



IN-SITU CHEMICAL OXIDATION 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
NCDEQ UIC Tracking No. WI0100571**

Prepared for:

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Prepared by:

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Wood Project 6252-16-2012

May 19, 2020



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Subject: **In-situ Chemical Oxidation 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
NCDEQ UIC Tracking Number WI0100571
Wood Project 6252-16-2012**

Dear Mr. Zeller:

Please find attached the In-situ Chemical Oxidation (ISCO) Remedial Action Report (RA Report) for the above-referenced Site. Wood Environment & Infrastructure Solutions, Inc. prepared this ISCO 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 ISCO RA Report, please contact us at (828) 252-8130.

Sincerely,

Wood Environment & Infrastructure Solutions, Inc.

Rodney M. Clark, L.G.
Technical Professional II

RMC/MEW:rmc

cc: Andrew Warren, CTS Corporation
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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
DHS	Department of Homeland Security
ERH	electrical resistance heating
ISCO	in-situ chemical oxidation
LNAPL	light non-aqueous phase liquid
µg/L	micrograms per liter
µg/m ³	micrograms per cubic meter
NAPL	non-aqueous phase liquid
NCDEQ	North Carolina Department of Environmental Quality
QAPP	Quality Assurance Project Plan
QA/QC	quality assurance/quality control
RA	Remedial Action
RAO	remedial action objective
RAWP	Remedial Action Work Plan
RD	Remedial Design
SOW	Statement of Work
TCE	trichloroethene (also, trichloroethylene)
USEPA	United States Environmental Protection Agency
VOC	volatile organic compound

1.0 BACKGROUND

This document presents the In-situ Chemical Oxidation (ISCO) Remedial Action Report (RA Report) for completion of ISCO implementation/construction activities at the CTS of Asheville, Inc. Superfund Site (Site) located at 235 Mills Gap Road in Asheville, Buncombe County, North Carolina (Figure 1). This ISCO 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 are 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, 2014). A Focused Feasibility Study (FFS) was conducted to evaluate potential remedial alternatives for the one-acre NAPL area. Electrical resistance heating (ERH) was chosen as the recommended alternative (Amec Foster Wheeler, 2015a). An additional approximate 0.2-acre area located adjacent and upgradient of the NAPL area where elevated TCE concentrations were detected was added to the proposed treatment area (Amec Foster Wheeler, 2015b). This 1.2-acre area is considered the TCE source area.

A NAPL Area FFS Report Addendum was prepared to evaluate potential remedial alternatives for the dissolved-phase TCE groundwater plume downgradient from the TCE source area (the Northern Area). ISCO via hydraulically emplaced potassium permanganate was the recommended alternative for the 1.9-acre Northern Area depicted in Figure 3 (Amec Foster Wheeler, 2015b). Based on data collected during the ISCO Pre-design Investigation, an approximate 0.5-acre area east of the former NAPL/TCE source area was also included in the ISCO treatment area (designated 'Additional Treatment Area').

The United States Environmental Protection Agency (USEPA) approved ERH as the recommended interim remedial alternative for the source area and ISCO for the downgradient plume and memorialized the decision in the Interim Action Record of Decision in February 2016. The CD was entered by the United States District Court for the Western District of North Carolina on March 7, 2017.

ERH was implemented in 2018 to remediate saturated soil, groundwater, and LNAPL in the TCE source area. TCE concentrations were reduced by greater than 95 percent in the three media based on baseline and confirmation sampling results in the TCE source area.

An ISCO Treatability Study was conducted between late 2017 and early 2019 to collect information in determining if the proposed remedial action is effective to meet the RAO and, if so, to develop the full-scale ISCO remedial design. The results of the ISCO Treatability Study are described in the ISCO Treatability Study Evaluation Report (Wood, 2019a). The ISCO Final Remedial Design was submitted to USEPA on July 12, 2019 and was approved by USEPA on July 22, 2019 (Wood, 2019b).

A chronology of events related to implementation of the Interim Record of Decision and implementation of ISCO-related activities is summarized in Table 1.

1.3 REMEDIAL ACTION OBJECTIVE

ISCO has been implemented in the approximate 1.9-acre Northern Area and the approximate 0.5-acre Additional Treatment Area at the Site. TCE is the primary contaminant of concern and is

dissolved in groundwater. A remedial action objective (RAO) of a 95 percent reduction of TCE concentrations will be applied to groundwater samples collected in the ISCO treatment area.

An Interim Northern Area ISCO Remedial Action Objective Value Technical Memorandum (ISCO RAO Tech Memo) was submitted to USEPA on December 19, 2019 (Wood 2019d). The Northern Area ISCO RAO value was accepted by USEPA in a letter dated January 9, 2020. The ISCO RAO Tech Memo presented the methodology for determining successful achievement of the RAO. Using a 'population of data approach', the arithmetic average TCE groundwater concentration in the treatment area was determined to be 21,390 micrograms per liter ($\mu\text{g/L}$) from the baseline groundwater samples collected. The target groundwater concentration, 5 percent of the arithmetic average TCE concentration, was calculated to be 1,070 $\mu\text{g/L}$ (i.e., 95 percent TCE removal) in the treatment area. As described herein, groundwater samples will be collected on a semi-annual basis until the RAO has been achieved. If a 95 percent TCE reduction is not achieved in a particular area in a reasonable timeframe, additional ISCO treatment might be necessary. Additional information on the ISCO performance monitoring is described in Section 3.2.

1.4 REMEDIAL DESIGN ELEMENTS

The groundwater treatment remedy employed ISCO via emplaced solid potassium permanganate. The objective of the remedial design is to place sufficient reactive material to achieve a 95 percent reduction of TCE in groundwater within three to five years. Potassium permanganate was hydraulically emplaced in the subsurface as a slurry of granular potassium permanganate and a carrier fluid (water/bentonite slurry) creating a sheet-like sub-horizontal disc in the subsurface. Due to the concentration gradient between the potassium permanganate and surrounding groundwater, the potassium permanganate will diffuse over time into the soil/groundwater surrounding the emplacement. In addition, the potassium permanganate emplacement will be more permeable than the surrounding formation, so groundwater will preferentially flow through the emplacement. Contaminants in groundwater that migrate through the zone of solid potassium permanganate are then oxidized (i.e. destroyed). Also, the potassium permanganate dissolves into the groundwater in the surrounding formation and, via advection and dispersion, creates an "oxidative zone" that oxidizes contaminants in this zone. The potassium permanganate will continue to oxidize volatile organic compounds (VOCs) until the oxidative capacity is exhausted.

Emplacement locations/wells were generally constructed in a 30-foot by 40-foot spacing (Figure 3). The 40-foot spacing is generally parallel to groundwater flow, and the 30-foot spacing is generally perpendicular to groundwater flow. This layout takes advantage of natural groundwater flow to distribute the potassium permanganate that becomes dissolved in groundwater. A total of 79 emplacement wells/locations were constructed in the treatment area. Three emplacement wells were constructed during the Treatability Study, and 76 additional emplacement wells were constructed during the full-scale Remedial Action.

The treatment interval was from the top of the 'highly' contaminated zone down to bedrock. The top of the contaminated zone was based on previously collected data in the treatment area and baseline groundwater sampling analytical results. The emplacement depths were staggered between locations, based on the thickness of the contaminated zone and the depth to bedrock. In some areas (i.e., farther away from the former source area), TCE concentrations do not begin to increase until 10 or more feet below the water table. These emplacements are 'deep' as there is 'minimal' contamination in shallow groundwater in this area as per previous investigation and sampling work.

The amount of potassium permanganate used and the vertical spacing of each emplacement was dependent upon the approximate TCE concentration in the vicinity of the emplacements. TCE concentrations in the baseline groundwater samples and previously collected data were evaluated to determine the amount of potassium permanganate to be emplaced at each location. Where TCE concentrations were greater than 10,000 µg/L, approximately 1,000 pounds of potassium permanganate was emplaced. Where TCE concentrations were less than 10,000 µg/L, at least 500 pounds of potassium permanganate was emplaced.

2.0 CONSTRUCTION ACTIVITIES

2.1 SITE PREPARATION ACTIVITIES

Prior to subsurface drilling and emplacement activities, the following Site preparation activities were conducted:

- Vegetation was cleared around the Site entrance to provide improved ingress/egress visibility from/to Mills Gap Road.
- Vegetation and other surface obstructions were cleared in the treatment area for equipment and personnel access.
- Duke Energy was contacted to de-energize an overhead powerline and later relocate overhead powerlines in the treatment area.
- A water meter and backflow preventor assembly was obtained from the City of Asheville for use of municipal water supply.
- Temporary office and toilet facilities were mobilized to the Site.
- Electric service was established to the Site.

Under CERCLA Section 121(e)(1), federal, state, or local permits are not required for the portion of any removal or remedial action conducted entirely on site as defined in 40 CFR 300.5 (see also 40 CFR 300.400(e)(1) and (2)). In addition, CERCLA actions must only comply with the “substantive requirements,” not the administrative requirements of regulations. Administrative requirements include permit applications, reporting, record keeping, and consultation with administrative bodies.

The following agency regulations requiring a permit/adherence were identified for implementation of ISCO at the Site:

- North Carolina Department of Environmental Quality (NCDEQ) well construction and abandonment standards;
- NCDEQ Underground Injection Control Program rules for subsurface injection;
- State and federal hazardous and non-hazardous waste characterization, storage, and disposal requirements; and
- Department of Homeland Security (DHS) Chemical Facility Anti-Terrorism Standards (CFATS)

An “Application for Permit to Construct and/or Use a Well(s) for Injection” was submitted to NCDEQ prior to initiation of emplacement activities on November 25, 2019 and approved by NCDEQ on

December 1, 2019. NCDEQ indicated a permit was not needed due to oversight by USEPA, but that permitting requirements applied. An "Application for Permit to Construct a Monitoring or Recovery Well System" was submitted to the property owner to the east of the Site for access authorization to construct two monitoring wells. The completed form was submitted to NCDEQ.

Potassium permanganate in quantities exceeding the screening threshold quantity of 400 pounds is regulated by the DHS CFATS. Upon receipt of the potassium permanganate at the Site, the material was secured and a Top-Screen Survey was completed and submitted to DHS.

2.2 SUBSURFACE INSTALLATION ACTIVITIES

The following sections describe emplacement well installation, emplacement completion and performance monitoring well installation activities.

2.2.1 Emplacement Well Installation

Drilling activities were performed by South Atlantic Environmental Drilling and Construction Company, Inc. (SAEDACCO), an environmental drilling contractor. The emplacement well borings were advanced using sonic drill rigs and an eight-inch nominal diameter casing bit. One casing, EPW-49, was drilled with a ten-inch nominal diameter casing bit due to a technical drilling issue. The boreholes were extended three to four feet into apparent bedrock. A solid (un-screened) four-inch diameter, schedule 40, PVC flush-threaded casing was installed in each boring. Centralizers were installed five feet from the bottom of each casing and at approximate fifteen-foot intervals in the annulus of the boreholes. The surrounding approximate two-inch annular space between the casing and soil was pressure grouted from the bottom of the boreholes to ground surface using a tremie pipe and grout pump. The grout development was completed using Type I Portland cement with less than three percent powdered bentonite. The emplacement wells were completed flush with ground surface and equipped with an expandable locking cap. The grout was allowed to cure for at least 72 hours prior to completion of the emplacements.

The subsurface equipment (e.g., drill rods, cables, tremie pipe) used in drilling activities was not decontaminated between emplacement well locations, as the area where the borings were advanced was subsequently treated by ISCO. Drilling equipment was decontaminated between

borings for installation of monitoring wells and at the completion of drilling activities, prior to demobilization.

Drilling activities were conducted between October 2019 and January 2020. Drilling activities were temporarily suspended in early December 2019 for relocation of an overhead electrical line in the eastern and central portion of the treatment area and were later resumed and completed in January 2020.

During drilling, ambient air monitoring was performed using a photoionization detector capable of measuring volatile organics in the parts per million 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.

2.2.2 Emplacement Installation

FRx, Inc., an environmental injection contractor, mobilized equipment and materials for the emplacement activities. Granular research-grade potassium permanganate, which is marketed as RemOx[®] S by Carus Corporation, was delivered in approximate 2,000-pound weather-proof 'super sacks' and stored on wooden pallets inside a secured semi-trailer. The super sacks varied in actual weight but were on average slightly greater than 2,000 pounds each. One super sack was received as containing one metric ton (approximately 2,200 pounds), therefore an additional 100 pounds of potassium permanganate was included in two separate emplacements.

The emplacement process occurred in three steps. First, a high velocity water jet was used to cut the PVC casing and grout at the target emplacement depth and create a kerf, or notch, in the surrounding formation. Inflatable packers were then used to isolate the emplacement interval.

Second, the granular potassium permanganate was mixed with a water and bentonite slurry (approximately 97 percent water and 3 percent bentonite solution) and the mixture was injected into the formation using a positive displacement pump. The average concentration of the final mixed material comprising the emplacements was approximately 40 percent potassium permanganate, 58 percent water, and 2 percent bentonite by volume.

The third step involved 'chasing' the potassium permanganate/bentonite/water slurry through the injection equipment/conduit with a water/bentonite slurry to complete the emplacement of the material.

Hydraulic connections were observed between five sets of emplacement wells at various depths during emplacement activities. Once a hydraulic connection was established between emplacement wells, the hydraulically connected well that was not receiving emplacement material was temporarily sealed with a mechanical packer. Additionally, hydraulic connections to the ground surface were observed from the shallower emplacements at locations EPW-9, EPW-57 and EPW-75. Two hundred ninety-six emplacements were performed in the approximate 1.9-acre Northern Area. In general, potassium permanganate was hydraulically emplaced in the Northern Area at six to seven-foot vertical intervals at depths ranging from 27 to 91 feet below ground surface (bgs). Approximately 80 percent of the emplacements were completed at six-foot vertical intervals with 1,000 pounds of potassium permanganate. Approximately 18 percent of the emplacements were completed at seven-foot vertical intervals and approximately 20 percent of the emplacements contained 500 pounds of potassium permanganate.

Eighty-four emplacements were performed in the approximate 0.5-acre Additional Treatment Area. Potassium permanganate was hydraulically emplaced in the Additional Treatment Area at six to ten-foot vertical intervals at depths ranging from 40 to 91 feet bgs. Approximately 50 percent of the emplacements were completed at six-foot vertical intervals, with the remaining approximately 50 percent of emplacements completed at seven to ten-foot vertical intervals. Eighty-three of the emplacements contained 1,000 pounds of potassium permanganate, with one emplacement containing 500 pounds of potassium permanganate.

A total of 380 emplacements, containing approximately 350,200 pounds of potassium permanganate in approximately 82,050 gallons of slurry, were constructed at 76 emplacement well locations during this remedial action. This total does not include the emplacements performed at the three Treatability Study emplacement well locations in early 2018.

Table 2 contains a summary of the emplacement well construction details. A NCDEQ Injection Event Record is included as Appendix A.

Wood provided oversight of the drilling and emplacement activities and managed the waste pickup/disposal/manifesting (see Section 2.4). Copies of log books used to document construction activities are included in Appendix B.

Upon completion of the emplacements, DHS was notified that the potassium permanganate had been used/injected into the subsurface and was no longer stored at the Site. DHS closed the Site's Chemical Facility designation in a letter dated March 25, 2020.

2.2.3 Monitoring Well Construction

Five new monitoring well pairs, MW-33/33A through MW-37/37A, (five shallow and five deep overburden wells at each location) were installed in the ISCO treatment area in October 2019. The new monitoring wells were positioned in the approximate center of adjacent emplacement wells. Monitoring well installation procedures are described in the Field Sampling and Analysis Plan (FSAP; Wood 2019c). The monitoring well screened intervals are intended to be distributed throughout the treatment volume. The monitoring well construction details are summarized in Table 3 and the construction diagrams and NCDEQ monitoring well construction records are included in Appendix C.

Previously installed monitoring wells MW-6, MW-6A, MW-7A, MW-19, and MW-19A, located in the ISCO treatment area, will also be used for groundwater monitoring during the ISCO remedial action. The locations of the new and existing monitoring wells utilized for performance monitoring are depicted in Figure 3.

2.3 WASTE MANAGEMENT ACTIVITIES

The following waste streams were generated during construction activities:

- General solid waste;
- Soil from drilling activities;

- Water from drilling activities;
- Water from monitoring well development and groundwater purging; and
- Water from decontamination activities.

Wastes were managed in accordance with Paragraph 4.4 of the CD SOW and applicable regulations, as described below.

Non-regulated solid waste included used disposable items, such as personal protective equipment, disposable sampling equipment, empty and neutralized potassium permanganate super-sacks, and general refuse. The items were placed in plastic bags and deposited in a bulk collection container for transport and disposal at the permitted Buncombe County municipal solid waste landfill.

Soil generated during the installation of monitoring wells and emplacement well casings was transferred to 'roll-off' waste containers. Unsaturated soil cuttings were segregated from the saturated soil cuttings. The roll-off containers were lined with plastic sheeting and covers were placed over the soil when not being filled. Saturated soil was also generated in dewatering waste containers, which filtered soil from water generated during drilling activities. Unsaturated and saturated soil samples were collected during drilling activities for determination of the contaminant concentrations and characterization for waste disposal. The soil samples were submitted to Pace Analytical Services for analysis of VOCs according to USEPA Method 8260, semivolatile organic compounds according to USEPA Method 8270, RCRA metals using the Toxicity Characteristic Leaching Procedure and USEPA Methods 6010 and 7470. The analytical report is included in Appendix D. The analytical results, coupled with previously collected data from the site, indicated that soil from the unsaturated zone could be managed as non-hazardous waste, and soil from the saturated zone could be managed as hazardous waste.

Soil generated from installation of the off-Site monitoring wells was placed in 55-gallon drums and stored in the fenced easement area on the off-Site property. Historical soil and groundwater analytical results from this area indicated the soil should be managed as a hazardous waste.

Water generated during emplacement well installation, monitoring well development, monitoring well purging/sampling, and decontamination activities was accumulated in a double-walled storage

tank ('frac' tank). A representative sample of the water in the frac tank was collected and submitted to Pace Analytical Services for analysis of VOCs according to USEPA Method 8260. The analytical report is included in Appendix D and indicated the water should be managed as hazardous waste.

Groundwater purged during development of the off-Site monitoring wells was placed in 55-gallon drums and stored in the fenced easement area on the off-Site property. Historical groundwater analytical results from this area indicated the water should be managed as a hazardous waste.

Soil and water waste generated during the drilling activities was transported by A&D Environmental Services, to the appropriate USEPA-approved disposal facility. Approximately 26 tons of non-hazardous soil were disposed of at the Republic Services facility in Enoree, South Carolina. Approximately 138 tons of hazardous soil was disposed of at the Chemical Waste Management, Inc. facility in Emelle, Alabama. Approximately 16,794 gallons of hazardous water were disposed of at the DART facility in Charlotte, North Carolina. Additionally, three drums of soil and one drum of decontamination plastic were also disposed of as hazardous waste at the DART facility in Charlotte, North Carolina.

The completed waste disposal manifests are included in Appendix E.

2.4 DESIGN MODIFICATIONS

The ISCO Final Remedial Design and RAWP included a target vertical emplacement spacing of six feet. Emplacement spacing was modified to seven vertical feet at 54 of the 296 emplacement locations in the Northern Area (18 percent), which USEPA approved during a site visit on January 22, 2020. The modified emplacement spacing was performed at 11 emplacement well locations adjacent to the north and west of the northern ERH treatment lobe. Approximately 50 percent of the emplacements in the Additional Treatment Area contained vertical spacing from seven to ten feet.

One emplacement well casing, EPW-49, was drilled with a ten-inch nominal diameter casing bit due to a technical drilling issue during initial advancement of the eight-inch nominal diameter casing bit. The typical four-inch casing was installed in the boring, therefore the grout annulus was

approximately three inches thick versus two inches thick. This grout annulus thickness did not affect the performance of the emplacement process.

