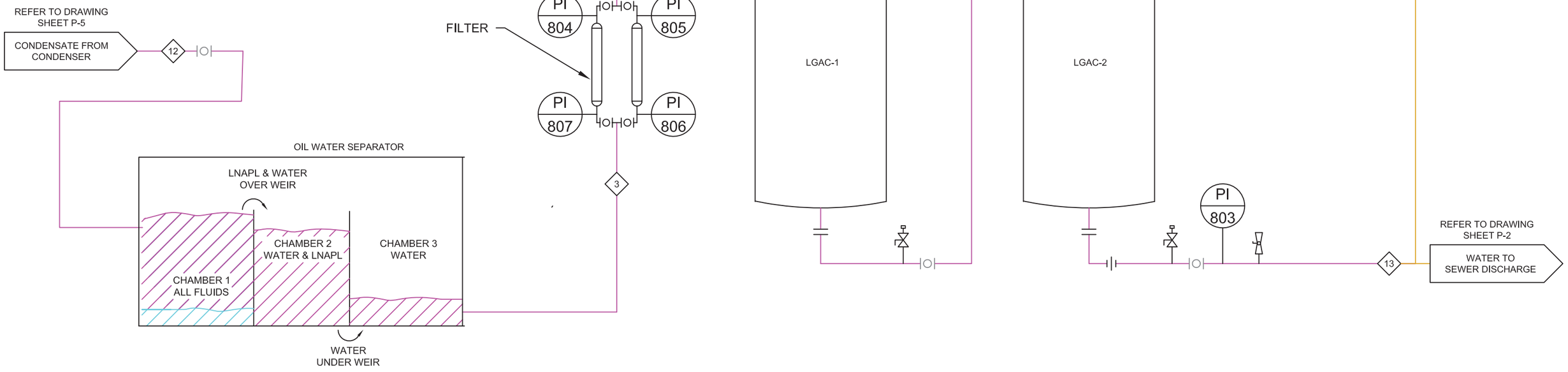

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SITE	CTS OF ASHEVILLE SUPERFUND SITE
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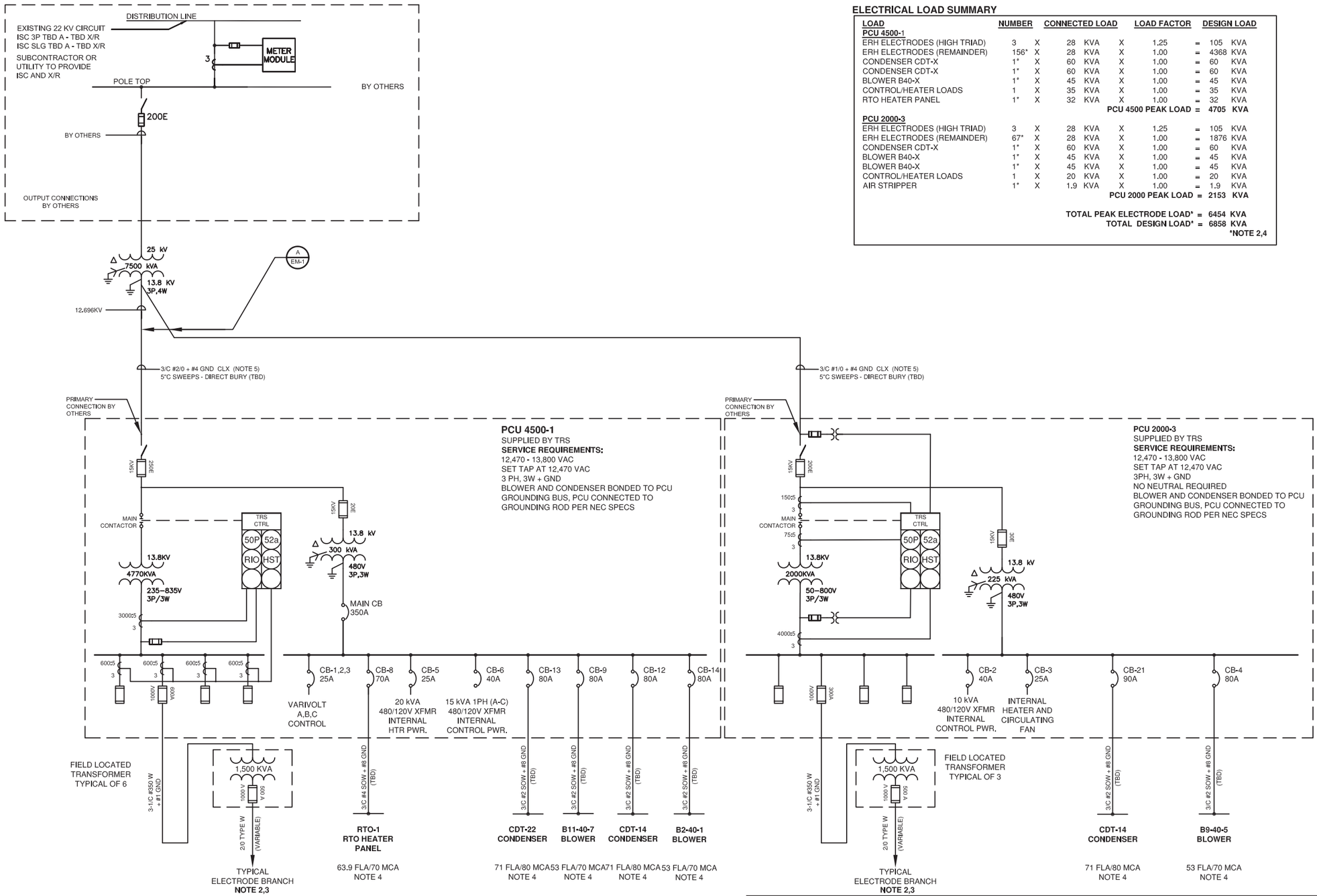
CLIENT	CTS CORPORATION

WATER TREATMENT PROCESS AND INSTRUMENTATION DIAGRAM

APPROVED FOR CONSTRUCTION		DATE	2018.JUL.16
BY		PROJECT	NC.ASH.1821
DATE	2017.NOV.27	SHEET	P-8



PCU 4500-1
SUPPLIED BY TRS
SERVICE REQUIREMENTS:
12,470 - 13,800 VAC
SET TAP AT 12,470 VAC
3 PH, 3W + GND
BLOWER AND CONDENSER BONDED TO PCU GROUNDING BUS, PCU CONNECTED TO GROUNDING ROD PER NEC SPECS

PCU 2000-3
SUPPLIED BY TRS
SERVICE REQUIREMENTS:
12,470 - 13,800 VAC
SET TAP AT 12,470 VAC
3PH, 3W + GND
NO NEUTRAL REQUIRED
BLOWER AND CONDENSER BONDED TO PCU GROUNDING BUS, PCU CONNECTED TO GROUNDING ROD PER NEC SPECS