Nine emplacement well locations (EPW-9, EPW-10, EPW-12, EPW-27, EPW-28, EPW-35, EPW-49, EPW-73 and EPW-76) were modified/relocated from the originally-planned locations due to physical constraints for setup of drilling/injection equipment. The relocations ranged from approximately one to five feet from initial locations, with one EPW location (EPW-10) relocated 12 feet from the initial location.

Daylighting is the occurrence of potassium permanganate mixture at the ground surface during injection activities. A shallow emplacement could not be completed at location EPW-9 due to daylighting. Daylighting occurred during the final step of installation at a shallow emplacement at location EPW-75; however, the emplacement was essentially complete prior to the daylighting. Two shallow emplacements could not be completed at location EPW-57 due to daylighting.

During emplacement activities, it was discovered that one emplacement well casing, EPW-45, contained an obstruction that prevented downhole tooling from reaching the lowest target emplacement depth. The emplacement depths were redistributed in the remaining treatment interval and four emplacements were performed at the location instead of the originally-designated five emplacements.

3.0 PERFORMANCE STANDARDS AND CONSTRUCTION QUALITY CONTROL

The following sections describe the performance standards and monitoring associated with the ISCO activities, as well as the construction quality control implemented during ISCO activities.

3.1 TREATMENT VOLUME

The treatment volume in the 1.9-acre Northern Area was calculated to be 110,400 cubic yards (cy). The treatment volume of the 0.5-acre Additional Treatment Area was calculated to be 30,000 cy. The sum of the two treatment areas indicate the calculated treatment volume as constructed is approximately 140,400 cy.

3.2 RAO SAMPLING AND ANALYSIS STRATEGY

RAO sampling consists of collecting groundwater 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 ISCO RAO Tech Memo, dated December 19, 2019, and discussed in Section 1.3. Sampling procedures are described in the RAWP FSAP (Wood 2019c), and quality assurance/quality control procedures are described in the RAWP QAPP (Wood 2019c).

Samples will be collected following completion of ISCO emplacement activities for remediation performance monitoring, and detection monitoring, as follows:

- Remediation performance monitoring includes collection of samples for chemical analysis to determine whether the remedial goal has been achieved.
- Detection monitoring at select off-site monitoring wells includes visual observations for the presence/absence of potassium permanganate.

Groundwater samples for remediation performance monitoring will be collected from monitoring wells in the treatment area on a semi-annual basis until the RAO is achieved. The relative concentration of potential potassium permanganate in the remediation performance monitoring wells will be attempted to be measured with a colorimeter and/or visual observations.

Level IV reporting and data validation was conducted on the baseline groundwater analytical results. Level II reporting and data validation will be conducted on the first two semi-annual groundwater monitoring analytical results conducted after the ISCO emplacements have been installed. Level IV reporting and data validation will be conducted on the semi-annual groundwater analytical results after the first year of monitoring. After the first year of monitoring, it is anticipated that the RAO will be achieved at certain locations, and the analytical results at those locations would be considered confirmation samples requiring Level IV data validation.

Additionally, a Site Wide Monitoring Plan (Wood 2017) was prepared for monitoring various media throughout implementation of the ERH and ISCO interim remedial actions. Site Wide Monitoring events will be performed in conjunction with ISCO performance monitoring beginning in July 2020. Reports for the Site Wide Monitoring events and the ISCO Performance Monitoring events will be submitted to USEPA within 45 days or receipt of final laboratory reports.

3.3 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), (Wood 2019b), Appendix B 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.

The following QA/QC activities were conducted:

- Surveying of EPW 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.
- During construction, phases of the construction were reviewed as related to the design. In general, reviews were conducted during and after drilling and emplacement activities. USEPA participated in the phased inspections.
- Some minor construction deficiencies were identified when a performed work, material, or installation did not meet project plans or specifications. An example of a minor deficiency was grout intrusion in emplacement wells following construction. The corrective action was to drill the grout out of the casings to the extent possible. Minor construction deficiencies identified were corrected promptly and documented by Wood.

The ISCO remedy was constructed as designed with the exception of minor changes as described in Section 2.8.

3.4 USEPA OVERSIGHT ACTIVITIES

The USEPA provided oversight of the ISCO implementation activities. The USEPA Remedial Project Manager visited the Site during ISCO drilling and emplacement activities and at the completion of ISCO emplacement. Representatives of USEPA and the SDs conducted an inspection of the constructed remedy on March 20, 2020. USEPA has not collected environmental samples associated with ISCO implementation activities.

3.5 UPDATED INTERIM REMEDIAL DESIGN/REMEDIAL ACTION CONSTRUCTION SCHEDULE

The updated Schedule for Interim Remedial Design/Remedial Action, which includes the ISCO performance monitoring activities, is included as Appendix F.

4.0 FINAL INSPECTION AND CERTIFICATIONS

Mr. Matthew Wallace and Mr. Gregory Hutchins with Wood (representatives of the SDs) and Mr. Craig Zeller with USEPA performed a final inspection of the constructed remedy on March 20, 2020.

4.1 SAFETY

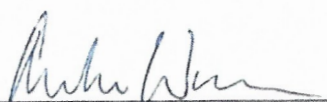
Safety procedures contained in the Site Health and Safety Plan were followed during the RA construction activities. There were no Occupational Safety and Health Administration recordable incidents, or releases of material/chemicals to the environment/community which required a response.

4.2 CERTIFICATIONS

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

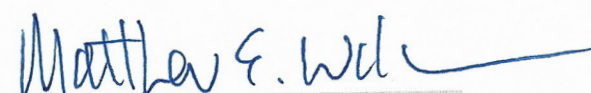
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage 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:



Andrew Warren, CTS Corporation
Responsible Official

For the Supervising Contractor



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

5.0 CONTACT INFORMATION

USEPA Remedial Project Manager

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61 Forsyth Street, SW
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(404) 562-8827

NCDEQ Project Manager

Beth Hartzell
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Raleigh, North Carolina 27609
(919) 707-8335

Settling Defendants

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(630) 577-8879

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Kurt Batsel
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Marietta, Georgia 30068
(770) 578-9696

Mills Gap Road Associates
William Clarke
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(828) 252-6919

Supervising Contractor

Wood Environment & Infrastructure Solutions, Inc.
Matthew Wallace
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Asheville, North Carolina 28806
(828) 252-8130

*CTS of Asheville, Inc. Superfund Site
In-Situ Chemical Oxidation Remedial Action Report
Wood Project 6252-16-2012
May 19, 2020*

ISCO Emplacement Contractor

FRx, Inc.
Doug Knight
Post Office Box 498292
Cincinnati, Ohio 45249
(864) 356-8424

6.0 REFERENCES

- Amec Environment & Infrastructure Solutions, Inc. 2014a. NAPL Investigation Report, 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.
- Amec Foster Wheeler, 2017. Site Wide Monitoring Plan, CTS of Asheville, Inc. Superfund Site, November 27, 2017.
- Wood, 2019a. In-situ Chemical Oxidation Treatability Study Evaluation Report, CTS of Asheville, Inc. Superfund Site, May 3, 2019.
- Wood, 2019b. In-situ Chemical Oxidation Final Remedial Design, CTS of Asheville, Inc. Superfund Site, July 22, 2019.
- Wood, 2019c. In-Situ Chemical Oxidation Remedial Action Work Plan, CTS of Asheville, Inc. Superfund Site, August 19, 2019.
- Wood 2019d. Interim Northern Area ISCO Remedial Action Objective Value Technical Memorandum, CTS of Asheville, Inc. Superfund Site, December 19, 2019.

TABLES

TABLE 1
Chronology of Events Related to ISCO 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
4/19/2017	ISCO Pre-Design Investigation Work Plan submitted to USEPA
5/1/2017	Remedial Design Work Plan approved by USEPA
9/11/2017	ISCO Pre-Design Evaluation Report submitted to USEPA
11/7/2019	ISCO Treatability Study Work Plan submitted to USEPA
11/30/2017 - 5/3/2019	Implement ISCO Treatability Study
5/3/2019	ISCO Treatability Study Evaluation Report submitted to USEPA
6/6/2019	ISCO Preliminary Remedial Design submitted to USEPA
7/12/2019	ISCO Final Remedial Design submitted to USEPA
7/22/2019	ISCO Final Remedial Design approved by USEPA
8/19/2019	ISCO Remedial Action Work Plan submitted to USEPA
8/26/2019	ISCO Remedial Action Work Plan approved by USEPA
9/24/2019	Conduct the Preconstruction Conference at the Site
10/1/2019 - 1/10/2020	Installation of emplacement well casings
10/1/2019 - 10/10/2019	Installation of monitoring wells
10/16/2019 - 10/18/2019	Collection of baseline groundwater samples
11/25/2019	Injection Permit Application submitted to NCDEQ
12/20/2019	Injection Permit Application approved by NCDEQ
12/4/2019 - 3/4/2020	Installation of potassium permanganate emplacements
12/19/2019	Interim Remedial Action Objective Values Technical Memorandum submitted to USEPA
1/9/2020	Interim Remedial Action Objective Values Technical Memorandum approved by USEPA
3/20/2020	Inspection of Constructed Remedy
5/19/2020	ISCO Remedial Action Report submitted to USEPA

Notes:

ISCO - In-Situ Chemical Oxidation

USEPA - United States Environmental Protection Agency;

NCDEQ - North Carolina Department of Environmental Quality

Prepared By: RMC 4/15/20

Checked By: GLH 5/15/20

TABLE 2
Emplacement Well Casing Summary
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Wood Project 6252-16-2012

EPW ID	Installation Date	Ground Surface Elevation	Depth to Bedrock (feet bgs)	Bedrock Elevation	Casing Depth (feet bgs)
4	10/31/2019	2,417.4	74	2,343.4	78.1
5	11/6/2019	2,419.6	79	2,340.6	84.1
6	10/22/2019	2,421.2	78.5	2,342.7	83.1
7	10/21/2019	2,422.8	79	2,343.8	82.3
8	10/10/2019	2,409.9	80	2,329.9	84.2
9	12/5/2019	2,411.3	75	2,336.3	79.2
10	12/5/2019	2,412.6	75	2,337.6	79.0
11	1/9/2020	2,415.9	76	2,339.9	80.0
12	10/25/2019	2,418.1	76	2,342.1	80.4
13	10/29/2019	2,419.9	79	2,340.9	82.9
14	10/22/2019	2,421.3	81	2,340.3	83.8
15	11/8/2019	2,422.9	80.5	2,342.4	85.0
16	10/8/2019	2,409.7	81	2,328.7	85.7
17	10/10/2019	2,410.9	64	2,346.9	69.1
18	12/6/2019	2,412.5	74	2,338.5	78.0
19	1/9/2020	2,416.3	76	2,340.3	80.2
20	10/28/2019	2,418.3	77	2,341.3	80.7
21	10/29/2019	2,420.0	81	2,339.0	85.3
22	11/5/2019	2,421.4	81	2,340.4	85.3
23	10/18/2019	2,422.8	84	2,338.8	89.6
24	10/7/2019	2,409.9	76.5	2,333.4	80.8
25	10/11/2019	2,410.9	70	2,340.9	73.4
26	12/4/2019	2,412.5	68	2,344.5	74.1
27	11/4/2019	2,416.4	76	2,340.4	79.9
28	11/7/2019	2,418.3	78.5	2,339.8	82.3
29	11/5/2019	2,420.0	79	2,341.0	83.2
30	10/24/2019	2,421.3	84	2,337.3	88.5
31	10/17/2019	2,422.9	94	2,328.9	99.3
32	10/4/2019	2,409.9	70	2,339.9	74.0
33	10/9/2019	2,411.1	64	2,347.1	68.5
34	11/4/2019	2,412.7	64	2,348.7	67.8
35	1/10/2020	2,414.1	68	2,346.1	72.4
36	11/7/2019	2,416.6	74	2,342.6	78.1
37	11/7/2019	2,418.3	78	2,340.3	82.0
38	11/12/2019	2,419.9	85	2,334.9	89.2

TABLE 2
Emplacement Well Casing Summary
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Wood Project 6252-16-2012

EPW ID	Installation Date	Ground Surface Elevation	Depth to Bedrock (feet bgs)	Bedrock Elevation	Casing Depth (feet bgs)
39	10/24/2019	2,421.3	84	2,337.3	88.4
40	10/16/2019	2,422.7	92	2,330.7	97.3
41	10/3/2019	2,410.1	60	2,350.1	63.8
42	10/9/2019	2,411.4	62.5	2,348.9	67.3
43	12/3/2019	2,412.8	61	2,351.8	64.3
44	1/8/2020	2,414.1	64	2,350.1	68.3
45	12/2/2019	2,416.7	74	2,342.7	78.0
46	12/2/2019	2,418.3	81	2,337.3	83.4
47	11/26/2019	2,419.8	84	2,335.8	87.6
48	11/18/2019	2,421.1	84	2,337.1	88.2
49	11/15/2019	2,422.3	94	2,328.3	99.7
50	10/1/2019	2,412.4	64	2,348.4	67.1
51	10/2/2019	2,413.2	55	2,358.2	57.8
52	1/7/2020	2,414.6	63	2,351.6	67.7
53	12/3/2019	2,417.0	69	2,348.0	73.1
54	11/22/2019	2,417.6	76	2,341.6	79.7
55	11/21/2019	2,418.2	83	2,335.2	87.0
56	11/19/2019	2,419.5	83.5	2,336.0	87.6
57	11/11/2019	2,420.5	94	2,326.5	97.7
58	1/6/2020	2,415.2	68	2,347.2	72.4
59	11/1/2019	2,418.2	63.5	2,354.7	67.2
60	11/5/2019	2,418.2	78.5	2,339.7	82.5
61	11/19/2019	2,417.7	83.5	2,334.2	87.7
62	10/15/2019	2,419.0	84	2,335.0	88.1
63	1/8/2020	2,415.7	74	2,341.7	78.0
64	11/6/2019	2,418.2	80	2,338.2	84.1
65	11/8/2019	2,418.1	78	2,340.1	82.1
66	10/15/2019	2,418.3	80	2,338.3	84.4
67	11/25/2019	2,416.6	81	2,335.6	84.9
68	10/31/2019	2,418.1	74	2,344.1	77.8
69	11/7/2019	2,418.2	73	2,345.2	77.2
70	10/14/2019	2,418.1	74	2,344.1	78.1
71	10/29/2019	2,418.0	73	2,345.0	76.6
72	11/21/2019	2,418.1	74	2,344.1	79.3
73	11/12/2019	2,418.7	68.5	2,350.2	72.2

TABLE 2
Emplacement Well Casing Summary
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Wood Project 6252-16-2012

EPW ID	Installation Date	Ground Surface Elevation	Depth to Bedrock (feet bgs)	Bedrock Elevation	Casing Depth (feet bgs)
74	10/25/2019	2,418.1	79	2,339.1	81.6
75	11/20/2019	2,418.1	68	2,350.1	72.0
76	11/14/2019	2,417.2	63	2,354.2	67.4
77	10/23/2019	2,418.1	73	2,345.1	77.3
78	11/20/2019	2,418.1	60	2,358.1	64.7
79	10/24/2019	2,418.1	71	2,347.1	73.6

Notes:

EPW - Emplacement well

bgs - below ground surface

Elevations are in feet above mean sea level

Prepared By: RMC 4/15/20

Checked By: GLH 5/15/20

TABLE 3
Monitoring Well Construction Details
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Wood Project 6252-16-2012

Monitoring Well	Installation Date	Well Depth (feet bgs)	Screened Interval (feet bgs)	Ground Surface Elevation	Top of Casing Elevation	Depth to Groundwater 10/16/2019 (feet btoc)	Groundwater Elevation
MW-6	6/16/2008	47.2	37.2 - 46.8	2,421.53	2,421.35	30.49	2,390.86
MW-6A	9/15/2008	80.7	75.6 - 80.4	2,421.71	2,421.21	28.63	2,392.58
MW-7A	3/6/2009	71.5	66.8 - 71.3	2,412.04	2,411.79	15.74	2,396.05
MW-19	11/30/2017	45.2	40.0 - 44.8	2,415.50	2,415.19	18.11	2,397.08
MW-19A	11/30/2017	64.9	59.7 - 64.5	2,415.54	2,415.36	18.43	2,396.93
MW-33	10/3/2019	45.4	40.3 - 45.1	2,410.20	2,409.79	13.75	2,396.04
MW-33A	10/4/2019	64.9	59.7 - 64.5	2,410.16	2,409.78	14.03	2,395.75
MW-34	10/1/2019	50.6	45.4 - 50.2	2,419.00	2,418.53	23.82	2,394.71
MW-34A	10/1/2019	65.2	60.1 - 64.9	2,418.90	2,418.56	23.10	2,395.46
MW-35	10/3/2019	50.3	45.2 - 50.0	2,412.07	2,411.60	15.33	2,396.27
MW-35A	10/3/2019	60.4	55.2 - 60.0	2,411.99	2,411.49	15.33	2,396.16
MW-36	10/2/2019	55.3	50.1 - 54.9	2,419.17	2,418.78	22.45	2,396.33
MW-36A	10/2/2019	70.4	65.2 - 70.0	2,419.05	2,418.68	23.03	2,395.65
MW-37	10/9/2019	40.1	35.0 - 39.8	2,418.04	2,417.67	21.80	2,395.87
MW-37A	10/7/2019	60.2	55.1 - 59.9	2,418.04	2,417.65	21.63	2,396.02

Notes:

bgs - below ground surface

btoc - below top of casing

Elevations are in feet relative to mean sea level.

Prepared By: RMC 4/15/20

Checked By: GLH 4/15/20

TABLE 4
Emplacement Summary
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Wood Project 6252-16-2012

EPW ID	Emplacement Completion Date	Treatment Interval (feet bgs)	Number of Emplacements	Potassium Permanganate (pounds)	Potassium Permanganate Slurry (gallons)
4	1/15/2020	40 - 74	5	5,000	1,155
5	12/5/2019	40 - 79	6	6,000	1,616
6	1/9/2020	40 - 78.5	6	6,000	1,341
7	1/7/2020	40 - 79	6	6,000	1,376
8	2/10/2020	50 - 80	4	4,000	784
9	2/3/2020	40 - 75	4	4,000	774
10	1/30/2020	40 - 75	5	5,000	1,020
11	1/23/2020	40 - 76	5	5,000	1,315
12	1/15/2020	40 - 76	6	6,000	1,416
13	2/12/2020	45 - 79	5	5,000	1,035
14	1/10/2020	40 - 81	6	6,000	1,371
15	1/8/2020	40 - 80.5	6	6,000	1,331
16	2/10/2020	40 - 81	6	6,000	1,226
17	2/11/2020	40 - 64	4	4,000	799
18	1/30/2020	40 - 73	5	5,000	1,060
19	1/27/2020	40 - 76	5	5,000	1,305
20	1/16/2020	40 - 77	6	6,000	1,306
21	1/13/2020	45 - 79	5	5,000	1,180
22	12/5/2019	45 - 81	6	6,000	1,236
23	1/8/2020	40 - 84	7	7,000	1,547
24	2/7/2020	40 - 76.5	6	6,000	1,286
25	2/3/2020	40 - 70	4	4,000	864
26	1/30/2020	40 - 68	4	4,000	784
27	1/27/2020	40 - 76	5	5,000	1,090
28	1/16/2020	40 - 78.5	6	6,000	1,221
29	1/13/2020	45 - 79	5	5,000	1,170
30	1/10/2020	45 - 84	6	6,000	1,386
31	1/9/2020	45 - 94	8	8,000	1,828
32	2/4/2020	35 - 70	5	5,000	1,035
33	2/3/2020	40 - 64	3	3,000	608
34	1/29/2020	40 - 64	4	4,000	804
35	1/28/2020	40 - 68	4	4,000	829
36	1/28/2020	40 - 74	5	5,000	1,145
37	1/17/2020	40 - 78	6	6,000	1,356
38	1/14/2020	45 - 85	6	6,000	1,386
39	2/13/2020	45 - 84	4	4,000	874
40	12/13/2019	45 - 92	8	8,000	1,618
41	2/4/2020	35 - 60	4	4,100	839
42	2/4/2020	40 - 62.5	3	3,100	648
43	1/29/2020	40 - 61	3	3,000	573
44	1/28/2020	40 - 64	3	3,000	568
45	1/29/2020	40 - 74	4	4,000	789
46	1/17/2020	45 - 81	5	5,000	1,075
47	2/24/2020	48 - 84	3	3,000	668
48	2/24/2020	47 - 84	4	4,000	784

TABLE 4
Emplacement Summary
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina
Wood Project 6252-16-2012

EPW ID	Emplacement Completion Date	Treatment Interval (feet bgs)	Number of Emplacements	Potassium Permanganate (pounds)	Potassium Permanganate Slurry (gallons)
49	12/6/2019	45 - 94	8	8,000	1,633
50	2/11/2020	40 - 64	3	3,000	608
51	2/11/2020	40 - 55	2	2,000	407
52	2/11/2020	40 - 63	3	1,500	607
53	2/12/2020	40 - 69	4	2,000	907
54	2/19/2020	45 - 76	4	2,000	912
55	2/25/2020	50 - 83	3	3,000	568
56	2/25/2020	45 - 83.5	4	4,000	859
57	12/9/2019	45 - 94	6	6,150	1,194
58	2/11/2020	40 - 68	3	1,500	697
59	2/20/2020	35 - 63.5	4	2,000	867
60	2/26/2020	44 - 78.5	3	3,000	593
61	2/26/2020	45 - 83.5	4	4,000	934
62	12/9/2019	40 - 84	7	6,850	1,349
63	2/19/2020	40 - 74	5	2,500	1,088
64	3/2/2020	35 - 80	4	3,500	824
65	2/26/2020	35 - 78	5	5,000	1,085
66	12/10/2019	35 - 80	7	7,000	1,322
67	2/19/2020	35 - 81	6	3,000	1,423
68	3/3/2020	33 - 74	6	5,000	1,255
69	2/27/2020	35 - 73	4	4,000	749
70	12/12/2019	35 - 74	6	6,000	1,186
71	2/18/2020	28 - 73	6	3,000	1,363
72	3/4/2020	30 - 74	7	6,000	1,631
73	3/2/2020	33 - 68.5	4	4,000	839
74	2/18/2020	25 - 79	7	3,500	1,539
75	3/4/2020	30 - 68	6	5,500	1,326
76	2/14/2020	25 - 63	6	6,000	1,341
77	2/17/2020	25 - 73	6	3,000	1,303
78	3/2/2020	25 - 60	5	5,000	1,050
79	2/17/2020	25 - 71	6	3,000	1,173

Prepared By: RMC 4/29/20

Checked By: GLH 5/1/20

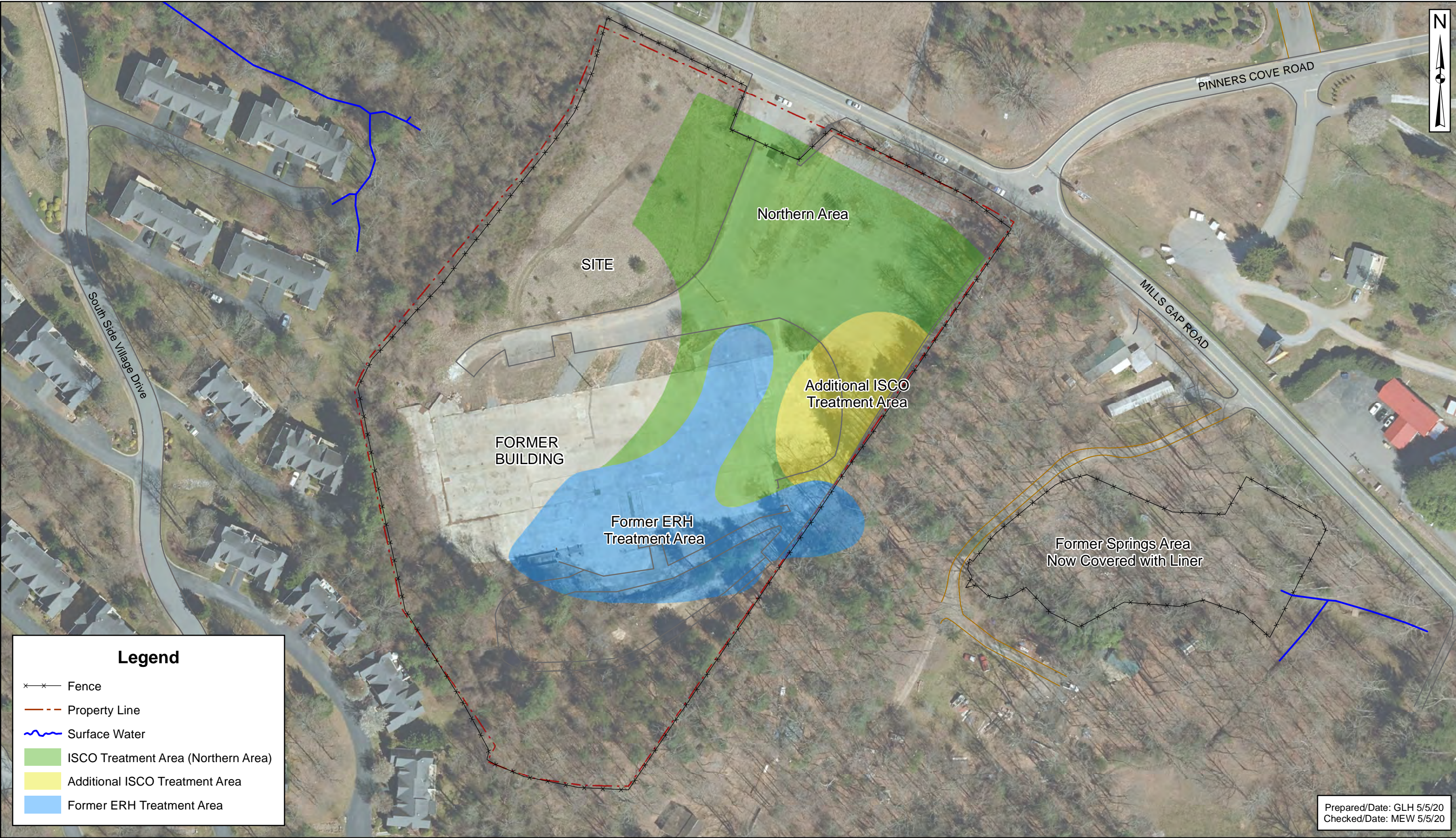
Notes:

EPW - Emplacement well

bgs - below ground surface

Potassium permanganate slurry is mixture of potassium permanganate, water and bentonite

FIGURES





Legend

- x-x-x-x Fence
- - - Property Line
- Emplacement Well (EPW) Location
- ⊕ ISCO Performance Monitoring Well Location
- ISCO Treatment Area (Northern Area)
- Additional ISCO Treatment Area



ISCO Emplacement and Monitoring Well Locations
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina

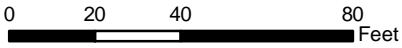


Figure 3
Project 6252162012
Drawn By: GLH 5/5/20
Approved By: MEW 5/5/20



Legend

- ×-×- Fence
- Property Line
- ~ Surface Water
- ⊕ Detection Monitoring Well Location
- ISCO Treatment Area (Northern Area)
- Additional ISCO Treatment Area

Prepared/Date: GLH 5/5/20
Checked/Date: MEW 5/5/20

Wood Environment & Infrastructure Solutions, Inc.
1308 Patton Ave Suite C
Asheville, NC 28806
(828)252-8130

Detection Monitoring Well Locations
CTS of Asheville, Inc. Superfund Site
Asheville, North Carolina



1 inch = 100 feet
0 100 200 Feet
PROJ.: 6252162012
LOCATION: P:\CTS - Mills Gap\GIS\ISCO

Figure
4

APPENDIX A

NCDEQ INJECTION EVENT RECORD

North Carolina Department of Environmental Quality – Division of Water Resources
INJECTION EVENT RECORD (IER)

Permit Number WI0100571

1. Permit Information

CTS Corporation
Permittee

CTS of Asheville, Inc Superfund Site
Facility Name

235 Mills Gap Road, Asheville, NC (Buncombe)
Facility Address (include County)

2. Injection Contractor Information

FRx, Inc.
Injection Contractor / Company Name

Street Address 11258 Cornell Park Drive, Suite 610

Blue Ash Ohio 45242
City State Zip Code

(864) 356 - 8424
Area code – Phone number

3. Well Information

Number of wells used for injection 76

Well IDs EPW-4 through EPW-79

Were any new wells installed during this injection event?

☒ Yes ☐ No

If yes, please provide the following information:

Number of Monitoring Wells 12

Number of Injection Wells 76

Type of Well Installed (Check applicable type):

☐ Bored ☒ Drilled ☐ Direct-Push
☐ Hand-Augured ☐ Other (specify) _____

Please include a copy of the GW-1 form for each well installed.

Were any wells abandoned during this injection event?

☐ Yes ☒ No

If yes, please provide the following information:

Number of Monitoring Wells NA

Number of Injection Wells NA

Please include a copy of the GW-30 for each well abandoned.

4. Injectant Information

Potassium Permanganate (RemOx® S by Carus Corp.)
Injectant(s) Type (can use separate additional sheets if necessary)

Concentration 40% solid potassium permanganate mixed into a bentonite and water slurry

If the injectant is diluted please indicate the source dilution fluid. City of Asheville municipal potable water

Total Volume Injected (gal) 82,210 gallons

Volume Injected per well (gal) See Table 4

5. Injection History

Injection date(s) Dec. 4, 2019 to March 4, 2020

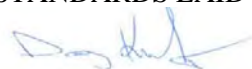
Injection number (e.g. 3 of 5) 2 of 3 (estimated)* –
*includes pilot study and future potential polishing event

Is this the last injection at this site?

☐ Yes ☒ No**

**pending monitoring results will determine potential future polishing injection event(s).

I DO HEREBY CERTIFY THAT ALL THE INFORMATION ON THIS FORM IS CORRECT TO THE BEST OF MY KNOWLEDGE AND THAT THE INJECTION WAS PERFORMED WITHIN THE STANDARDS LAID OUT IN THE PERMIT.



4/17/2020

SIGNATURE OF INJECTION CONTRACTOR DATE

Doug Knight
PRINT NAME OF PERSON PERFORMING THE INJECTION

*CTS of Asheville, Inc. Superfund Site
In-Situ Chemical Oxidation Remedial Action Report
Wood Project 6252-16-2012
May 19, 2020*

APPENDIX B

COPIES OF LOG BOOKS

9/30/19 6252162012

R. Clark/Wood

DAILY FIELD NOTES

- 1100- Arrived onsite / Richard SAEDACCO onsite / Susan Avritt onsite
- SAEDACCO D-50 & Geoprobe 8150L
- 1130- S. Avritt conducts H&S / Project Kick-off Meeting / see H&S form ^{for personnel}
- 12:10- SAEDACCO Offsite for lunch
- 12:00-13:00 United Rentals delivers truck & set up secondary containment 13:00 United Rentals leaves
- 12:45 SAEDACCO returns to site
- Unload drill rig
- D-50 sets up on MW-34A
- Geoprobe 8150 LS sets up on EPW-50
- 1330 - Mike Griffin w/A&D indicates roll off will not be delivered until 1800 later today. Drillers will continue set up.
- Unloading supplies.
- 1445- SAEDACCO personnel leaves site.
- 1530- Portable toilet delivered
- 1715-1800- A&D delivers two roll off containers
- 1800- R. Clark / A&D off site.

10/1/19 6252162012

R. Clark/Wood

DAILY FIELD NOTES

- 0710- Arrived onsite / SAEDACCO onsite
- Conduct H&S Meeting
- 8150 LS begins drilling EPW-50 from 0' bgs / surface.
- D-50 begins drilling MW-34A
- Equipment: 110' of 4 1/4" HSA's
- D-50 encounters 6" quartz lens (hard drilling) @ ~29' bgs in MW-34A. Cuttings become wet after 29.5' bgs
- Contain 0' - 25' as non haz & 25' to 8150 LS begin drilling EPW-50 w/ 4" to 27' & then advance 6" sonic rods 27'
- 0900- Fill observed to w 20' bgs in EPW-50.
- 0900- D-50 complete drilling MW-34A to 65' bgs; Begin well installations
- 0940- D-50 completes install of bentonite seal / allow time for setup
- 1000- 8150 LS encounters bedrock @ ~55' bgs w/ 4" sonic rods as observed by drill rate & sample

R.

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10/1/19 6252162012 R. Clark/Wood

DAKY FIELD NOTES

1020- SAEDARCO begins grouting
MW-34A / Stage grout w/ 1" tremie
in 40 gallon batches

Pull 15' augers & stage (1 batch)
grout, pull 15' augers & stage
grout (1 batch). 1 batch ~ 5 lbs
grout is 6 bags (42 lbs) ^{46.5} gallons water
per bag

1130 8150 crew completes
setup for 8" sonic rods

* setup of 4" PVC casing
w/ stabilizers. Stop for
lunch. Containerize 250 gallons in tank

1130-1215 D-50 crew pulls
remaining 20' HSA's & grouts via tremie
MW-34A to surface

1215- D-50 crew begins decon

1220- 8150 crew returns to site

1225- D-50 sets up on MW-34

* begins drilling w/ 8" (4 1/4" HSA)

1320- 8150's drills to 67' w/

8" sonic, begin removing 6" rod

1345- 8150's hydraulic cylinder

leaks while pulling 6" rod

Utilize absorbent pads to

contain hydraulic leak

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10/1/19 6252162012 R. Clark/Wood

1400- D-50 crew drilled to 50'

Begin MW installation

1430- Complete install of bentonite

seal; allow set-up time

prior to grouting. 8150 crew contains 250 gal

1510- Begin tremie stage grouting

1st Batch ~ 40 gallons water,

8 bags Portland and ~ 5 lbs bentonite

powder (1 batch). Pull 10' of augers

& resume stage grouting w/ 1st batch

1530- 8150 crew off site

D-50 crew resumes tremie stage

grouting; pull 10 augers; resume

w/ 1st batch. Pull 10' augers, resume

grouting, Pull remaining augers.

Mix 1/2 batch (4 bags Portland) &

resume tremie grouting. Top off MW

34A. Boring w/ grout.

1600- Breakdown location & prep

to decon 4 1/4" HSA's @ MW-34.

1615- D-50 setup on MW-34A

1615- 8150 crew returns to site

1635- D-50 begins drilling MW-34

1640- SAEDARCO mechanic on site

to repair hydraulic piston

1700- D-50 crew stops @ 25' 6.95' / heaves

1730- 8150 crew completes repair, leaves site

10/2/19

6252162012

E. Clark Wood

DAILY FIELD NOTES

0700 - Arrive on site

0715 - Conduct H&S Meeting

0730 - D-SO crew resumes

drilling MW-36A from 25' bgs

8150LS crew resumes

drilling EPW-SO & Begins

installation of ^{new 10/2/19} 8" 4" casing

8150LS crew uses tremie

pipe & water to flush

approximately 6 feet of

sediment from bottom of

boring

0800 - 8150LS begins grouting

EPW-SO via tremie through grout

shoe.

0820 - DSO crew @ 70' bgs.

Contains 0'-30' as non-haz soil

& 30' to ^{new 10/2/19} as haz. soil

- Encountered auger refusal

@ 70.7'. Begin well

installation. Wood plug

became lodged between well

& auger. Driller installed

tremie pipe to bottom

of boring & pulled a 5'

10/2/19

6252162012

E. Clark Wood

auger to dislodge wood plug

Drilled used tremie w/ tremie

to wash filter sand through

tremie pipe. Filter pack used

only 4 1/2 bags sand ~~versus 7 bags~~~~used and drilling~~

0900 - 8150LS completes

installation of EPW-SO. Begin

setup @ EPW-S1.

0930 - DSO crew completes

install of bentonite seal

Wait for seal to set

0930 - 8150LS begins drilling

EPW-S1 w/ 8" from surface

to 17' bgs, then switches to

4" sampler.

1015 - DSO crew begins tremie

stage grouting. Utilize 8-

4 1/2 Portland Bags per grout

batch.

1120 - D-SO crew completes

grouting MW-36A. Setup on

MW-36

1140 - D-SO crew begins decan.

8150LS encountered rock

@ 55' bgs / drilled to 58'

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10/2/19 6252162012 R. Clark/Wood

1200-8150LS crew complete
advancing 6" rods to 5'

Stop for lunch

1200-Collect IDW-ISCO-3
from 10' bgs @ MW-36

1210-DSO crew stops
for lunch

1210-Dewatering tank
delivered to site

1235-D-SO crew resumes
drilling MW-36 from 10'

1245-8150LS crew returns
from lunch

1300-8150LS crew
resumes drilling EPW-51

Begin advancing 8" rods

1330-Collect IDW-ISCO-4
from 50' bgs @ MW-36

1400-D-SO crew begins
MW installation @ MW-36

-8150LS crew removing
6" casing from EPW-51

-Advanced 8" to 58' bgs

1415-1415-DSO crew
installs bentonite seal
in MW-36

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10/2/19 6252162012 R. Clark/Wood

1500-Begin grouting/casing
installation @ EPW-51

1415-1445-D-SO crew

saw cuts concrete @ MW-
37/37A location. Surveyed

location is adjacent to
former wall of offices;

possibly contains footer
Move MW-37A 2.0' NW

and MW-37 2.0' SW of
surveyed location.

1500-Begin grouting
MW-36 via tremie stage

grouting.

1600-8150LS crew completes
installation of EPW-51

-Mobilize to EPW-41

Drill to 17' bgs w/ 8" rods

1605-D-SO crew complete
grouting MW-36. Setup for

decon. Decon augers

1630-DSO crew mobilize
to MW-35A. Clear vegetation

8150LS tops off auger in
EPW-51. D-SO drills to 15'

1705-5AEDACC offsite 1720 R. Clark/Wood

CTS of Asheville Page 1 of 5
10/3/19 6252162012 R. Clark/Wood

DAILY FIELD NOTES

0700 - Arrived onsite / open roll offs.

0815 - Drillers onsite / Conduct H&S Meeting.

0730 - D-SO crew resumes drilling MW-35A. from 15' bgs - Contained 0' - 15' as nonhaz. Contain 15' + as haz.

8150LS crew resumes drilling ^{same 10/3/19} EPW-41 from 17' w/ 4" rods/sampler. No recovery from 17' - 27'.

0840 - D-SO crew reaches ~60' bgs in MW-35A. Begin MW-Installation.

0850 - 8150LS crew encounters potential rock @ ~60' bgs. Driller indicated he drilled ~4'; measured DTB of 4". rod is 63.4' bgs. Begin advancing 6" rods over 4" rods.

0905 - 8150LS crew begins repair to rotary head. Water leaking from head.

CTS of Asheville

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10/3/19 6252162012 R. Clark/Wood

0920 - D-SO crew completes installation of bentonite seal/ wait for seal to set up.

1015 - DSO crew begins tremie stages grouting MW-35A.

0930 - 1000 - Will from 8150LS crew offsite to obtain bolt for water swivel flanges on rotary head.

1030 - 8150LS - repair completed. Resume advancing 6" rods @ EPW-41.

1100 - Complete advancing 6" rods to ~64' bgs. Begin advancing 8" rods @ EPW-41.