ELECTRICAL LOAD SUMMARY

LOAD	NUMBER		CONNECTED LOAD		LOAD FACTOR		DESIGN LOAD
PCU 4500-1							
ERH ELECTRODES (HIGH TRIAD)	3	X	28 KVA	X	1.25	=	105 KVA
ERH ELECTRODES (REMAINDER)	156*	X	28 KVA	X	1.00	=	4368 KVA
CONDENSER CDT-X	1*	X	60 KVA	X	1.00	=	60 KVA
CONDENSER CDT-X	1*	X	60 KVA	X	1.00	=	60 KVA
BLOWER B40-X	1*	X	45 KVA	X	1.00	=	45 KVA
CONTROL/HEATER LOADS	1	X	35 KVA	X	1.00	=	35 KVA
RTO HEATER PANEL	1*	X	32 KVA	X	1.00	=	32 KVA
					PCU 4500 PEAK LOAD	=	**4705 KVA**
PCU 2000-3							
ERH ELECTRODES (HIGH TRIAD)	3	X	28 KVA	X	1.25	=	105 KVA
ERH ELECTRODES (REMAINDER)	67*	X	28 KVA	X	1.00	=	1876 KVA
CONDENSER CDT-X	1*	X	60 KVA	X	1.00	=	60 KVA
BLOWER B40-X	1*	X	45 KVA	X	1.00	=	45 KVA
BLOWER B40-X	1*	X	45 KVA	X	1.00	=	45 KVA
CONTROL/HEATER LOADS	1	X	20 KVA	X	1.00	=	20 KVA
AIR STRIPPER	1*	X	1.9 KVA	X	1.00	=	1.9 KVA
					PCU 2000 PEAK LOAD	=	**2153 KVA**
					TOTAL PEAK ELECTRODE LOAD*	=	**6454 KVA**
					TOTAL DESIGN LOAD*	=	**6858 KVA**
							***NOTE 2,4**

NOTES
1. GROUND CABLE SIZES ARE MINIMUMS
2. PER PCU ELECTRODE COUNT AND INDIVIDUAL ELECTRODE POWER WILL VARY ACCORDING TO PROJECT NEEDS, LIMIT TOTAL PEAK PCU POWER TO THE VALUES LISTED IN THE ELECTRICAL LOAD SUMMARY TABLE
3. 229 ELECTRODES WITH A TOTAL PEAK POWER DEMAND OF 5417 KVA.
4. ONLY A MAXIMUM OF TWO BLOWERS, TWO CONDENSERS, AND ONE RTO WILL BE ON THE FINAL DESIGN
5. USE CLX TYPE MV-105 OKOGUARD SHIELDED POWER CABLES FOR MEDIUM VOLTAGE CIRCUITS OR ENGINEERING APPROVED EQUAL
6. DRAWINGS HOLDS ARE NOT RELEASED FOR CONSTRUCTION.

DRAWING HOLDS
1. ENGINEERING HOLD PENDING DESIGN AND SETTINGS.
2. ENGINEERING HOLD PENDING UTILITY DESIGN APPROVAL AND UNDERGROUND FEEDER CALCULATION.
3. ENGINEERING HOLD PENDING OPTION SELECTION