1115 - D-SO completes tremie stages grouting MW-35A. Mobilize to MW-35; Begin drilling w/ existing clean H&S.

1130 - Water swivel breaks again. Driller indicates wash bits were incorrect type.

1145 - Frank Gwinnitt w/ SAEDAC onsite to deliver supplies.

1145-ABD delivers roll-off rollup bar

1150-D-50 crew stops for

lunch/Will w/GAEDACCO

offsite to obtain parts

-81SOLS stops for lunch/repair

1225-D-50 resumes drilling

MW-35 from 15 bgs

-Contain 0'-20' as hazarous

& 20' as hazardous

1300-81SOLS crew returns - begin repair

1345-D-50 completes drilling

of MW-35; begin well repair/

installation 1330-81SOLS resumes

1340-D-50 completes ^{advancing} ^{stage}

installation of bentonite

seal / allow setup time

-Begin decon augers

1425-81SOLS completes

advancing 8" rods; remove

6" rods; begins casing

installation

1430-D-50-Begins tremie

stage grouting MW-35

1450-81SOLS begins grouting

EPW-41.

1530-D-50 crew completes

installation of MW-35

1600-81SOLS crew completes

grouting & remove 8" rods

from EPW-41

-Containerize 500 gallons

of drilling water into

dewatering tanks

1600-D-50 crew sets up on MW-

33 and begins drilling w/ 4 1/4"

HSA's

1615-81SOLS mobilizes to EPW-32

and sets up. Drill to 17' bgs

w/ 8" rods. Appears to be

fill material to 16'. Encountered

quartz gravel/fragments from

~16' to 17' bgs.

1645-D-50 crew begins well install

@ MW-33.

1700-81SOLS stops drilling 4" rods

in EPW-32 @ 47' bgs.

1705-D-50 crew completes

installation of bentonite seal

@ MW-33. Allow time for set

1700-1730 81SOLS crew

assists R. Clark in reporting

10/3/19 6252162012 R. Clark/Wood

drip on dewatering tank
 @ loose connection. Use
 wipe to mop up ~ 1 Liter
 of water in secondary
 containment & place in
 haz soil container. Use
 60" pipe wrench to
 tighten ~ 6" connection
 fitting.

1730-81SOLS crew
 offsite.

1735-D-50 crew begins
 tremie stage grouting
 MW-33.

1835-D-50 crew completes
 tremie stage grouting
 MW-33. Set up on MW-33A.

1845-SACDACC D-50
 personal leave site
 1900-R. Clark offsite

[Signature]
 10/3/19

10/4/19 6252162012 R. Clark/Wood

DAILY FIELD NOTES

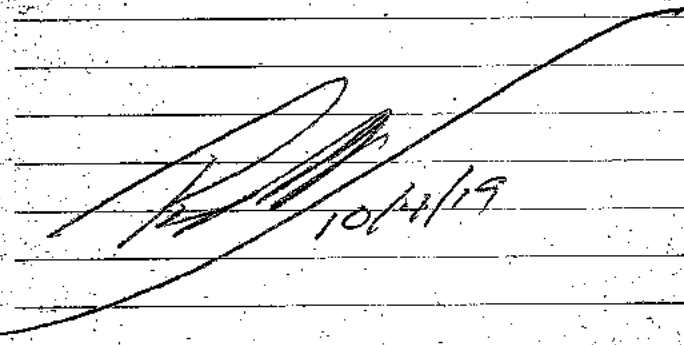
0700-R. Clark on site
 Oper roll off - Check dewatering tank
 0708-SACDACC on site
 0715-Conduct H & S Meeting
 0730-81SOLS crew
 resume advancing 4"
 rods from 47' 6" @ CRW-32
 -D-50 crew begins advancing
 4 1/4" HSA @ MW-33A
 0815-81SOLS crew encounters
 hard drilling @ 62.4' switch
 to wet wash rods. Encounter
 rock @ 69.5' & terminate @ 72.7'
 Begin advancing 6" rods
 over 4" rods
 0900-81SOLS crew empties
 250 gallon tote in dewatering
 tank. Tank begins leaking
 from dent in tank. Will
 need repair. Utilize 5
 gallon bucket to contain
 drip.
 0930-81SOLS crew removes
 4" rods after advancing
 6" rods to depth.

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10/14/19 6252167012 R. Clark/Wood

- 1035 D-50 crew drilled
to ~ 66' bgs @ MW-33A
Begin MW installation
- 8150LS crew drilled
w/ 8" rods from
initial 7' bgs to 72' bgs
1130 8150LS crew begins
casing installation
1200 D-50 crew complete
installation of bentonite
seal; wait for seal to
setup. Begin decons
1205 - United Rental on site to
repair leak in dewatering
tank
1235 - 8150LS crew
completes installation
of EPW-32. Contain 204 @ Haz
8150LS crew mobilizes
to MW-37/37A & uses
some 8" rods to open
hole through concrete
1240 D-50 crew
completes installation
of MW-33A frame
stage growth.

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10/14/19 6252167012 R. Clark/Wood

- 1240 - United Rental off site
- 8150LS sets up on
EPW-74; drill from 0' to 17'
w/ 8" rods. Contain @ Monbaz
1245 - D-50 crew complete
decons 4 1/4 HSA's
1330 - D-50 crew
mobilizes to MW-37A
Does not setup. Begin
cleaning up site
1345 - 8150LS stops
drilling @ 17'
Setup 4" rods for
Monday
1430 - SAEDARCO Leaves site
- Close, roll off
1445 - R. Clark leaves site


10/14/19

R. Clark

CTS of Asheville

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10/7/19 6252162012

R. Clark/Wood

6252162012

R. Clark/Wood

DAILY FIELD NOTES

0930 - Leave office for site

1000 - Arrive on site / drillers

call indicated running rate

1030 - SAEDACCO arrives

conduct H & S Meeting

- Open roll off's

1045 - D-50 crew sets up

on MW-37A & begin

drilling from surface

w/ 4" HSA

1055 - 8150LS crew

resumes drilling EPW-24

from 17' bgs. Utilize

4" rods for sampling

1140 - D-50 crew stops

@ 25' bgs in MW-37A

stop for lunch / D-50 crew begins

Tag depth to bottom of

EPW-32 at 73.5' bgs

1205 Encountered bedrock

@ 76.5' bgs @ EPW-24

1240 - Drilled to 80.9' bgs

8150LS crew stops for

lunch. 815025 leave site.

1270 - D-50 crew returns

From lunch. Resume drilling from

25' bgs @ MW-37A. Contact

0'-20' as von Laz. & 20' as bgs

1310 - 8150LS crew returns

From lunch. Begin drilling

6" rods to depth @ EPW-24

1315 - Begin MW-Installation

@ MW-37A. Drilling to

~61 bgs.

Used PID to monitor breathing

air zone @ MW-37A.

Breathing zone OK @ 0.0 to 0.1 ppm

Soil cuttings in bucket

readings from 0.7 to 40.3 ppm

Above bucket reading 0.4 to

0.8 ppm. EPW-24 breathing

zone is 0.0 ppm.

1330 - D-50 crew completes

installation of bentonite

seal. Allow time for seal

to setup.

1400 - Bushlog onsite

1410 - D-50 crew begins frame

stage grouting MW-37A.

1430 - 8150LS crew begins

advancing 8" rods to depth

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10/7/19 6252162012 R. Clark/Wood

1530-8150LS crew begins
installation of 4" PVC
casing. Grout via tremie
grout. Grout 3 batches

1545-DSO crew completes
installation of MW-37A

1555-DSO crew sets up
to decon. Begins decon
of augers

1700-1745-Pump off
dewatering tank into
grout tank

1745-SAEDACCO LEAVES SITE

Reilly
10/7/19

CTS of Asheville Page 1 of 3
10/8/19 6252162012 R. Clark/Wood

DAILY FIELD NOTES

0700-Arrive onsite/open rolloffs

0715-Conduct H&S Meeting

0730-D.SO crew prepares to travel
to Springs area for MW installation

0730-8150LS crew sets up on
EPW-16. Drill to 17' bgs w/8"
rods. Drill from 17' bgs to 47'
w/6" rods

0830-Stop Traffic on MGR to
mobilize rig to springs area.
7 setup for MW installation.

S. Arvitt w/Wood w/ D.SO crew.

0845-8150LS crew down due
to fuel filter/rig not obtaining
optimum vibration. Will w/SAEDACCO
offsite to obtain new fuel
filter. Helpers begin cutting
casing stickups/prepare to grout

0920-rain steadily/helpers stop
work

0900-0930 United Rentals onsite/installs
JIB weld on leak areas

1002-Will w/SAEDACCO returns to
site.

1120-Complete repairs/stop for lunch

Casing Installation of EPW-16

_____ *Write in this space*

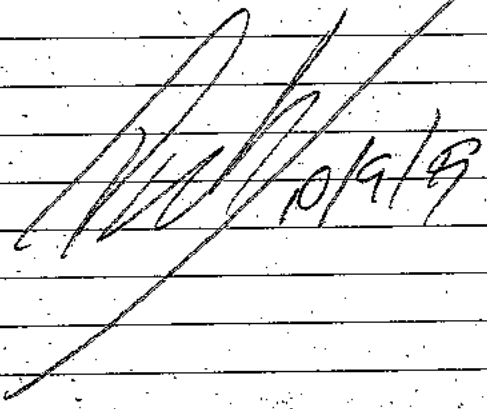
DAILY FIELD NOTES

- 0700- Arrived onsite / SACPAU onsite
0715 - Conduct H*5 Meeting
0720- D-SO crew resumes
drilling MW-37 from 25' bgs.
- 8150 LS crew ^{resumes grouting} ~~movers~~ ^{from 10/9/19} ~~CPW-16~~
EPW-16 Mobilize from CPW-16
to CPW-42 & Setup
0815 - D-SO crew begins well
installation @ MW-37 to
~40' bgs. Soil has petroleum-like
odor. Perform P.I.D. monitoring
Breathing zone = 0.0 ppm.
0840 - D-SO crew installs
bentonite seal / allow
setup time
0900-1015 Duke Power/AWP
onsite to deenergize
power line on ^{north} east portion
of site.
0930 - D-SO crew tremie stage
grout MW-37.
1030-8150 LS crew encounters
rock at approximately
~625' bgs. Driller advances
boring to ~68' bgs to

- avoid excessive stick up of
casing / drill string during
installation. Measured 55' competent rock ^{PWR 0.5}
Remove 6" rods & advance
8" rods to depth.
- D-SO crew pumps off
remaining fluid @ base
of deaerating tank
into fresh tank. Use skid to ^{end.} ~~lift~~
1045 - D-SO crew sets up
on EPW-51 w/ 3 7/8"
Trecore to wash drill grout
@ base of EPW. The casing
depth to base is 57.8'; grout
measured @ 53.0'; ^{from 10/9/19} drilled 4.8'
of grout to 57.8' bgs.
1100-8150 LS crew begins
removal of 6" rods from
- install 4" PVC casing
@ begin grouting via
tremie grout shoe
D-SO crew sets up to drill
out grout in EPW-50
Measured depth was 60.9';
however driller advanced
3 7/8" trecore to ~66' bgs with

10/19/19 6252162012 Page 3 of 4
 resistance. Drill to 665' hrs & wash
 out casing of grout.
 - DSO crew decons augers
 1220-1245 - DSO & 8150LS crew
 stops for lunch
 1245 - DSO crew deconstructs
 decon pad & begins loading
 D-50 rig onto support
 trailers. Overlapper begins forming well pad
 1300 - Begin well development
 @ NW-34/34A 34/34A
 - Use 2 separate pumps to
 develop wells @ same time
 1305 - 8150LS crew sets
 up on EPW-33 and
 begin drilling w/ 8" rods
 to 17' bgs, then switch
 to 5" rods
 1400 - DSO crew sets up on
 NW-36/36A for well
 development
 1500 - DSO crew sets up on
 NW-35/35A for well
 development.
 1600 - 8150LS crew encounter
 rock @ ~64' bgs @
 EPW-33.

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 10/19/19 6252162012 R. Clark Wood
 1600 - DSO crew sets up on
 NW-33/33A for well development.
 1615 - 8150LS begins advancing
 8" rods
 1700 - DSO crew sets up on
 NW-37/37A for well
 development.
 1730 - 8150LS crew begins
 removing 6" rods & install
 4" PVC casing in EPW-33
 1800 - DSO crew leaves site
 1830 - 8150LS crew completes
 grouting EPW-33
 1845 - R. Clark Wood leaves site


 10/19/19

10/10/19 6252162017 R. Clark/Abel

0700-Arrive onsite ^{DAVE FIELD NOTES} / open roll-off

0715-Conduct H#5 Meeting

0720-DSO crew begins

setting pads for MW-34/34A

-8150LS crew sets up on

EPW-17 & begin drilling w/ 6" rods

0740-DSO crew sets up on concrete pads on MW-36/36A

-8150LS crew begins

drilling w/ 6" rods @

17' bgs; contain 0-17' as

near haz & 17' + as haz

0815-A&D onsite to deliver

roll-off for haz waste

0830-8150LS crew removes

posts & fencing in area of

EPW-8

0900-A&D offsite.

0930-DSO crew installs

pads @ MW-37/37A

1000-DSO crew offsite

to develop wells MW-38

and MW-39 & install

well pads.

1000-8150LS crew encounters

rock @ 53 @ EPW-17 and

10/10/19 6252162017 R. Clark/Abel

drill to ~58' bgs

Recovered 4.0' of competent

rock & 2.0' of PWR material /

from base of 6" rod /

Bedrock @ 164' bgs /

1030-1130-R. Clark @ MW-38

& MW-39 for well development

1130-Returned to site

8150LS crew installing

4" PVC casing @ EPW-17

1230-8150LS crew completes

installation. Setup on

EPW-8.

-DSO crew resumes well

pad installation

1245-Driver Sean w/ RGL

Logistics (sub of United

Rental) delivers dewatering

tank & picks up dewatering

tank w/ leak.

1430-Sean w/ RGL offsite.

1515-8150LS crew encounters

rock @ ~80' bgs and drilled

to 85' w/ 6" rods. Begin Poor recovery

advancing 8" rods / Product 1

1700 Begin install of 4" PVC & grout / Product 1

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10/11/19 6252162017 R Clark/Wood

0700-Arrive onsite (SAEDACCO) on site

0715-Conduct H&S Meeting

0730-D-SO crew finalizes

loading of equipment & leaves

0730-EPW-8; top off grout

0740-8150's crew sets

up on EPW-25 and

begin drilling w/ 8"

rods to 17' Contains

rock; 17' as haz.

0815-Begin advancing 6"

rods from 17' bgs to 74' bgs

1035-encountered rock

@ 70'; drill to 74" w/ 6"

-Begin advancing 8" rods

Perform PID monitoring of

breathing zone.

-Recovered 2.8' of Gneiss

± 1.1' of PWR in core barrel

w/ some rock fragments

1135-Begin installation @ 4" PC

Casing & tremie grout through shoe

1300-Complete installation @

EPW-25, Set up on EPW-22

1330-S. Avritt indicates to

Set up on EPW-30.

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10/12/19 6252162012 R Clark/Wood

1330-1400-Drillers cleanup site

load up

1400-SAEDACCO offsite

-R. Clark awaits arrival of

United Rental.

1500-United Rental arrives

1530-United Rental/R. Clark offsite

Run 10/11/19

R. Clark

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10/14/19 6257167017 R Clark/Wood

0945 - Leave office for site
1000 - Arrive onsite
1030 - SAEDACCO/815015 crew
arrives onsite. Set up on
EPW-70 and begin advancing
8" rods to 17' bgs. B then
begin advancing 6" rods
Contain O-27 as nonhaz
DTW = MW-31 = 31.93' bgs
1210 - Stop for lunch @ 47' bgs
1235 - Return from lunch
- Resume drilling from 47' bgs
- Encountered bedrock @
~69' bgs & drilled to ~74' bgs
1430 - Advanced 8" rods to 74'
bgs & removed 6" rods.
Observed 0.5' of recovered
rock @ ~69.0' - 69.5', but
then core appears to be
P.W.R. w/ some rock fragments
but primarily soil (silt, sand, &
some gravel) to ~74' bgs
- Drilled to 79' bgs w/ 6" rods
encountered rock @ 74' - 79' bgs
- Recovered 4.8' of rock,
dark to light gray, micaceous, schist,
some fractures, trace PWR zones.

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10/14/19 6257167017 R Clark/Wood

Gravel to moderately hard, highly to
medium weathered.
1500 - Begin installation of 4"
PVC casing in EPW-70
- Containerized ~600 gallons of drill
fluid from EPW-70 into dewatering
box w/ "new" 130 microfilter fabric.
- Check dewatering box for leaks;
Ok, no leaks observed.
Performed P.I.D. monitoring
of breathing zone @ EPW-70
= 0.0 ppm.
1630 - Completed installation
@ EPW-70; Set up on
EPW-66. Drill to 17' bgs
& stop for the day
1700 - SAEDACCO offsite
- R. Clark closes roll off &
files paperwork
1730 - R. Clark offsite

R. Clark
10/14/19

R. Clark

10/15/19

6252162012

R. Clark/Wood

DATELY FIELD NOTES

0700-Arrive on site / SAGDACC fuels rig.

0715 - Conduct H+S Meeting

0720 - Begin drilling EPW-66

from 17' bgs w/ 6" rods

Contain 0-27' as nonhaz

& 27' + as haz.

- Monitor Breathing zone w/ PID = 0.00

Encountered ~0.5' thick quartz con

@ appx. 46' bgs. Recovered a 3" to

4" thick fragment of quartz in barrel.

0930 - Driller encountered rock

w/ 8" rods. Drilled to 82' bgs.

Driller indicated change in drill

rates was abrupt. @ 78' bgs.

- Begin advancing 8" rods

from 17' bgs to 82' bgs.

1030 - Remove 6" rods.

Recovered ~20' of rods & 20' of

DWR rock. Schist / friable.

moderately indurated, medium to highly

weathered med. hard to hard.

- Begin installation of

4" PVC to depth.

1245 - Complete installation of

EPW-66 to ~84' bgs.

10/15/19

6252162012

R. Clark/Wood

Move to and setup on EPW-67

- Begin drilling w/ 8" rods to 17' bgs.

- Begin drilling w/ 6" rods from 17' bgs

Contain 0-27' as nonhaz & 27' + as haz.

Encountered quartz zone from

~47'-49'. Encountered rock

@ appx 83'; driller indicates

slightly harder drilling @ 82'

& harder drilling @ ~84'

- Advanced to ~88' bgs w/ 6"

1505 - Begin advancing 8" rods

to ~88' bgs.

1615 - Begin Installation of 4" PVC

casing. remove core barrel.

Recovered ~3.2' of competent

rock; dark gray schist.

friable - moderately indurated,

medium weathering w/ some PWR

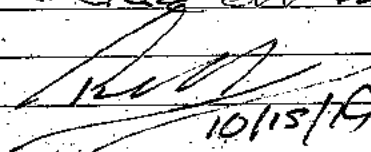
above w/ abundant quartz fragments

1830 Complete Installation

- SAGDACC personnel leaves site.

R. Clark closes roll off

1845 - R. Clark off site



10/15/19

Rite in the Rain

10/16/A 6252/6262

R. Clark/Wa

DAILY FIELD NOTES

0700 - R Clark/Wood on site/open roll of 6

0715-SAEDACCO gasite/conduct #8S

Meeting / SAEDACCO pumps off

0730 - ^{RUC} water from tote that
01/2/19 would not drain into
dewatering tank.

0730 Setup on EAW-46

- cut overhead limbs / small trees, as necessary for setup
- R. Clark calibrates sampling equipment

- R. Clark calibrates sampling equipment

U. R. Clark sets up on MW-6A
w/ Monsoon for low-flow sampling

0745 - SAEDACCO begins
drilling from surface w/
8" rods to 17' bgs & then
switches to 6" rods.