AS BUILTS

TRS GROUP, INC. 338 COMMERCE AVE., SUITE 304, LONGVIEW, WA 98632

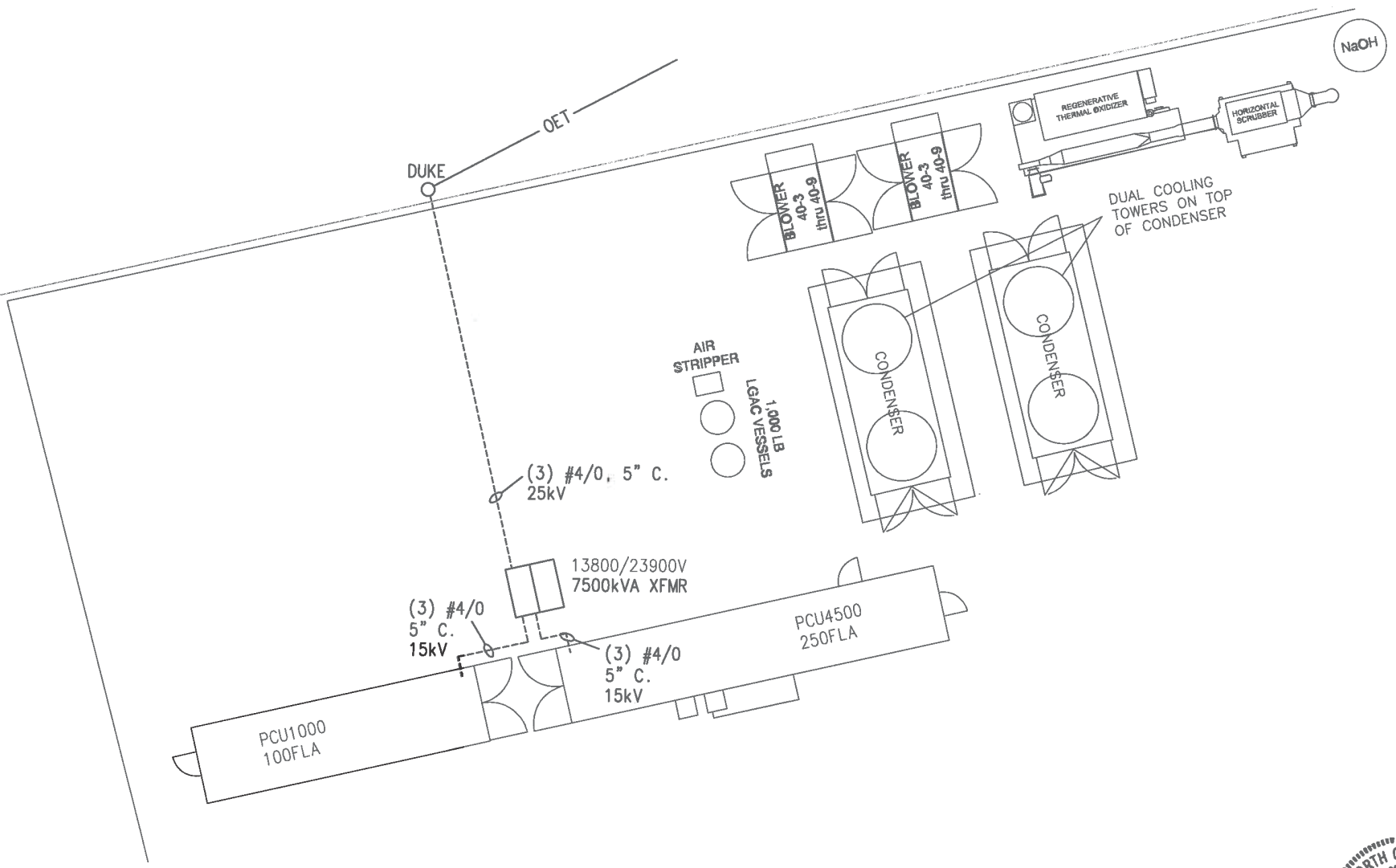
DESIGNED BY	E. CROWNOVER
DRAWN BY	A. PEABODY
CHECKED BY	D. OBERLE
PROJECT MANAGER	C. BLUNDY
QSAT REVIEW	2017.NOV.27

SITE	CTS OF ASHEVILLE SUPERFUND SITE
LOCATION	ASHEVILLE, NORTH CAROLINA
CLIENT	CTS CORPORATION

SINGLE LINE

APPROVED FOR CONSTRUCTION
BY David Oberle
DATE 2017.NOV.27

DATE 2017.JUL.17
PROJECT NC.ASH.1821
SHEET E-1



LEGEND

—OET— TEMPORARY OVERHEAD ELECTRIC LINE

NOTE:
ALL UNDERGROUND CONDUCTOR, TERMINATIONS AND ACCESSORIES TO BE 25kV CLASS ON BOTH THE PRIMARY AND SECONDARY SIDES OF THE TRANSFORMER.