Contains 0-27 as non haz
27 + as haz.

2.7' + as hcz.

Driller encountered hard drilling
 @ 79'-80' soft @ 80'-82', 82'-84' slight
 advanced to 84' bgs border

1100- SAEDACCO pumps water from dewatering tank into rake tank. Did not recover rock.

12/16/19 6252167012

RC/ab/100

Driller advanced 6" 84-92 indicated

Driller advanced 6" to 92-97, indicated

- Recovered 3.5' ; dark gray schist

Frittle-modiolated medium

weathering some PWR zones along

O.S. recovered of PWR w/ trace rock frag

11:30-12:15 - R. Clark offsite to ship

PUMP @ FedEx / Drillers stop for

pump & feeder / kills step for lunch

DATE - Sat. - MAY 19/19A

12:15 - Set up on MW-19/194
/ Pacific this was £

w/ Peristaltic pump for

low flow sampling (see forms)

14:40 SAEDACCO begins installation

of 4" PVC in EPW-40 to ~93%

- R. Clark sets up an MW-36/36H

well pair w/ peristaltic pump.

(see forms)

6:30 - SAGDARCO completes installation

f PW-40. Performed breathing zone mon

1645 - P. Glade completes sampling of

MIL = 36 / 360 "in all pairs."

- SACIDALCO comes off - burnt

- SAEVALCO pumps off deacidizing

tank. Cleans up site. Vig soil

from totals B much par.

80 CTS of Asheville Page 1 of 2
10/17/19 GZSUG 2012 RClark/Wad

DAILY FIELD NOTES

0700- Arrive onsite (open roll offs)
0715- SAEDACCO onsite (conduct
H# S Meeting

- Setup on EPW-31 w/
8" rods; drill to 17' bgs.
At 17'; switch to 6" rods
and drill from 17' bgs to 99'

- R. Clark calibrates water
quality equipment (see forms)

0830- R. Clark sets up on
MW-34/34A well pair.
for low flow sampling
via peristaltic pump.
(see forms)

1030- R. Clark sets up on
MW-7A

1100- Driller indicates
drilled to 99' bgs; encountered
slightly harder material @
80'; ~~but~~ but did
not drill as competent
rock; Recovered 3.5'
of friable, highly weathered
to mod. weathered schist
dark gray; contains some PWR zones

CTS of Asheville Page 2 of 2
10/17/19 GZSUG 2012 RClark/Wad

1200-1230- lunch

1230- Drillers ^{8150LS crew} begin installation
of EPW-31 4" PVC casing
to ~ 99' bgs. Perform PID Monitor: Oppy

1300- R. Clark makes copper coils
for MW-37/37A & sets up
on well pair w/ peristaltic
pump for low flow sampling

1530- SAEDACCO ^{8150LS crew} completes
installation of EPW-31.

- Setup on EPW-23

- R. Clark sets up on MW-33/
33A well pair w/ peristaltic
pump for low flow sampling

- 1700- 8150LS crew drilled
from 0' to 47' bgs w/ 6" rods
@ EPW-23. Leave site

1730- R. Clark completes
GW sampling @ MW-33/
33A well pair. Close roll
offs.

1800- R. Clark offsite

R. Clark 10/17/19

Return to the Pump

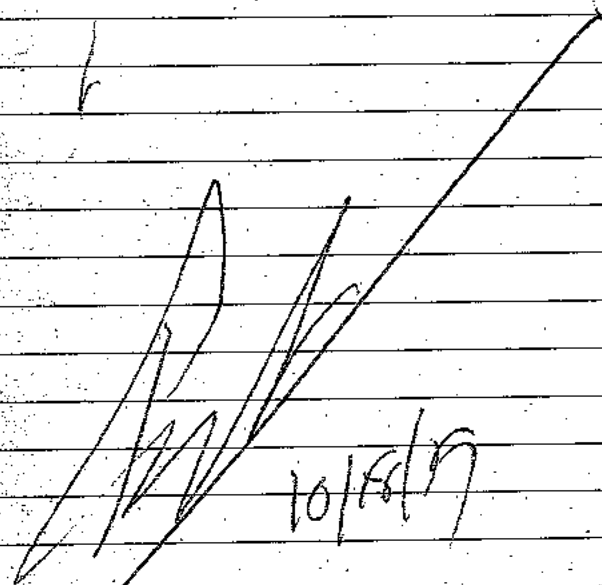
CTS of Asheville Page 1 of 2
10/18/19 6152162012 R. Clark/Wood

DAILY FIELD NOTES

0700- Arrive onsite / gear roll off
0715 - 8150LS crew arrives / candid
H&S Meeting / calibrate water quality meter
0725 - 8150LS crew resumes
drilling EPW-23 from 47' bgs
0900 - R. Clark sets up on MW
- 3S/13GA well pair w/
peristaltic pump for
low flow sampling
1100 - 8150LS crew encountered
"harder" material from 80' to
90' w/ 6" rods, but not
competent rock according
to driller ^{slightly harder to 84'} begin advancing
8" rods to ~ 90' bgs
1200 - Remove 6" rods, recovered
3.5' of friable to moderately
indurated, moderately to highly
weathered, Schist w/ some
FLWR zones. Perform PID Monitoring: 00 ppm
1215 - Driller's stop for lunch
R. Clark offsite to deliver
GW samples to lab & ship
equipment to Eastern Solutions

CTS of Asheville Page 2 of 2
10/18/19 6152162012 R. Clark/Wood

1315 - R. Clark returns
Drillers installing 4" PVC
casing @ EPW-23
1630 - 8150LS completes
installation
- Pump dewatering tank
into fracture tank
- Close roll off
1500 - SAEDACCO / R. Clark
offsite



CTS of Ashville Page 1 of 1
10/23/19 6252162012 R Clark/Wood

DAILY FIELD NOTES

1050 - R. Clark / SAEDACC onsite
8140 LS drill rig onsite / driller
not present, but helpers Tim & John are present

11:00 - Conduct H & S Meeting
8150 LS crew sets up on
EPW-7. Don't setup on EPW-15
due to overhead limb. Will
need to obtain an extended
Saw prior to setup.

- Advance 0' - 17' w/ 8" rods

- Advance 17' - ~83' w/ 6" rods

8140 LS crew uses concrete saw
to cut holes @ drill locations

EPW's in concrete pad area

1130 - Begin advancing 8" rods

to 83' bgs; Remove 6" rods

- Recovered 30' of gray mud.

Indicated, mod. weathered schist

- Driller encountered rock @ ~80'

w/ 6" rods; but ~79' bgs w/

8" rods,

1530 - Begin installation of

4" PVC casing @ EPW-7 + 80'

1700 - complete installation. Move 3

setup on EPW-6.

1730 - SAEDACC / R. Clark leave site

CTS of Ashville Page 1 of 2
10/22/19 6252162012 R Clark/Wood

0930 - Delayed start due to
rain / still raining; clock

radar / SAEDACC & R. Clark

leave site. 1130 - R. Clark onsite

1200 - SAEDACC onsite; conduct

H & S Meeting. Contain 0' - 27' ^{non-haz}

8150 LS crew begin drilling

EPW-6 from surface.

- Drill w/ 8" from 0' to 17'

- Drill w/ 6" from 17' to 83'

8140 LS crew sets up on

EPW-77; Drill w/ 8" rods

from 0' to 17' bgs

Contain 0 - 17' as non-haz

1430 - 8150 LS crew encountered

rock in EPW-6 @ ~79';

Drilled to ~83' bgs w/ 6" rods

Begin advancing 8" rods

Perform PID monitoring

Breathing zone = 0.0 ppm @ EPW-6

& EPW-77

1600 - 8150 LS crew begins

installation of 4" PVC @

EPW-6; recovered 4.5' of rock

top of rock ~78.5' bgs

R. Clark

CTS of Asheville Page 2 of 2
10/22/19 6252152012 R. Clark/Wood

1630-8140LS crew
drilled to 72' bgs w/ 6" rods
Didn't encounter rock; begin
advancing 8" rods
Advanced 8" rods to 37' bgs

~~1800-1700-8150LS EPW~~

^{RWC 10/22/19}
Completes installation
of EPW-6. Setup on

EPW-14. Advance 8"
rods from surface to
17' bgs. Contain as
nonhaz ^{4' bgs RWC 10/22/19}

1800-8140LS crew
Stop & drilling 8" rods
@ 47' bgs @ EPW-77

1800-SAEDACCO 8150LS
8140LS crew's offsite

[Signature]
10/22/19

CTS of Asheville Page 1 of 3
10/23/19 6252162012 R. Clark/Wood

DAILY FIELD NOTES

0700- R. Clark on site / open roll off

- SAEDACCO arrives 07:15 to 07:30

0730- Conduct H & S Meeting

- 8140LS crew resumes EPW-77
advancing 8" rods from 47' bgs.

- 8150LS crew resumes drilling
EPW-14 from 17' bgs w/ 6"
rods. Contain 12'-22' as nonhaz
Contain 27' + as haz.

0915-8140LS completes
advancing 8" rods to 72'

Pull 6" rods; no recovery
Driller indicates soft material
washed out; readvance 6" rods
to 72' & advance from

72' to ~78' bgs. Encountered
rock @ ~74' bgs. ^{RWC 10/23/19 1090}
Advanced
8" rods to ~78' bgs; install
4" PVC casing; Encountered rock @ ~73' w/ 6" rods

1000-8150LS crew encountered
rock @ ~81' bgs. Drilled to ^{800' 100'}
~85' bgs. Begin advancing ^{no other}
8" rods. Recovered only 15' of rock ^{material}

1015- Recovered rock @ EPW-77
is friable; mod. to highly weathered
schist. ^{note in the field}

10/23/19

6252162012

R. Clark / Wood

1105 - Completed advancing 8" rods to ~85' bgs w/ EPW-14. Begin installing 4" PVC casing. Recovered 2.8' of gray/grayish brown, friable highly weathered schist.

1200 8140LS crew has difficulty w/ ball on grout shoe sealing during grouting after reaming tremie drill - flushes

PVC w/ fresh water to remove grout via tremie. & reams tremie & flush base w/ ~7 gallons fresh water to clear ball.

1230 - 8150LS crew completes installation @ EPW-14. Setup on EPW-30.

1300 - 8140LS crew completes installation of EPW-77.

1300 - 1330 - SASPACCO (und)

1330 - 8150LS crew advances 8" rod from 0' - 17' & 6" rods @ EPW-30

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R. Clark / Wood

From 17' to 70' bgs.

Use 4" rods & sample from 4" RMC 10/23/19 70' to

1330 - 8140LS crew sets up on EPW-79

1509 8150LS crew begins advancing 4" rods to 70' bgs. 1515 - 8140LS crew stops to fuel rig.

1529 - 8150LS driller indicated 1st 4" run from 57' to 65' & will need start "wet" cutting from 65' +

1700 - 8150LS crew drilled from 65' to 87' bgs w/ 4" rods (77-87') recovered 1' of rock and ~2' of PWR at base of run returning to spil. Instruct crew to drill 5' further w/ 4" rods. Driller indicated crew will drill it to ~93' bgs, but leave rods in ground overnight.

1745 - 8150LS crew leaves site - 8140LS crew drilled to 47' w/ 8" & 57' bgs w/ 6" rods @ EPW-79. 1800 leave site.

CTS of Asheville Pump 1 of 2
10/24/19 6252162012 R. Clark/Wood

DAIRY FIELD NOTES

0700 - R. Clark onsite
0715 - SAEADACCO arrives
0725 - Conduct H+S Meeting
0730 - 8150LS crew sets
up pump for dewatering box
- R. Clark pumps dewatering box
into Frak tank
- 8150LS crew resumes drilling
to 88' bgs w/ 6" rods
+ retrieve sample from 87 to 93'
- obvious clay. Begin removing
4" rods @ 0827
0840 - Begin advancing 8"
rods. Recovered 3.1' of
grayish brown to brownish gray
P.W.R. w/ some rock fragments
to highly weathered friable
schist. Instruct driller to
install PVC casing to ~88'
bgs. 0730-0900 8140LS crew advances 6"
rods from 87'
0900 - 8140LS crew to 71'
encountered rock @
~71' bgs @ EPW-79
and drilled to 74' bgs
Begin advancing 8" rods

CTS of Asheville Page 2 of 3
10/24/19 6252162012 R. Clark/Wood

from 47' bgs to 74' bgs
0930 - 8150LS crew completes
advancing 8" rods to 88' bgs.
Begin installing PVC casing
1030 - 8140LS crew completes
installation of 10/24/19
advancing 8" rods to ~74' bgs
- Remove 6" rods; recovered
~10' of gray to dark gray
moderately indurated-hard
Gneiss, moderately weathered
- Driller indicates some rock
lost in base of casing; will
attempt to recover.
- Driller @ EPW-79 indicates did
not recover rock; drilled it
to crushed it @ base of casing.
1050 - 8140LS crew begins installing
4" PVC casing @ EPW-79
1115 - 8150LS crew completes
EPW-30; Set up on EPW-39
1200 - 8150LS crew drilled to
17' bgs w/ 8"; center as non-haz
- 8150LS crew stop for lunch
1230 - 8140LS crew completes
installation @ EPW-79

10/24/19 6252162012 R. Clark/Wood

1230-8140LS crew stops for lunch
- Pump off dewatering tank

1230-8150LS crew resumes

- drilling @ EPW-39; Begin
advancing 6" rods from
17' bgs to 88' bgs, rock @ 84'

- R. Clark tags depth to bottoms
in casings EPW-23, 7, 6, 14, 3, 77

1300-8140LS Crew sets
up on EPW-74. Begin

advancing 8" rods
from surface to 17';

then 6" rods to 27'; contain
10-17' as haz due to petroleum

like odor & 17'+ as haz
- Rock recovered @ EPW-39

consists of P.W.R. to highly
weathered friable, brownish

mass. Schist.
1545-8150LS completes

advancing 8" rods; pulled 6" rods
@ EPW-39; Begin installation

of 4" PVC casing
1545-8140LS advanced 8" rods

to 27' bgs & 6" rods

10/24/19 6252162012 R. Clark/Wood

1645-8150LS completes
installation @ EPW-39.

Mobilize to EPW-12.

EPW-12 relocated 3.5' to NW
due to "future" overhead power

in area of initial borings.
Currently power line not

energized.
- Cut limbs from adjacent tree

& setup on EPW-12
Advance 8" to 17' bgs

Contain 0'-17' as nonhaz
& 17'+ as haz.

1730-8140LS crew stops
@ 67' bgs w/ 6" rods &

47' bgs w/ 8" rods
1745-8140LS crew off site

1750-8150LS crew off site
1800-R. Clark off site

1700-G. Hutchinson returned PID
- Performed breathing zone check w/ PID

10/24/19

10/25/19

6252162012

R. Clark/Wood

10/25/19

6252162012

R. Clark/Wood

DAILY FIELD NOTES

0700-Arrive onsite; pump dewatering tank / open roll off
 0715-Conduct H & S Meeting
 SAEDACCO onsite 0800-Ed Holmes Surveying onsite
 -8140LS crew resumes drilling
 @ EPW-74 w/ 6" rods @ 67' bgs & 8" rods from 47' bgs
 -8150LS crew resumes drilling
 @ EPW 12 from 17' bgs w/ 6" rods
 0945-8140LS crew encountered rock @ ~79' bgs @ EPW-74
 advanced 6" rods to 83' bgs
 1030-8140LS crew completes advance of 8" rods to 83' bgs
 After pulling 6" rods; only 0.5' of rock recovered; gray med. indurated, hard, Gneiss;
 Advance / Install 4" casing to ~82' bgs; unable to get casing to 83' bgs; slide bottom centralizer down 1' or 4.0' from base of casing instead of typical 5.0'.

1100-8150LS crew encounters rock @ 76' bgs; drill to 80' bgs. & begin advancing 8" rods
 @ EPW-12, from 17' to 80' bgs
 1105-Ed Holmes Surveying completes surveying of new wells & others & leave site
 1110-Pump dewatering tank into truck
 1130-8140LS crew unable to get casing to base of boring; outer casing becomes stuck; driller removes 8" rods
 1200-8150LS crew completes advancing 8" rods; remove 6" rods; recovered ~3.5' of med. indurated, hard, light gray Gneiss
 Begin installation of 4" PVC casing
 1215-8140LS crew advances 8" rods to base and begin installation of 4" PVC casing @ EPW-74
 1300-8150LS crew completes installation @ EPW-12. Top off grout in EPW-39 & EPW-7

7330-8150LS crew off site.
 1400-8140LS crew complete
 installation of EPW-74.
 -clean up drill site/setup
 on EPW-71
 1430-8140LS off site
 1500-R. Clark off site

[Handwritten signature]
 10/25/19

DAILY FIELD NOTES

0800-R. Clark on site to pump
 off dewatering tanks
 0830-A & D on site to deliver
 empty rolloff container &
 pick up haz. roll off
 1015-A & D off site
 1030-8150LS crew arrives
 on site; Setup on EPW-20
 and begin drilling w/ 8"
 rods; Drill from 0'-17' bgs
 contain as non haz 6" ^{RMC + air spg}
 -Begin drilling w/ 1 1/2" rods
 @ 17' bgs.
 1100-8140LS crew arrives
 on site; begin drilling @
 EPW-71; Drill w/ 6" rods
 to 30' bgs & dispose of
 0-10' soil as non haz &
 10' + as haz due to petroleum
 like odor in soil.
 -Perform monitoring of breathing
 zone w/ PID @ EPW-71
 breathing zone = 0.0 ppm; soil
 in spud steel bucket 6" above
 soil is 4.7 ppm; EPW-20 ^{10' in soil}

CTS of Asheville Page 2 of 3

10/28/19 6252162012 R. Clark/Wood

Breathing zone = 0.0 ppm; Soil in
slit shear bucket = 0.0 ppm
(6" above bucket)

810LS crew advances 8"
rods to 27' bgs & then
resumes advancing 6" rods
1400. 8150LS crew encountered
rock @ 77' bgs, advanced
6" rods to 81' bgs &
begin advancing 8" rods
from 17' bgs.

1445-8150LS crew begin
installing 4" PVC casing
to 81' bgs @ EPW-20

1530-8150LS crew
complete installation
@ EPW-20; Setup on
EPW-21. Drill to 17'

w/ 8" rods contains
no haz; Drill from 17'
to 47' bgs w/ 6" rods
KOB contains as haz

8140LS crew @ 77' bgs
doest think they
have encountered
rock. Instruct.

CTS of Asheville

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10/28/19 6252162012 R. Clark/Wood

Crew to advance 8" rods
to depth and retrieve
sample. Driller indicates
8" rods were loading up.
Pulls 20' of 8" rods to
37' bgs & stops for day
- Begin cutting concrete
at other EPW locations
1200- SAEDACCO (8150 &
8140 crews) leave site
@ 1715- R. Clark/Wood leaves
site.

10/28/19

CIS of Asheville Page 1 of 3
10/29/19 6252162012 R. Clark/Wood

DAILY FIELD NOTES

0700 - R. Clark arrived on site
- Pump dewatering tank
0715 - Conduct H+S Meeting
- 8150LS crew resumes
drilling EPW-21 @ 47' w/ 6"
rod.

- 8140LS crew resumes
drilling w/ 8" rods from
37' bgs to 77' bgs @ EPW-21
- Perform PID monitoring of
breathing zone @ EPW-21
EPW-21

0850-0920 - 8140LS crew
break down; due to missing
bolt & bushing in cylinder
on upper jaw of breakout
table. Able to find
bolt & bushing, clean &
repair.

0920 - Resume drilling
0915 - 8150LS crew
encountered rock @

81' bgs; drilled to 85' bgs
- Drill 8" rods from 17' bgs
to 85' bgs & pull 6" rods

CIS of Asheville Page 2 of 3
10/29/19 6252162012 R. Clark/Wood

- Recovered 4.0' of PWR to
brownish gray, highly weathered
friable garnet mica SCHIST.
- Began casing installation EPW-21
0915-8140LS crew removes
6" rods from ~ 77' bgs

Recovered ~ 0.5' of PWR
to highly weathered friable
dark grayish brown schist; driller
indicated slightly harder
drilling ~ 73' bgs; install
4" PVC casing to ~ 77' bgs
@ EPW-21

1130-8150LS crew completes
installation @ EPW-21; mobilize
& setup on EPW-13

1140-8140LS crew completes
installation @ EPW-71; move
to & setup on EPW-68

1200-1230 SAEDACCO (8150 & 8140) crews
stop for lunch

1230-8150LS resumes drilling
EPW-13; Drilled 8" to 17' contour
as washaz; drilled from 17'
to 87' w/ 6" rods;
contains 27' + as below

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10/29/19 6252162012 R. Clark/Wood

1500-8150LS crew completes
drilling 8" rods to 82' bgs,
retrieves/corres. 6" rods.
Recovered 3.5' of PWR to
brownish gray friable highly
weathered garnet mica schist.
Begin installing 4" PVC casing
1645-8150LS crew

completes installation
@ EPW-13, cleanup
1700-8150LS crew off site
-8140LS crew stops
@ 67' bgs w/ 6" rods
7 8" rods @ 27' bgs
1715-8140LS crew leaves
site. R. Clark off site

[Signature]
10/29/19

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10/20/19 6252162012 R. Clark/Wood

DAILY FIELD NOTES

0700-R. Clark onsite
0715-SAEDACCO onsite/light rain
0230-Conduct HHS Meeting
-8150LS crew setup on
EPW-4.
-8140LS crew resumes
drilling EPW-68 w/ 6"
rods from 67' bgs. Last
corres recovered silty, micaceous
SAND, dense but no rock fragments.
-Begin wet cutting @ 62' bgs
@ EPW-68
-Drill from 67-77' bgs
-Encountered PWR to rock
@ approx 74' bgs
-8150LS crew tops off
grout in EPW-13
0900-SAEDACCO off site due
to rain.

[Signature]
10/30/19

10/31/19

6252162012

R. Clark/Wood

DAILY FIELD NOTES

0730-Arrive onsite / conduct H2S Meeting
 0845-8150LS crew begins drilling

EPW-4 from surface; contain

0'-17' bgs as non-haz

- Drill from 0'-17' w/ 8" rods

17'-77' w/ 6" rods

0745-8140LS crew begins

advancing 8" rods from

27' bgs to 77' bgs via wet

cut. Perform PID monitoring of breather = 0.

1005-8140LS crew completes

advancing 8" rods to 77' bgs

- Removed 6" rods;

recovered 4.5' of P.W.R.

to highly weathered, friable

grayish SCHIST, little quartz fragments

- Driller indicated harder

drilling @ ~ 77' bgs; install

4" PVC casing to ~ 77' bgs

@ EPW-68.

1040-8150LS crew completes

advancing 8" rods to 77' bgs

@ EPW-4; remove 6" rods

Recovered ~ 2.5' of highly

to moderately weathered

10/31/19

6252162012

R. Clark/Wood

friable to mod. moderately, brownish

gray to gray, SCHIST; some

quartz fragments encountered @ top

of recovered rock zone

- Begin installing 4" PVC

casing @ EPW-4 to ~ 77' bgs

- R. Clark pumps off dewatering

tank

- R. Clark performs P.I.D. monitoring

of breathing zone @ EPW-4

1155-8140LS crew completes

installation of 4" PVC

casing @ EPW-68

- 8140LS crew mobilizes

to and sets up on EPW-59

- Begin advancing 8" rods

from surface to 27' bgs

1205-8150LS crew

completes installation

of EPW-4; mobilize to

and set up on EPW-27

Relocate EPW-27 50' SE

of initial staked boring due

to presence of "future"

overhead power in vicinity.

Setup, but did not start

CTS of Asheville

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10/31/19 6252162012

R. Clark/Wood

DAILY FIELD NOTES

Contain 0' - 17' as nonhaz
 & 17' + as haz @ EPW-59
 1430 8140LS crew stops
 for day @ 37' bgs w/
 6" & 8" rods
 - SAEDACCO offsite early
 due to rain/Waterize equipment
 1445 R. Clark offsite

[Signature]
 10/31/19

CTS of Asheville

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11/1/19

6252162012

R. Clark/Wood

DAILY FIELD NOTES

0730 R. Clark onsite/SAEDACCO present
 - conduct H7S Meeting.
 8140LS crew resumes drilling
 EPW-59 from 32' bgs.
 - R. Clark checked grout in
 EPW-68 j @ 26' bgs; Instruct
 drillers to top off grout
 - 8150LS crew member Dylan Everett
 tops off grout in EPW-68
 0815 Robert Miller (2675ND) and
 Christian Americh w/ SAEDACCO onsite
 - Christian & Dylan perform maintenance
 on 8150LS rig.
 0900 R. Clark performs PTD
 monitoring of breathing zone
 = 0.0 ppm. Soil beds = 0.5 ppm
 1055 8140LS crew encounters
 rock @ appx. 63.5 to 64' bgs
 Advance 8" rods to 67' bgs
 1130 8140LS crew begins
 installation of 4" PVC
 casing.
 1200 United Rental onsite
 deliver de-water box & set up
 secondary containment

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11/1/19 6252162012 R. Clark/Wood

United Rentals tear edge of 2nd day container.

1330-United Rental off site

1400-8140LS crew completes

installation of EPW-59.

-Clear up site

1430-8140LS crew off site

1445-R. Clark off site to

get lunch; SAEDACCO/Chris from

onsite to perform maintenance

1500-R. Clark returns

1545-Christie w/SAEDACCO

off site / R. Clark off site

[Large handwritten signature/initials]
11/1/19

CTS of Asheville Page 1 of 3⁰⁹
11/4/19 6252162012 R. Clark/Wood

DAILY FIELD NOTES

0700 ^{AMS} 11/4/19

1000-Leave office for site

1015-Onsite / wait for SAEDACCO

Open rolloffs; drain decontam

tank / Relocated EPW-27 50' to 56' due to

1100-SAEDACCO arrives onsite ^{overhead} electrical

Conduct H & S Meeting. ^{1.00}

-8150LS crew begins drilling

EPW-27 from surface w/8"

-8140LS crew sets up on

EPW-60 & begins drilling

w/8" rods to 17' bgs

-Conduct monitoring of

breathing zone @ EPW-27

= 0.0 ppm @ EPW-60

= 0.0 ppm

1300-8150LS encounters rock

@ 76' bgs @ EPW-27

Advanced 6" rods to 80' bgs

& then advance 8" rods

to from 17' bgs to ^{AMS} 80' bgs

80' bgs

-Begin using new decontam

box

Return to Rain

11/4/19

6252162012

R. Clark (Wood)

DAILY FIELD NOTES

1400 - 8150LS crew completes
advancing 8" rods to
80' bgs; retrieve 5" rods;
recovered 3.2' of highly
to mod. weathered,
friable to mod. indurated
mica schist; trace quartz
fragments above sample

- Begin installation of
EPW-27 4" PVC

1600 - 8140LS crew
retrieve 5" rods from
74' to observe
formation; observe
micaceous, silty SAND
Continue advancing 8"
rods to 82' bgs;
encountered rock @ ~
78.5' bgs; Begin advancing 8" rods to

1630 - 8150LS crew
completes installation
@ EPW-22; set up
on EPW-29; Drill to 17' w/ 8"
rods; contain as non-haz
1700 - SAEDACCO leave site

11/5/19

6252162012

R. Clark (Wood)

DAILY FIELD NOTES

0715 - Arrive onsite
0730 - Conduct H&S Meeting
- 8150LS crew resumes drilling
EPW-29; Begin advancing 6"
rods from 17' bgs to 83' bgs
Encountered rock @ ~ 79' bgs
0830 - Begin advancing 8" rod from
17' bgs to 83' bgs

0830 - 8140LS crew resumes
advancing 8" rods from
27' bgs to ~~82' bgs~~ ^{RMC #1119} to 82' bgs
- R. Clark pumps off dewatering tanks
- Roll off #3 haz is full for soil; Begin
using Roll off #4 for haz. soil.

1000 - 8150LS crew completes
advancing 8" rods to 83' bgs
Retrieve 6" rods; recovered
4.0' of moderately weathered,
moderately indurated, light gray
to grayish brown; GNEISS w/
some schist zones that are highly
weathered. Begin installing 4" PVC
casing.

1045 - 8140LS crew completes
advancing 8" rods to 82' bgs

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R. Clark/Wood

Retrieve 6" rods; obtained 2.5' recovery of P.W.R. to highly weathered, friable, mica schist, grayish brown to brownish gray. Driller indicates drilling was hard from 78.5 to 82' bgs.

- Begin installation of 4" PVC @ EPW-60

1130 - 8150LS crew completes installation of EPW-29;

Move to and setup on EPW-22

1200 - 8140LS crew completes installation of EPW-60;

Move to and setup on EPW-64

- Begin drilling w/ 8" rods from surface to 17' bgs; contain as nonhaz; begin drilling w/ 6" rods. Contain 17' ± as haz.

1230 - 8150LS crew advances 8" rods to 17' bgs; contain as nonhaz; drill from 17' bgs to 85' bgs w/ 6" rods; contain 27' ± as haz; encountered rock harder drilling @ ~81' bgs

11/5/2019

6252162012

R. Clark/Wood

- Advance 8" rods to 85' bgs
1505 - Retrieve 6" rods; recovered friable-mud, indicated by mud hard, highly to moderately weathered light gray GNEISS w/ some schist zones (1.8' recovered of competent, 2.2' of highly weathered schist). Begin installation of 4" PVC @ EPW-22. R. Clark performs breathing zone monitoring w/ P.T.D. @ EPW-22 during drilling = 0.0 ppm & @ EPW-64 = 0.0 ppm

1700 - 8150LS crew completes installation @ EPW-22 to ~85' bgs; Set up on EPW-5
- 8140LS crew drilled to ~83.5' bgs w/ 6" rods; indicates drilling not hard & not a recentered rock. Instruct to drill 8" rods to depth ~83.5 & retrieve sample tomorrow. Draw polystyrene to top of C grant @ EPW-60 & 59. 8150LS tops off grant @ EPW-22, 29 & 22

1730 - SAEPDCCO leave site

11/6/19

625262012

P. Clark / W. Bon

DAILY FIELD NOTES

0230- Arrive onsite

- Conduct H&S Meeting
- 8150LS relocate EPW-5 5.0' east of original location due to overhead line.
- Begin drilling from surface to 17' bgs w/ 8" ; Drill from 17' bgs to 83' w/ 6" rods
- Contains 0-27' as no haz & 27' + as haz
- 8140LS crew resumes advancing 8" rods from 17' bgs to 84' bgs
- Conduct breathing zone monitoring @ EPW-5 & EPW-64 = 0.0 ppm.
- 0900 - 8140LS crew completes advancing 8" rods to 17' bgs. Begin installation of 4" PVC casing.
- 8150LS crew encounters rock @ 79' bgs w/ 6" rods; drill to 83' bgs & begin advancing 8" rods

11/6/19

625262012

P. Clark / W. Bon

- 0940- Complete advancing 8" @ EPW-5; retrieve gray to gray/brown, moderately indurated to friable, highly weathered schist 2.5' competent rock w/ some 2.5' PWR w/ rock fragments above
- Driller indicated lateral drilling @ 79' bgs.
- 1040- 8150LS crew completes installation of 4" PVC casing @ EPW-5; Mobilize to & set up on EPW-28. Relocate 1 east.
- 8140LS crew completes installation of EPW-64; Move to and set up on EPW-69.
- Rock recovered @ EPW-64 consisted, highly to mod weathered friable, brownish gray schist.
- 8150LS crew advances 8" rods to 17' bgs, & 6" rods to 17' bgs.
- 1200-1230- 8150LS crew stops for lunch
- 1220-1245 8140LS crew stops for lunch

12/6/19 6252162012 R. Clark/Wood

8140LS crew EPW-69

advances 8" rods to 17' bgs
 & begin advancing 6" rods
 from 17' to

1430-8150LS crew encountered
 rock @ 78.5' bgs; drill 6"
 rods to ~ 82' bgs &
 begin advancing 8" rod
 from 17' to ~ 82.5' bgs

1530-8150LS - completes
 installation of 4" PVC

@ EPW-28; Move to
 and setup on EPW-36
 - Begin advancing 8" rods
 for surface to 17' bgs.
 - Contain c3 monhanz

stop @ 17'; 8150LS crew
 taps off grant @ EPW-5
 and EPW-28.

1700-8150LS crew leaves
 site

1705-8140LS crew complete
 advancing 6" rods

to 77' bgs; encountered
 rock @ ~ 73' bgs

1715- SAEDACCO 8140LS & R. Clark
 off site

12/6/19

6252162012

R. Clark/Wood

DAILY FIELD NOTES

0700-R. Clark/SAEDACCO on site

Conduct H#5 Meeting

- 8150LS crew resumes

drilling EPW-36 w/ 6"
 rods from 17' bgs

- 8140LS crew begins advancing
 8" rods from 17' bgs to 7'

- G. Hutchinson/Wood on site to
 cut tree limbs @ EPW-15
 w/ pole saw.

0800-G. Hutchinson/Wood off site

0905-8150LS crew encounters
 rock @ ~ 74' bgs; drill to
 78' bgs. Begin advancing 8" rod

- 8140LS crew completes
 advancing 8" rods; retrieve
 rock; dark to light grayish brown
 to gray, moderately weathered,
 friable schist; recovered.

0910-CCI on site to obtain plastic
 (decon pad) drum @ site & 2 purge

water & 3 soil drums from adj.
 property (see manifest & drum

management record)

0915-8140LS crew installs 4" PVC @ EPW-69

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R. Clark/Wood

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R. Clark/Wood

0930-8150LS crew completes
advancing 8" rods to 78'

- install 4" PVC casing @

EPW-36. Recovered 40' of light gray

1015-CLT offsite ^{GNEISS, med. weath.}
^{mod. indurated}

1100-8150LS crew completes

installation @ EPW-36

1105-8150LS mobilizes

to and sets up on EPW-37

and begin drill w/ 8" rods

to 17' bgs. then 6" rods

from 17' bgs. Contain 0-17'

as non-haz 1130-1200 8150LS lunch

1150-8140LS crew completes

installation @ EPW-69

- Mobilizes to EPW-65

& sets up. Begin advancing

8" rods to 17' bgs.

Advance 6" rods from 17' bgs

1300-8150LS crew encounters

rock @ ~ 78' bgs. Advance

6" rods to ~ 82' bgs.

1230-1300 8140LS crew lunch

1300-8140LS crew resumes

drilling 6" rods from 37' bgs

8150LS crew begins advancing
8" rods from 17' bgs to 82'

Encountered Rock @ ~ 78'

bgs. Begin advancing 8" ^{Gran}
^{Med. & High}

rods from 17' bgs to 82' bgs ^{weath.}

1415 8150LS completes ^{3.5' of}
^{Gneiss w/}

advancing 8" rods. Begin ^{scist zone}

installation @ EPW-37

4" PVC casing.

1530-8150LS completes

installation. Top of grant in

EPW-36, 37, 28 & 30

1615-1300LS begins casing

- SAEDACC stops work for

the day; 8140LS @ 82'

bgs w/ 6" rods. Indicates

drilling still "soft", but will retrieve

1630-1300LS offsite ^{sample}
^{tomorrow}

1645-R. Clark offsite

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R. Clark / Wood

DAILY FIELD NOTES

- 0700-SNAEDACCO/R. Clark onsite
 0715-Conduct H3 S Meeting
 - 8150LS moves to and sets up on EPW-15
 - Begin drilling from surface w/ 8" rods; switch to 6" rods @ 17'
 - 8140LS encounters rock @ ~ 78' bgs. ^{begin} Begin advancing 8" rods to depth from 17' bgs
 - 8150LS contains 0'-27' as nonhaz & 27' + as haz.
 - 1005-8150LS crew encounters rock @ ~ 81' bgs @ EPW-15
 - Begin advancing 8" rods to 85' bgs.
 1032-8140LS crew retrieve 3.0' of dark gray, mod.-highly weathered, friable to mod. indurated schist w/ some ~ 1.0' of PWR w/ rock fragments. Begin installing 4" PVC casing @ EPW-65
 1130-8150LS crew completes advancing 8" rods to 85' bgs. Recovered ~ 4.5' of light gray, GIVESS, mod. indurated

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R. Clark / Wood

moderately weathered.

- Begin installation of 4" PVC @ EPW-15
 - Performed breathing zone monitoring @ EPW-15 during drilling activities = 0.0 ppm & @ EPW-65 = 0.0 ppm.
 1130 Christian (mechanic) w/ SNAEDACCO onsite to perform maintenance on 8140LS @ completion of drilling activities.
 1302 8150LS crew completes installation of 4" PVC casing @ EPW-15 & grading top off - 8150LS crew leaves site
 - 8140LS crew completed installation of 4" PVC casing @ EPW-65; top off grout from surface vent pipe.
 1400-8140LS crew off site
 - Christian w/ SNAEDACCO begins maintenance.
 1430-Christian w/ SNAEDACCO off site
 1445-R. Clark off site

Rite in the Rain

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R. Clark/Wood

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R. Clark/Wood

DAILY FIELD NOTES

1030-Tim w/ 8140 crew
on site starts
venting cones
at EPW-73

1000-8150LS crew onset

- Conduct H&S Meeting

8150LS crew sets up on EPW-57

- Begin drilling w/ 8" rods

to 17' bgs; then switch to

6" rods @ 17' bgs (within 0.77')

1115-8140LS crew arrives on site

- Setup on EPW-73; relocate

4.0' north of original drill

location due to edge of

pad, angled concrete @ edge

of pad and overhead tree

- Begin drilling EPW-73

from surface w/ 8" rods

1200-1230-SAEADCO stops for

lunch.

1420-8150LS crew encounters

slightly harder drilling

@ 86' bgs to 90' bgs.

- Advanced 8" rods to depth

7 retrieve 6" rods; material

consisted of dark brown

silty, micaceous SAND, w/

abundant relict rock stringers

but NO rock fragments.

Recover rock ~ 4.0' of soil to

possible PWR. Instruct drillers

to continue advance; drilled

an additional 5' to 95' and

wasn't harder ^{until 11:30 bgs} ^{driller indicated}

harder drilling @ 96' bgs

Advanced to 98' bgs, Retrieve

6" rods; recovered 1.2' of

rock; dark gray, mod. indurated-

friable, highly weathered, silty.

- Begin installing 4" PVC casing

w/ EPW-57 to depth of 98' bgs.

- R. Clark perform monitoring

of breathage zone @ EPW-57

and EPW-73 during drilling

activities = 0.0 ppm @ both

drill site.

1645-8150LS crew completes

installation of EPW-57

- Winterize equipment

- R. Clark pumps off dewetting

tanks

8140LS crew encountered

rock @ 72.5' bgs.

8140LS crew stop @ 72.5' bgs.

1700-8140LS crew off site

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6252167012

R. Clark/Wood

11/12/19

6252167012

R. Clark/Wood

DAILY FIELD NOTES

0730 R. Clark onsite for A&D

0800 A&D onsite to deliver roll off
pickup haz roll off #3
(see form/manifest)

0830 SAEDACCO onsite

- Conduct #3 S Meeting

(late start due to sleet/rain)

- Stops raining (sleet) @

~9 AM; SAEDACCO starts
work at 0900

- 8150LS sets up on EPU-38

begin drilling w/ 8" rods to

17' bgs; confirm as near L&Z #

17+ as L&Z (Performed PID monitoring

0900 A&D leaves site ^{during soil} _{excavation}0905 8140LS crew begins ^{0.0} _{ppm}

advancing 8" rods from

17' bgs to 72.5'; Driller indicates hard zone

1015 Frank w/ A&D onsite B Matt

Harden w/ A&D to dig out

soil/sludge in dewatering

box. Allen Gilstrap w/ A&D

returns to site; overweigh Lt

Indicated he weighed 83,780 lb

A&D did soil from box 3 into box

~5,000 lbs. Allen w/ A&D leaves site

1130-8150LS crew encountered

rock @ 85' bgs @ EPU-38

Advanced 6" rods to

~88' bgs; Driller indicates

crew needs to visit Lowe's

to obtain supplies (duct tape,

contractor bags, etc...) 8150LS

crew leaves site.