NORTH CAROLINA PROFESSIONAL SEAL 20179 ENGINEER ERIC G. JEDD

3/7/18

Y-7

REV	DATE	INITIAL	DESCRIPTION

JOB NAME: CTS

EQUIPMENT LAYOUT

DRAWING INFORMATION
FILE NAME: Y-7.DWG
PLOT SCALE: NTS
PLOT STYLE: EXTS
SOFTWARE: AUTOCAD 2016

SEAL

HAYNES
HB HAYNES CORPORATION
187 DEAVERVIEW ROAD (828) 254-6141
POST OFFICE BOX 16589 FAX (828) 253-8136
ASHEVILLE, NC 28816 INTERNET: HBHAYNES.COM

Y-7

SHEET 1 OF 1

TRS ERH Start Up Safety Checklist

START-UP CHECK LIST – PART 1

Project # NC.ASH.1821 **Site Name: CTS of Asheville Site**

Part 1 MUST be completed prior to initial application of power to the subsurface.

Instructions:

1. This form must be completed entirely and submitted electronically for review and approval;
2. This is a template, save the completed form using project file naming protocol; XX.XXX.#### SUCL mmddyy xxx;
3. Navigate between grey form fields with the "tab" key, using a return will expand the text box;
4. The questions are in outline form, a "no" answer makes the sublevel questions NA;
5. A text box is supplied with each question to allow comment.
6. Reviewers in order of availability: Tom Powell, Eric Maki, or Greg Knight.

Template filename: SUCL 041117aif.docx

ERH ES Electrical Application Data

Which PCU(s) on site?	2000-3 and 4500-1
Electrode Nominal Capacity (kW)?	3,701
Groundwater Conductivity (µS/cm)	177
Initial Electrode Voltage (P-P, P-N):	699, 404
Initial Average Electrode Amps:	47
Initial Site Total Amps:	10,673
Min. Resistance Electrode Voltage (P-P, P-N):	370, 214
Average Electrode Amps at Min. Resistance:	88
Site Total Amps at Minimum Resistance:	20,170

On-Site ERH Electrical Data

Field electrode cable voltage rating?	1,000 (SRGT)
Electrode conductive interval (bgs)?	variable,
How is the ERH equipment grounded?	Ground Rod at Utility XFM
Distance from treatment area to service grounds (feet):	70'
List and Describe all subsurface lines that are present in the treatment area, utility lines and all other lines included:	Sanitary and Storm lines from southern treatment area to E and NE, fire loop, potable water and gas lines but all are abandoned in place

Site Plans

1. Yes Has a voltage mitigation plan been developed for the Site and approved by Engineering and SR Management? Yes
2. No Is there a surface **ERH exclusion zone** preventing **ANY** person from entering? (Note: Excluding the PCU and other electrical enclosures there is not always an ERH field exclusion zone, there is ALWAYS a restricted zone [refer to SOP 1.2 and 1.3])
3. Yes Is any portion of the electrode field accessible to the public? Please provide

   details:Above angled electrodes onto Rice property
4. Yes Has the ERH restricted zone been properly delineated to keep unauthorized personnel out of the area?
5. Yes Are there boundaries of the ERH restricted zone that use existing fences/walls? Please describe: 210' of fence to East along Rice property
6. Yes Is any portion of the ERH electrode field not inside the restricted zone?

   Describe 16 electrodes angled outside fence at up to 45 degree angle with entry points at perimeter fence
7. No Does a fence separate the equipment from the field?

Structure Details

8. No Is there a building(s) within 50 feet of the ERH treatment area?
   a. No Has the building been inspected for cracks or other signs of previous settling?
   b. No Has the building been photo catalogued?
   c. No Has an elevation survey of the building been completed?
9. Briefly describe the condition of the building, the foundation, and type of construction:

Fence Details

10. Identify all chain link/metal gates within and surrounding the ERH treatment area on a site map (provide with this SUCL): include both the exclusion zone fence and any other fence in the proximity of the ERH treatment area (perimeter fence, facility fence, neighbors' fence). facility fence, chain link, vinyl clad within 20 ft of the treatment area
11. Is the restricted zone fence a TRS-installed fence or a client installed or pre-existing fence? Please provide detail: chain link is pre-existing, vinyl clad is TRS installed
    a. No Does the fence have barbed wire?
    b. Yes Does the fence have embedded posts?
       i. What is the fence post material of construction?metal chain link for pre-existing, vinyl clad for TRS installed
    c. No Is the fence connected to utility ground?
       i. What size wire connects the fence to utility ground? NA

ii. How many connections are made between the fence and utility ground? NA

12. Yes Have all chain link gates within and surrounding the ERH area been bonded to prevent a potential for a shock hazard?