1145-8140LS completes advancing

8" rods to ~72.5' bgs; retrieve

6" rods; recovered 15' of

dark gray, med. indurated, mod. highly

weathered schist; recovered rock jointed

1230 Matt w/ A&D indicated they've

excavated dewatering box &

left ~2' of sludge in base

so as to not destroy filter.

Fabric. 1245 A&D off site

1240 8150LS crew returns to

site; Begin advancing 8" rod

to 88' bgs. Perform PID monitoring = 0.0 ppm @ EPU-38

1340 8140LS crew leaves site

for lunch. 1410 8140 crew returns.

1410 8150LS rig experiencing controls

sticking/freezing. Driller uses

heater to dry controls. 8" rods @

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Q52157612

R. Clark (Woods)

at ~ 8 hrs @ EPW-38

1500-8140LS crew completes

EPW-73. 8150LS crew assists

8140LS crew in moving to

EPW-76. Relocate boring 5' west.

1545-SAEDACCO leaves site.

Indicates pump on 8140LS

is frozen; unable to

winterize the pump; leave

valves open.

CTS of Aslerville

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6752162012

R. Clark (Woods)

0800-R. Clark onsite (sitting up for cold)

0800-885-SAEDACCO arrives

0830-Conduct HPS Meeting

-8150LS crew resumes drilling

EPW-38; Begin Installation of

4" PUC Casing.

-8140LS crew begins thawing

pump/hoses @ EPW-76.

0915-A&D arrives onsite

w/ Brenner Tanker truck to remove

evacuate water from Frak

tank. Removed ~ 4,650 gallons

(see manifest). 8140 crew mixes grout for

1035-A&D offsite ^{EPW-73 & 38 with}-8140LS crew still working ^{upsetting for pump to}

on thawing pump & hoses.

1105-8150LS crew completes

installation of EPW-38

* grouting; move to and setup

on EPW-49; Driller setup

7' west of original location due

power pole. Instructs driller

to ^{move} closer, if possible. Relocated

4.0 from initial boring location

to the west.

1140-8140 crew unfrozen & begin

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drilling from 17' bgs w/ 8" rods. Contain as non-haz to 276
1200-1230-8150LS crew steps for lunch, 1230-Begin drilling EPW-49
1230-1245-8140LS crew steps for lunch.
1245-8140LS crew resumes drilling 6" rods from 27' bgs.

1400-8150LS crew encounters quartz zone from ~55'-56' bgs; recovered 1.2' of quartz (8" piece intact).

1505-8150LS crew begins advancing 8" rods to 97' bgs; encountered rock at ~93' bgs.

1540-8150LS crew slacks threads from 8" casing at 98' bgs; broken thread 7' bgs; broke down begins; driller attempts to "fish" out 8" rods.

1630-8140LS crew encounters rock @ 63' bgs; advance 6" rods to ~67' bgs.

1630-1645-crews winterize pumps hoses
1700-SAEDACCO offsite (R. Clark offsite)

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ONLY FIELD NOTES

0700 R. Clark onsite (Tim w/ SAEDACCO already onsite)

0730-8140LS crew arrives onsite - Conduct H & S Meeting

0800-8150LS crew arrives onsite - Will (Driller) indicates 10" rods to overdrill the stuck 8" rods will arrive @ 9 AM; he is making trip to Lowes; helpers Dylan & Tamara stay to top off fluids

0800-8140LS crew begins advancing 8" rods from 17' bgs to ~67' bgs

- Perform PID monitoring @ = 0.0 ppm
EPW-76. 8140 crew unable to obtain vibration in head; driller indicates oil too cold; possibly

0900-FPD arrives w/ Bremer truck - Pump out water from frak tank (see manifest) removed ~5,032 gallons

0915 Will returns to site; Frank w/ SAEDACCO arrives w/ 10" rods

8150LS crew begins setup @ 40"

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R. Clark / Wood

rods.

1000- A & D leaves site w/ Brenner truck.

1015-8140LS begins drilling w/ 8" rods / obtain vib by disassembling switch & reassembling.

- Perform PID monitoring of breathing zone @ EPU-49 = 0.0 ppm & @ EPU-76 = 0.3 ppm

1200-8150LS crew completes advancing 10" rods to ~98' bgs; tremie sand in annulus between 6" & 8" rods in attempt to retrieve.

1200-8150LS & 8140LS crews stop for lunch.

1230-8140LS begins installation of 4" PUC @ EPU-76 - Driller indicated he was losing circulation/water from ~50' to 60'; had not started wet cutting until about 57' w/ 6" rods.

1400-8150LS crew completes advancing 10" rods to 98' bgs & retrieves 8" rods.

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R. Clark / Wood

8150LS removes 8" rods &

6" rods; but sand remains @ 80' bgs; utilize 6" rods to wash out sand.

1500-8150LS crew tags bottom w/ 1" tremie in 88' bgs; ~10' sand remains; readvance

6" rods to depth to run up & wash sand from 10' 8" rods.

1545-8140LS completes installation @ EPU-76; crew begins tapping off grant.

1600-8140LS crew begins prepping for demobilization.

8150LS recovered 3.5' of dark gray mud indicated to friable.

mud weathered to highly weathered schist @ EPU-49

1615-8150LS crew removed 6" and tagging sand @

94' bgs. Driller indicates he will set casing in morning

& begins winterizing equipment.

1700- SAEDACCO leaves site.

Plot in the Rain

11/15/19

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P. Clark/Wood

DAILY FIELD NOTES

0700 - R. Clark / SAEDACCO onsite

- 8140LS crew tops off
grout @ EPW-76- 8150LS crew begins
grouting EPW-490800 - Allen G. w/ A&D arrives
onsite. Drop roll off
empty for haz disposal
& line it with plastic0815 - John w/ A&D arrives w/
Brenner tanker truck to
begin evacuating frak
tank. Removed ~4,945
gallons. 8140LS crew cuts casings.0835 - Allen G. unable to pick
up nonhaz load due to
drillers @ EPW-49

0915 - John w/ A&D leaves site

0935 - Drillers complete
grouting @ EPW-49;
& pull rig off location
so A&D can load
nonhaz rolloff1015 - A&D completes loading
& leaves site / 8150LS
1045 - 8140LS crew offsite

11/15/19

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P. Clark/Wood

Crew continues grouting

1100 - A. Gilstrap w/ A&D
returns to site; NonhazBox is 300 lbs overweight
Unload Box; Use skid
steers to remove~500 lbs of soil in place
in haz box #5 1145 - A&D offsite1200 - 8150LS completed grouting
and set up on EPW-48- Christian w/ SAEDACCO
onsite to perform maintenance

on 8150LS rod handler (slow)

1245 - 8150LS crew & Christian
w/ SAEDACCO leaves1300 - Portajohn (Able) onsite
to clean

1320 - Able Offsite

1500 - A&D (Allen Gilstrap) onsite
- Drop roll off empty
& pickup haz rolloff #4
(see Mgt. Form)

1600 - A&D / R. Clark leave site.


11/15/19
R. Clark/Wood

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G2S216201

R. Clark/

DAILY FIELD NOTES

1030- SAEDACCO onsite/Setup
on EPW-481100-R. Clark onsite/conduct
H&S Meeting- 8150LS crew begins
advancing 8" rods to 17'
* then 6" rods from
17' bgs to 57'1200-8150LS crew stops @
57' bgs w/ 6" rods
for lunch & to obtain disc1230- Resume drilling
EPW-48; begin wet cut
@ 57' bgs.1430- Encountered rock
@ 84'; advanced to 88'
Advanced 8" rods from
17' - 88'; & retrace 6"
rods; Recovered 3.0' of
PWR to high weathered,
friable SCH/ST; some quartz
fragments above sample,
up to 4" in Ø.1635 Complete Installation
@ EPW-48.

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G2S216202

R. Clark/

1645 Setup on EPW-56

1700- SAEDACCO (R. Clark offsite)

Rock

11/18/19

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R. Clark / Wood

DAILY FIELD NOTES

0700 - R. Clark / SACDACC onsite

- Conduct H&S Meeting

8150's crew begins advancing

8" rods @ EPW-56 to 17'

bgs; then 6" rods from

17' bgs; Contain surface to 27'

bgs as nonhaz.

0900 - Encountered rock

@ ~ 835 bgs; advanced

6" rods ~ "bgs; & begin

advancing 8" rods from 17'

0955 - Complete rock advancing

8" rods; retrieve 6" rods

Recovered 2.0' of P.W.R. to

highly weathered, friable

Schist, dark brownish gray

1000 Begin installing 4" casing

@ EPW-48.56

1100 - Complete EPW-56 install

Move to and setup on

EPW-61

1130 - Begin advance 8" rods

@ EPW-61 from surface

to 17' bgs. Contain

0-27' as nonhaz B

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R. Clark / Wood

22' + as hazardous soil

1200-1230 ~ lunch

1230 - 8150's crew resumes

drilling from 27' bgs

1505 - 8150's encountered rock

@ ~ 835 bgs; encountered

quartz from ~ 63' - 65' bgs

Advanced 6" & 8" rock

to ~ 87.5' easting; Begin

installation @ 4" PVC casing

@ EPW-61. Recovered

3.5' of PWR to highly weathered,

friable, brownish gray SCHIST

trace little mod. indurated, hard

rock fragments/sections

1645 - Complete installation

of EPW-61; Setup on

EPW-78.

- Top off grout @

EPW-56 & 61

R. Clark / Wood

11/20/14 6252162012

G. Hutchins/Wood

Daily Field Notes7:00 G. Hutchins + R. Clark (wood) + SAEDACC
onsite, Conduct H+S Meeting7:30 BLSOLS begins drilling @ EPW 78
8" Rods to 17' bgs then 6" Rods
from 17' bgs10:00 Encountered rock @ 60' bgs,
advanced 8" rods 4' into rock
Stopped boring @ 64' bgs.
Advance 8" rods to 64' bgs
Retrieve 6" rods. Install
EPW 78 casing.11:15 Complete EPW 78 and set up on
EPW 75. Begin drilling 8" rods
to 17' bgs

11:45-12:30 Lunch

12:35 Advance 6" Rods from 17' bgs

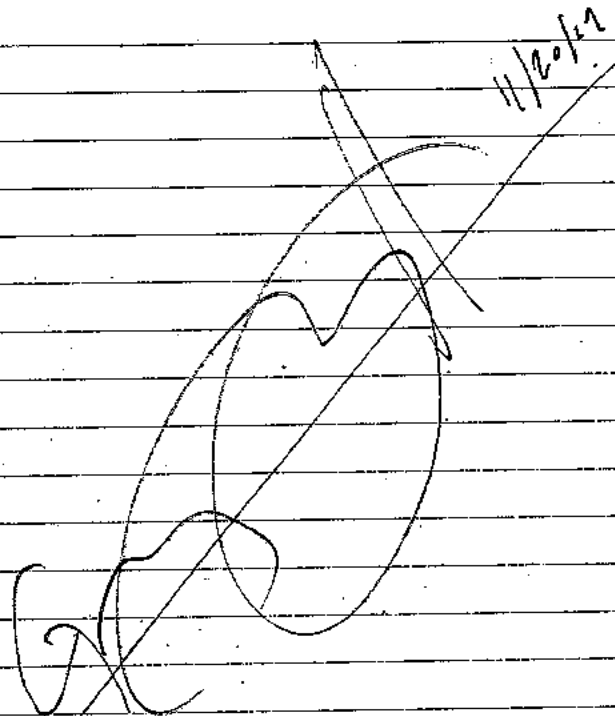
13:10 A&D onsite to collect
Flux roll off #514:00 BLSOLS Encountered rock @ 68' bgs
advanced 8" rods 4' into rock
Stopped boring @ 72' bgs.
Retrieve 6" rods. Install
EPW 75 casing15:00 BLSOLS sets up on EPW-72
Advance 8" rods to 17' bgs

11/20/14 6252162012

G. Hutchins/Wood

BLSOLS encountered rock @ 74' bgs
@ EPW 72. Advance 6"
to 78' bgs.

17:20 SAGDAWD + wood offsite.



R. Clark

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G252162012

R. Clark/Woods

DAILY FIELD NOTES

0700- Arrive on site / SAEDACCO on site

- Conduct H*5 Meeting
- 8150LS begins advancing 8" rods from 17' bgs to 78' bgs @ EPW-72.

0800- Advanced 8" rods to 6' bgs; Begin installation of 4" PVC casing. Recovered 1.5' of P.W.R. to highly weathered friable SCHIST, gray to grayish brown.

1015- Complete installation mobilize to and setup on EPW-55. Advance 8" rods to 17' bgs & 6" rods from 17' to 27' as non-haz. Drill to 57' bgs

1200-1230 Stop for lunch
1300- Encountered rock @ 83.0'; Advanced 6" rods 87' & then advanced 8" rods from 17' - 87'.

1400 Recovered 2.5' of ^{dark} gray to med. indurated, highly to med. weathered

CTS of Asheville

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11/21/19

G252162012

R. Clark/Woods

SCHIST. Begin installation of 4" PVC casing. Performed breathing zone monitoring during drilling activities = 0.0 ppm.

1500- Complete installation of EPW-55; move to & setup on EPW-54.

- Drill to 17' w/ 8" rods
- Drill from 17' - 80' w/ 6" rods.

Encountered quartz zone from ~ 63-64' bgs and rock @ ~ 75' bgs.

1710- Stop drilling for the day & begin clean-up.

1730- SAEDACCO/R. Clark off site

11/21/19

R. Clark/Woods

CTS of Asheville Page 1 of 1
11/22/19 6252162012 R. Clark/Wood

0700-R. Clark / SAEDAECCO onsite

- Conduct H & S Meeting

8150LS advances 8" rods from 17' bgs to 80' bgs:

0930 Complete advancing 8" rods

Remove 6" rods; recovered 32' of P.W.R. to highly weathered friable, dark gray to brownish gray, SCHIST. Begin installing 4" casing @ EPW-54.

1130 Complete installation @ EPW-54. 1100-1130-200 lunch

1200 Move to and set up on EPW-67. Hydraulic hose leaking when rig in operation

1230-SAEDAECCO Offsite

1200-1245-ABD onsite to pickup small dewatering box (baz soil)

1300-R. Clark offsite

[Signature]
11/22/19

CTS of Asheville Page 1 of 1
11/25/19 6252162012 G. Hutchings/Wood

0830 G Hutchings / SAEDAECCO onsite to repair 8150LS

1130 Begin advancing 8" rods to 17' bgs then 6" rods from 17' bgs @ EPW 67

1245 Encountered Quartz veins from 62' - 64' bgs

1345 Complete advancing 8" rods to 85' bgs. Remove 6" rods Recover rock fragments + weathered schist. Begin installing EPW 67

1500 Complete installation of EPW 67

1520 8150LS set up on EPW 47

1600 8150LS 6" Rods to 37' bgs

1645 G Hutchings / SAEDAECCO offsite

[Signature]
11/25/19

11/26/19 6252162012 G. Hutchins/Wood

7.15 G. Hutchins + SAGDALCO onsite.

- H+S meeting.

7.45 8150LS continue on CP-47

with 6" Rods from 37'

to 88' bgs. Advance 8" Rods

to 88' bgs and recover 6" Rods

Highly weathered rock fragments

recovered from boring.

10.45 Begin construction of CP-47.

12.30 Complete construction of CP-47.

12.30 Lunch

13.00 A&D Enviro returns to site

with filter box. 24" of sludge

to be removed before returning

to United Rentals

13.30 8150LS crew performs Rig repairs.

14.00 8150LS Power washer used to

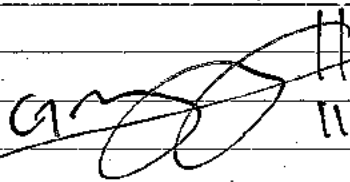
clean filter box.

17.15 Complete power washing of filter

box.

17.45 G. Hutchins + SAGDALCO

offsite


 11/26/19

11/27/19 6252162012 G. Hutchins/Wood

7.15 G. Hutchins + SAGDALCO onsite

- H+S meeting

7.30 G. Hutchins + SAGDALCO complete

additional rinse of filter box

8.00 A&D Enviro onsite to collect

filter box

SAGDALCO cleans site

8.45 8150LS sets up on CP-46

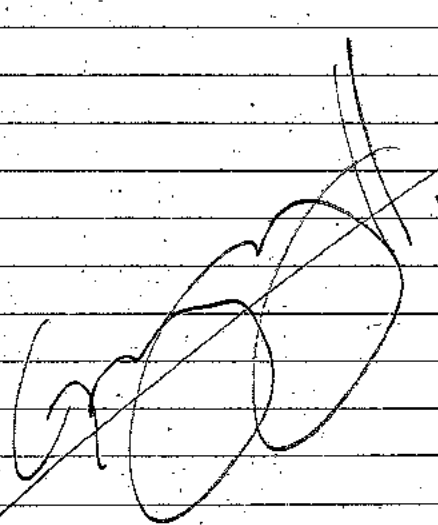
Advance 8" Rods to 17' bgs

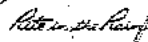
then 6" Rods from 17' bgs.

to Rock @ 88' bgs. Advance

6" Rods ~ 4' into Rock

11.45 G. Hutchins + SAGDALCO offsite


 11/27/19



CTS of Asheville Page 1 of 3
12/2/19 6252162012 R. Clark/Wood

- 09:00 - R. Clark/S. Avritt w/ Wood onsite / Fix personnel onsite
- Conduct H₂S Meeting
09:30 - S. Avritt received delivery of 84,000 lbs of potassium permanganate (2 tractor trailers)
- Fix begins setup @ EPW-5 & setting up hopper/equipment.
10:20 - SAEDACCO onsite
Setup to drill / fill polytates
- Continue advancing EPW 46. 8150LS crew
- Begin advancing 8" rods from 17' to 85' bgs
11:50 - 8150LS crew completes advancing 8" rods, retrieve 6" rods & recovered 15 dark gray mod. indurated, mod. weathered ~~material~~ SCH 15T; in 1.0 of PWR material recovered
12:00 - Begin installation of EPW-46 4" casing.

CTS of Asheville Page 2 of 3
12/2/19 6252162012 R. Clark/Wood

- 1300 - Fix leaves site for Greenville (shop)
+330 - 8150LS crew completes installation of EPW-46
- Stop for lunch
1400 - 8150LS crew sets up on EPW-45
Drill from surface to 17' bgs w/ 8" rod & casing as noted
Drill from 17' to 78' w/ 6" rods & casing as noted
Perform monitoring of leaking zone w/ PID = 0.0 ppm
Encountered rock @ 74' bgs
Completed advancing 8" rods to 78' bgs; retrieving 6" rods light to dark gray, moderately indurated, moderately weathered GNEISS.
1630 Begin installation of 4" PVC of EPW-45
1730 - During installation, after removing frame & grouting from surface via frame in annulus; water began displacing from 4" casing ~~from casing~~

CTS of Asheville

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12/2/19

6252162012

R. Clark/Wood

- Driller indicated that ball unsent in grout shoe & any action to correct will make grout intrusion worse.