13. Yes Are there "Danger - High Voltage" signs posted at 25-foot spacing on all sides?

d. NA Are these signs installed at every direction change in the fence?

e. No Can the signs be obstructed through normal site changes, such as opening doors?

f. NA Do signs alternate between “Do Not Drill or Dig Within 50 Feet” and “Authorized Personnel Only”?

g. What name and phone number is on the signs?instead of 25 foot spacing only based on site review with GK/EM/EC install signs where posted boundary is 50 ft from electrode field, install combined sign Do Not Drill or Dig Within 50 Feet and High Voltage on posts on treatment area perimeter

14. No Does the fence have a surface grid?

h. What is the grid material?

i. No Is the fence connected to the grid?

j. What connection interval?

k. No Is the grid covered?

Site Electrical Service

15. Yes Was the medium voltage (600V – 15kV) inspection completed in accordance with SOP 1.4? List personnel that completed inspection: E. Evons and J. Ellis on site, E. Maki reviewed pictures

Site Security

16. Yes Does the site have a security system installed?

a. Yes Is the security alarm configured to shut down the PCU output?

b. Yes Have each of security sensors been tested and verified they are operational?

c. No Does the security alarm have a flashing light?

d. Yes Does the security system include Videofied cameras?

e. Yes Does the security system contact police?

17. Yes Has the security system been tested and does it actually open the contactor when tripped?

Site ERH Electrode Details

18. What style of electrode is installed (sheet pile, cable, pipe)? cable

a. Describe how the electrode is surface completed and electrically insulated: NA-all metal in subsurface

b. If a pipe electrode or another electrode with an over-sleeve above grade:

i. No Is there a "Danger - High Voltage" sign on the insulation of each electrode (ex. PVC cap)?

ii. No Is the electrical insulation secured to prevent someone from easily accessing the electrode (ex. secure PVC cap to over-sleeve with screw)?

19. No Are there electrodes terminated in vaults?
    a. NA Do the vaults lock?
    b. NA Are the vaults connected to utility ground?
    c. NA Is a "Danger – High Voltage" label on each vault?
20. Yes Is there a surface grid installed?
    a. What is the grid material?SDTX grounding pads installed, all other equipment at least 30 ft away from electrodes
    b. Yes Is the grid covered? What material is covering the grid?covered in gravel
    c. Yes Is the grid connected to all vaults or other surface metal?
    d. NA Has the grid been cut back from each electrode?
    e. No Is there a voltage mitigation wall around any portion of the electrode field? Please describe

Site Electrode Cabling

21. Yes Have all electrode cables been inspected for cuts or other insulation damage and been replaced as required?
22. Yes Do the electrode cables have splices?
    a. Yes Has each splice been inspected to comply with TRS SOP 3.7 for cable splices?
    b. Yes Have all electrode cable terminations been checked for tightness?
    c. Yes Are all electrode field cables labeled?

Site Groundwater Monitoring Wells

23. Yes Are there any monitoring wells in and near the treatment area?
    a. How many?

       List possible issue wells:MW-23, MW-23A, MW-12, MW-24, MW-24A, MW-25, MW-25A, MW-31, MW-31A, MW-3, MW-28, MW-28A, MW-32, MW-30, MW-30A, MW-14, MW-29, MW-29A, MW-2, MW-27, MW-26, MW-26A
24. Yes Are any of these wells in or near the ERH treatment area undocumented?
    a. How many undocumented wells?There is one SVE observation well (OW-2) that was not located for abandonment, but it may have been destroyed during demolition of the building
25. Yes Are there any monitoring wells in the heating zone?
    a. How are these wells constructed?

       List material(s):stainless steel

b. Yes Are the wells mitigated for step-and-touch? How?oversleeves installed on all MWs

c. Yes Are the wells sealed against steam/hot water/vapor pathways?

How?standard monitoring well head modification

26. No Are there wells are within 50-feet of the electrode field? How many?

27. No Will they need to be mitigated?

a. List wells and explain mitigation effort(s):

28. No Are there monitoring wells within 100 feet of the electrode field? How many?

29. Yes Have the wells in the heated zone been installed per the TRS standard design for hot groundwater sampling?

a. No Are the monitoring wells in vaults?

i. No Are the vaults locked?

ii. No Are the vaults bonded to the surface grid or utility ground?

b. No Is a “Danger – High Voltage”, "Danger - Risk of Electric Shock", or “Warning – Electrical Hazard” label on each vault or on each well within the restricted zone plus 50 feet?

30. No Have the vault lids been mitigated for voltage potentials?

Temperature Monitoring Points (TMPs)

31. yes Are the TMPs constructed to minimize exposure to energized components?

a. yes Is the TMP cap secured to prevent inadvertent removal (e.g.; screw)?

b. yes If there is a TMP oversleeve, has a "Danger - High Voltage” label been placed on the oversleeve?

32. yes Are the TMPs capped to prevent infiltration of moisture?

a. yes Have the TMP casings been checked to confirm for the absence of water?

b. yes If water was present, was it removed?

List TMPs that had water inside:TMP G12

Training

33. Yes Is there a signed, approved copy of the project HASP on the project site?

a. Yes Have the on-site personnel at startup completed HASP training and acknowledged training?

34. Yes Is the Lockout, Tagout (LOTO) program in place?

a. Yes Is there a hard copy of SOP 1.1, LOTO on site?

b. Yes Is the lockbox equipped with TRS standard LOTO locks and tags (refer to SOP 1.1)?

35. Yes Are all on-site personnel at startup LOTO trained in accordance with SOP 1.1 LOTO?

36. Yes Have each of the on-site support staff or any other person who needs to enter the restricted zone at startup completed ERH Restricted Zone training and acknowledged training?

Safety Items

37. Yes Is there adequate/properly rated arc-flash PPE on site?
38. Yes Does the site have a working eye-wash station or emergency eye-wash bottles (not expired)?
39. Yes Is there a working AED on site?
    a. Yes Have personnel on site at startup completed AED training and acknowledged training?
40. Yes Does the site have a complete first aid kit?
    a. Yes Does the site have a complete blood borne pathogens kit?
41. Yes Does the PCU have one 10lb A-B-C dry chemical & one 15lb CO_2 fully charged fire extinguisher?
    a. What is the inspection date on each fire extinguisher? May 2018
42. yes Have the equipment start-up check lists been completed?

Notifications

43. yes Have the client, property owner, and all adjacent property owners been sent a No Dig/Hazard letter?

Filename: trs hazards nc.ash acf.pdf

Part One Signatures

Project Manager: C. Blundy/S. Wood Date: 5/29/18 Reviewer: Eric Maki Date: 6/8/18

The site is ready for initial, attended application of power to the subsurface.

Date a copy of this document was sent to TRS Health and Safety Officer:

Conditional approval for preliminary voltage testing. Still verifying security system integration and interlocks.

START-UP CHECK LIST – PART 2

Project # NC.ASH.1821 **Site Name: CTS of Asheville Site**

Part 2 MUST be completed prior to unattended ERH operation.

Instructions:

1. This form must be completed entirely and submitted electronically for review and approval;
2. This is a template, save the completed form using project file naming protocol; XX.XXX.#### SUCL mmddyy xxx;
3. Navigate between grey form fields with the "tab" key, using a return will expand the text box;
4. The questions are in outline form, a "no" answer makes the sublevel questions NA;
5. A text box is supplied with each question to allow comment.
6. Reviewers in order of availability: Tom Powell, Eric Maki, or Greg Knight.

Template filename: SUCL Template 041117aif.docx

ERH Startup Testing Conditions

What is the typical voltage applied to the field?	320-424 (P-N) 4500-1 & 2000-3: 800V
How long has the system been operating at this voltage?	2 working days
What is the highest observed current in a neutral conductor? (Not ground conductor)	9 V
What is the voltage from neutral to ground?	Neutral to earth voltage

Process Interlocks

44. YesHave all safety interlocks been tested and confirmed operational?
    a. Yes Has the condenser interlock checklist been completed? Please attach completed checklist.
    b. Yes PCU interlock checklist been completed? Please attach completed checklist.
    c. Yes VR Blower interlock checklist been completed? Please attach completed checklist.
    d. Yes Vapor Treatment System interlock checklist been completed? Please attach completed checklist.
    e. Yes Water Handling and storage interlocks tested and acceptable?
    f. Yes Security Fence/Intrusion interlocks tested and acceptable?
    g. Yes Security system interlock to PCU contactor tested and acceptable
    h. Yes All remote E-Stops tested and acceptable?

Step & Touch Survey Data

45. Yes Has a step-and-touch voltage survey log sheet been prepared?
    a. Yes Does the log sheet refer to a plot plan that shows measurement locations? (attach a copy showing survey results)
46. Yes Have you conducted a "wetted site" voltage survey? (attach a copy showing survey results).
47. Yes Has a voltage to utility ground survey been conducted? (attach a copy showing survey results)
48. Describe any anomalous measurements (electrodes with high or low currents, unusual voltages, etc.) all step and touch survey measurements below 10 V
49. What changes were made to address these anomalies? Describe these changes and include the voltage surveys that indicate the changes are acceptable.

    extension cords banned in restricted zone
50. Yes Has a voltage to utility ground survey been conducted at the fence boundaries on the exterior side of restricted zone perimeter? (attach a copy showing survey results)
    b. Yes If sections of the fence can be isolated (gates opened) perform a voltage survey on each isolated section of fence.
    c. No If multiple isolated sections of fence can exist, perform a voltage survey for each possible configuration. (Examples: two gates, both open, one open, both closed).
51. Yes Has each fence, gate or building door within 100 feet of the nearest electrode been surveyed? Describe any anomalous measurements (electrodes with high or low currents, unusual voltages, etc.
52. No Are there any voltage survey measurements exceeding the limits stated in the voltage mitigation plan?
    d. No If yes, have you properly delineated an ERH exclusion zone around these locations so that personnel do not enter (Not all sites have an exclusion zone)?
    e. Max step-and-touch voltage in exclusion zone?no exclusion zone
    f. Max utility ground voltage in exclusion zone? no exclusion zone
    g. Max step-and-touch voltage in restricted zone?3.3
    h. Max utility ground voltage in restricted zone? extension cords banned in restricted zone
53. Yes Have you re-completed **Part 1** of this checklist to change any applicable items? (Attach the revised Part 1 to this document)
54. Yes Has remote ERH system access has been verified and is fully functional?

Part Two Signatures

Project Manager: C. Blundy/S. Wood Date: 6/8/18 Reviewer: Eric Maki
Date: 6/8/18

The site is ready for unattended application of power to the subsurface.

Date a copy of this document was sent to TRS Health and Safety Officer: 6/8/18

Follow up items after system is operating:

Weir tank vacuum and vacuum switch 1" wc - interlock is notification only

Perform voltage survey at tap 66 after rainstorm

Repeat coats of FlexSeal on fence post utility ground survey

Verified relay functionality is operating as designed for east PID monitor. Confirmed with Amec issue is with PIDs alarm setpoint programming. Once Amec confirms PIDs are functional, it is required to verify that both PCU contactors open when the south, north, and west PID monitors are operational and exceed the required time weighted average limit.