1800 - SAEDACCO R. Clark off site

[Signature]
12/2/19

CTS of Asheville

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12/3/19

6252162012

R. Clark/Wood

0715 - R. Clark / SAEDACCO on site

- Conduct H & S Meeting w/ SAEDACCO (8150LS CPLW) attempts to flush material (grout) via tremie pipe from EPW-45 / indicated ~ 7' of grout in bottom of casing

0800 - FRX personnel arrive

0800 - Susan Aircitt / Wood on site

0830 - Conduct H & S Meeting w/ FRX personnel

0800 - SAEDACCO (8150) set up on EPW-53; drill from surface w/ 8" casing to 17' bgs & then begin advancing 6" rods

- Confirm 0-17' as non-laz
FRX continues setup @ EPW-5

- Perform high pressure test on water jet / cutter

1100 - Perform monitoring of breathing zone @ EPW-53 = 0.6 ppm

1115 - 8150LS crew encountered

rock @ 69' w/ 6" rod; advance to 74'; completed advancing

8" rod to 74' bgs; recovered

2.5' of dark gray mod. indurated mod. weathered GNEISS.

[Signature]

CTS of Asheville

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Page 2

R. Clark (W)

1120-United Rentals on site to pick up secondary containment. Driver indicated hole in containment is too large to patch. Holes made during pickup of demustering tank although matting not used when dropped off by United Rentals.

1130-FRX began 1st injection @ EPW-S @ 76' bgs, but moyno pump @ mixing trailer not functioning properly; FRX disassembles pump/replaces stators.

1200-Pump still not functioning. Need to purchase new

FRX begins clearing up for the day.

1200-1230-Drillers (8150LS) complete installation of EPW-43

Stop for lunch

1230-8150LS crew moves to and sets up on EPW-43

1300-FRX leaves site /

-Able. on site to service portable

1305-8150LS begins drilling EPW-43 w/ 8" rods to 17' bgs & 6" rods from 17' bgs

CTS of Asheville

Page 2

12/3/19

6252162012

R. Clark (W)

Contain 0-17' as non-haz & 17' + as haz.

1440-Encountered rock @ 61' bgs; drill to ~ 65' bgs w/ 6" rods; Begin advancing 8" rods from 17' bgs to ~ 65' bgs.

1530-Complete advancing 8" rods; retrieve 6" rods; recovered 3.8' of grayish brown to gray mod. indurated, mod weathered, SCHIST grades to GNGISS (recovered ~ 3.0' of GNGISS)

-Begin installation of 4" casing @ EPW-43

1430-Move to and setup on EPW-34; Begin drilling w/ 8" rods to 17' bgs & then stop

Top off grout in EPW-43

1730-leave site for day after winterizing equipment.

[Signature]
12/3/19

Rite in the Rain

150 CTS of Ashenville Page 1 of 3
12/4/19 6252162012 R. Clark/Wood

DAILY FIELD NOTES

0715 - R. Clark / SAEDACC on site
- Conduct H & S Meeting
- Resume drilling EPW-34
from 17' bgs w/ 6" rods
Contain 17' + as has material
0845 - Encountered rock
@ ~ 64' bgs; advance 6"
rods to 68' bgs. Begin
advancing 8" rods from
17' bgs to 68' bgs
0930 - Complete advancing
8" rods to 68' bgs; retrieve
6" rods; recovered 1.5' of
gray mud. Inducted mud. weathered
to fresh GNEISS; trace quartz
fragments @ top of recovery
but drill did not know depth
encountered. Begin installation of 4" PVC
0950 - 3 personnel w/ FRx
onsite. ^{Worm gear delivered}
1010 - 1 additional personnel w/
FRx on site / Conduct H & S Meeting
FRx begin repairs to Mogro
worm gear.
1045 - 8150LS crew completes

CTS of Ashenville Page 2 of 3
12/4/19 6252162012 R. Clark/Wood

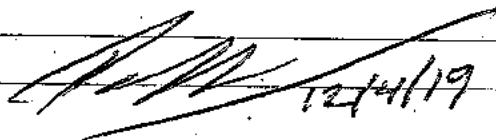
DAILY FIELD NOTES

installation of EPW-34; move
to rack setup on EPW-26
1235 - 8150LS encountered quartz
from ~ 53-54' bgs
1255 - 8150LS crew encountered
rock @ 69' bgs @ EPW-26, advance
to 73' bgs w/ 6" rods &
then begin advancing 8" rods
from 17' bgs
1300 - FRx completed repairs &
setup. Perform first
injection @ EPW-S @ 76' bgs
(800 lbs) of K₂MnO₄
1316 - FRx removes frac/
injection equipment from
casing to clean jets
& jet housing.
1400 - 2 personnel w/ FRx
return from Greenville w/
mixing equipment.
1405 - 8150LS crew begins
installation of 4" casing @ EPW-26
1415 - FRx completes repair of jets
- Begin 2nd frac injection @
70' bgs in EPW-S (1,200 lbs of K₂MnO₄)

CTS of Asheville Page 3 of 5
12/4/19 6252162012 R. Clark/wood

DAILY FIELD NOTES

- 1505 - 2nd frac complete / FRx begins mixing new batch of $KMnO_4$
- 1510 - ^{8150LS crew} Completed installation of EPW-26 / Top off grout @ EPW-34 / 26
- 1515 - Begin third injection @ 64' bgs @ EPW-S
- 1605 - 8150LS crew moves to and sets up on EPW-9 Relocate boring 6' to Southwest / South of initial location due to fence
- 1610 - Rig leaking oil; driller indicated likely from air compressor; SAEDACCO mechanic to be onsite.
- 1625 Down w/ FRx indicated 4th injection failed; FRx
- 1635 - FRx offsite
- 1640 - SAEDACCO offsite
- 1650 - R. Clark offsite.

 12/4/19

CTS of Asheville Page 1 of 5
12/5/19 6252162012 R. Clark/wood

DAILY FIELD NOTES

- 0715 - SAEDACCO / R. Clark onsite
- Conduct H&S Meeting
- 8150LS crew (2) set up to top off grout & cut casings, (1) Offsite to obtain plywood & other supplies
- 0745 - Christian w/ SAEDACCO onsite to repair leaking oil from air compressor.
- 0750 - FRx onsite / Begin arriving
- 0800 - Conduct H&S Meeting w/ FRx personnel
- FRx begins setup for reattempt of 4th injection @ 585 bgs in EPW-S
- 0830 - FRx ⁸⁴⁰⁰ reattempts 4th injection & again fails; Retrieve injection equipment from EPW-S & swap / replace injector head w/ 2-jets versus previous
- 0900 - Repair completed on 8150LS rig; complete setup on EPW-9
- Begin drilling w/ 8" rods to 17' bgs & 6" rods from 17' bgs
- Contains 0-17 as non-haz & 17' + as haz
- 0950 FRx jet replacement complete.

DATE _____

Date 12/5/19

Project / Client CTS of Asheville Page 2 of 4

6252167017

R. Clark Koon

CONTINUED DAILY NOTES FROM BOOK 1

0955-Frx attempts 4th injection
interval @ 57.0² bgs @ EPCWS
(1,000 lbs $KMnO_4$)

1020-FRx mixes new batch of $KMnO_4$

030-8150 crew encountered
rock @ 75' bgs advance
6' rocks ~~75'~~ ^{79 ft 10 in} bgs & begin
advancing 8' rocks, Begin install of 6'.

1100- Completed advancing using
8" rods to ^{19' 25"} 28' 6". Remove
6" rods, recovered 1.5' of
gray to brownish gray, mod.
indurated, mod. weathered.

GNEISS recovered 1.0' of P.W.R
material w/ rock fragments

1100-FR_x completed injection
 @ 52' 6_{gs} in EPCW-S (100016_{gs} KN₆O₇)
 Setup for injection @ 46' 6_{gs}.

11 30-1200 ¹¹¹⁴⁰ FRx changing hydraulic oil

on making equipment
1140
1200-FR_x resume/performance injection
@ EPW-S @ 46'65"

1200-FRX completes injection (C)
EPW-S / Stop for lunch *Note on the Pad*

Rate in the Rain

4

Location Asheville, NC Date 12/5/19
 Project / Client ETS of Asheville R. Clark/Wood
6252162012 Page 3 of 4

1200- SAEDACCO also stops for lunch
 1230-FRx returns to site
 - Move to EPW-22 and setup.
 1230-8150LS crew moves to and sets up on EPW-10
 Relocated 12' to Southeast of initial location
 - Drill to 17' bgs w/ 8" rods & then drill from 17' bgs w/ 6" rods
 1330 FRx begins injections @ EPW-22 @ 76' bgs
 1400-FRx performs injection of KMnO_4 @ 70' bgs @ EPW-22
 1415-FRx performs injection @ 64' bgs (1000 lbs)
 1430-Encountered rock @ 70' bgs
 1430-Encountered rock @ 70' bgs, drill to 78' bgs
 - Recovered Advance 8" from 17' bgs to 78' bgs @ EPW-10
 1530. Recovered gray to dark gray, med. indurated, med. weathered, GNESS
 1500-FRx injected 1,000 lbs of KMnO_4 @ 52' bgs @ EPW-22
 1530 FRx injected 1,000 lbs of KMnO_4 @ EPW-22 @ 46' bgs

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Location Asheville, NC Date 12/5/19
 Project / Client ETS of Asheville R. Clark/Wood
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1630-S. Avritt w/ Wood & Craig Zeller w/ USEPA onsite.
 FRx utilized 2,500-3,000 gallons of water for day.
 1600-FRx move to end setup on EPW-49.
 1620-FRx leaves site
 - Craig Zeller w/ USEPA leaves site
 - S. Avritt offsite to obtain locks
 1625-8150LS completes installation @ EPW-10; moves to & sets up on EPW-18; Drill to 17' bgs w/ 8" rods & 17' w/ 6" rods; contain 0-17' as nonhaz & 17' to 25' bgs encountered rock @ ~73' bgs
 Drilled to 77' bgs
 1800 SAEDACCO & R. Clark offsite.

[Signature] 12/5/19

Plot in the Rain

Location Ashville NC Date 12/6/19
Project / Client CTS of Ashville R. Clark/wood
6252162012 Page 1 of 3

0715 - R. Clark / SAEADACCO onsite
Conduct H#5 Meeting
8150LS crew continues
advancing 8" rods from
17' bgs @ EPW-18
0800 - FRx arrives onsite
Conduct H#5 Meeting
Susan Arritt onsite
FRx continues setup @
EPW-49.
0820 - 8150LS crew completes
advancing 8" rods to 77' bgs
@ EPW-18; Retrieve 6" rods
Recovered 1.5' of gray, med.
indurated, mod. weathered
GNEISS; stained fractures.
Begin installation of 4" PVC
0830 - FRx begins mixing
batch of $KMnO_4$
0845 - Injection @ 91' fails / FRx pulls up
0930 - Complete injection
@ EPW-49 @ 90.5' (1,000 lbs
of $KMnO_4$)
*Packer failed / high pressure
 $KMnO_4$ into tub @ surface

Location Ashville NC Date 12/6/19
Project / Client CTS of Ashville R. Clark/wood
6252162012 Page 2 of 3

0945 - 8150LS crew completes
installation @ EPW-18
Top of E grant @ EPW-9.10328
0945 - RMC 12/6/19
1007 - FRx injects $KMnO_4$ @ 85' bgs
@ EPW-49 (1000 lbs of $KMnO_4$)
1035 - FRx begins mixing batch of $KMnO_4$
1030 - SAEADACCO sets up decon
pad (2 personnel); while
(1 personnel) on skid steer
begins cleaning site
1043 - FRx performs injection
@ 79' bgs @ EPW-49
(1000 lbs of $KMnO_4$)
1115 - Begins raining
slightly / FRx gets in
truck / stop work
- SAEADACCO begins cleaning
out poly totes w/ soil
1125 - FRx resumes work
1140 - FRx performs injection
@ 73' @ EPW-49 (1,000 lbs $KMnO_4$)
1210 - FRx performs injection @
67' bgs in EPW-49 (1,000 lbs $KMnO_4$)
Checked breathing zone = 0.0 ppm

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Location Ashville, NC Date 12/6/19
 Project / Client CTS of Ashville R. Clark/Wood
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12:40 - FRx performs injection @ 61' bgs @ EPW-49 (1000 lbs $KMnO_4$)
 1320 - FRx performs injection @ 55' bgs @ EPW-49 (1000 lbs $KMnO_4$)
 1350 - FRx performs injection @ 49' bgs @ EPW-49 (1000 lbs $KMnO_4$)
 1400 - FRx removes injection equipment from casing and begins moving locations.
 1405 - SAEDACCO completes cleanup, decom, top off grout & cleaning soil from poly tanks.

14:50 - Perform Injection @ 88' bgs @ EPW-57 (1000 lbs $KMnO_4$)

15:30 - Perform Injection @ 82' bgs @ EPW-57 (1000 lbs $KMnO_4$)

1545-1615 - FRx packs up for day, lock trailers

1630 - FRx/R. Clark offsite

12/6/19

Location Ashville, NC Date 12/9/19
 Project / Client CTS of Ashville R. Clark/Wood
6252162012 Page 1 of 3

08:00 - FRx/R. Clark onsite
 - Conduct H & S Meeting.
 Trailer (Support) broken into; FRx indicates two generators, power tools & hand tools stolen
 - Discover cut fence in NE corner of site and foot path through leaves down to Mills Gap Road. (Contact S. Arritt who will contact Sheriff's office)
 - 0815 - lightly raining
 0845 - FRx begins mixing; 0815 - 0845 - FRx struggling to get power through extension cords in rain due to both generators being stolen & hydraulic connection to EPW-49
 09:00 FRx shuts off EPW-49 & performs injection @ 76' bgs @ EPW-57 (1000 lbs $KMnO_4$)
 09:30 FRx performs injection (Noted for 3 min) @ 70' bgs @ EPW-57 (1000 lbs $KMnO_4$) / Mud 100 gal / Chase 40 gal
 0955 - FRx performs injection (Noted for 3 min) @ 64' bgs @ EPW-57 (1000 lbs $KMnO_4$) / 100% Mud / Chase 40 gal
 Noted for 2 min 30 sec

Location Asheville, NC Date 12/4/19
 Project / Client CTS of Asheville R. Clark/Wood
6252-16-2012 Page 2 of 3

10:20 - FRx performs injection
 @ 58' bgs @ EPW-57 (1000 lbs
 $KMnO_4$, 100 Mud, Chase 40 gal)
 Notched for 3 min

10:58 FRx performs injection
 @ 52' bgs @ EPW-57
 (150 lbs $KMnO_4$, Mud 25 gallons
 Chase 0 gal / Check breathing air: 60
 Daylights 4' ~~5'~~ (water) 11^{am}
 Notched for 3 min ^{RAIA}

11:02 Stop Injection

11:20 - FRx leaves Site

11:15 - FRx attempted
 notch @ 46' bgs -

12:10 - FRx returns from lunch
 - Move to anode setup on EPW-62
 @ 78' bgs / Notch @ 2 min

12:59 - 13:13 FRx performs injection
 @ 78' bgs @ EPW-62 (1,000 lbs
 $KMnO_4$, 100 Mud, Chase
 45 gal.) Notch @ 2 min

13:29 - 13:37 FRx performs injection
 @ EPW-62 @ 72' bgs
 (800 lbs $KMnO_4$, 85 gallons Mud &
 45 gallons Chase) Notch @ 2 min

Location Asheville, NC Date 12/9/19
 Project / Client CTS of Asheville R. Clark/Wood
6252-16-2012 Page 3 of 3

13:49 - 14:01 - FRx performs injection
 @ EPW-62 @ 66' bgs (1,000 lbs $KMnO_4$,
 Mud 100 gallons, Chase 45 gallons), Knot @ 2 min

14:14 - 14:27 - FRx performs injection
 @ EPW-62 @ 60' bgs (1,000 lbs
 $KMnO_4$, Mud 100 gal & Chase 45 gallons)
 Knot @ 2 min

14:35 - 14:46 FRx performs injection
 @ EPW-62 @ 54' bgs (1,000 lbs $KMnO_4$,
 100 gallons, 45 gallons)

15:03 - 15:11 EPW-62 RMC 12/9/19

FRx performs injection @
 48' bgs @ EPW-62 (1,000 lbs
 $KMnO_4$, 100 gallons mud, Chase
 45 gallons. Notch for 2 min

15:21 - 15:31 - FRx performs
 injection @ 42' bgs @ EPW-62
 (1000 lbs $KMnO_4$, 100 gallons
 Chase 45)

16:00 - FRx leaves site for
 the day

12/9/19

Location Asheville, NC Date 12/10/19
 Project / Client CTS of Asheville R. Clark / Wood
6252-16-2012 Page 1 of 2

0800-FRx / R. Clark onsite
 - Conduct H+S Meeting
 0810-FRx begins setup for the day
 Set up on EPW-66
 0840-EPW-66 @ 74' Perm: 1,000 lbs
 Start: 0840 Mud: 130 gal
 Stop: 0856 Chase 45 gal
 09:15 FRx performs injection @
 EPW-66 @ 68' bgs
 09:16 Start Perm: 1000 lbs
 09:24 Stop Mud: 100
 09:42 FRx performs injection @
 EPW-66 @ 62' bgs Perm: 1000 lbs
 Start: 9:42 Mud: 40
 Stop: 9:51 Chase 40
 10:07-FRx performs injection @
 EPW-66 @ 56' bgs Perm: 1000 lbs
 Start: 10:07 Mud: 90 gal
 Stop: 10:17 Chase: 40 gal
 10:31-FRx performs injection @
 EPW-66 @ 50' bgs Perm: 1,000 lbs
 Start: 10:31 Mud: 90 gallons
 Stop: 10:40 Chase: 40 gallons
 10:48-FRx performs injection
 @ EPW-66 @ 44' bgs
 Start 10:48 Perm: 1000 lbs

Location Asheville, NC Date 12/10/19 13
 Project / Client CTS of Asheville R. Clark / Wood
6252-16-2012 Page 2 of 2

Stop 10:58 Mud: 40 gal. Chase 40 gal.
 Hydraulic connection made to EPW-62
 11:07 FRx performs injection @
 EPW-66 @ 38' bgs Perm: 1,000 lbs
 Start: 11:07 Mud: 90 gallons
 Stop: 11:16 Chase: 40 gallons
 11:20-11:45 Setup on EPW-70
 - move to location & setup
 11:45 FRx stops for lunch
 12:25-FRx returns from lunch
 - Continue setup @ EPW-70
 - Mix new batch of K₂SO₄
 - FRx performs injection @
 EPW-70 @ 71' bgs
 Start: 12:54 Perm: 1,000 lbs
 Stop: 13:09 Mud: 90
 Back breathing air: 0.0 ppm Chase 40
 13:30 FRx makes decision to
 stop work due to cloudy &
 rainy conditions.
 - Cleanup site
 14:00 FRx leaves
 R. Clark pumps dewatering
 tank & then leaves site
 14:30 R. Clark off site

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Location Asheville, NC Date 12/11/19
 Project / Client CTS of Asheville R. Clark (UNCO)
6252-16-2017 Page 1 of 2

0800 - R. Clark onsite / FRx (1 personnel) onsite

0810 - FRx (full crew) onsite

- Conduct H & S Meeting

FRx begin trying to thaw
 hoses/equipment (temp 30°F
 w/ wind chill of 20°F)

- Water lines iced, but
 flowing. Injection lines
 & mono are frozen
 solid.

0905 - FRx leaves site

1230 - FRx back onsite
 (3 personnel)

- Pipes still frozen

- Wait in truck for other

FRx personnel. Perform breathing zone = 0.0 ppm

1240 - FRx (2 personnel) arrives

1240 - 1515 - FRx personnel
 put hoses that are frozen
 in heated office trailers
 thaw mixing equipment on
 mixing trailer & winterize
 Disassemble injectors
 on compressor and remove
 ice w/ torch.

Location

Asheville, NC

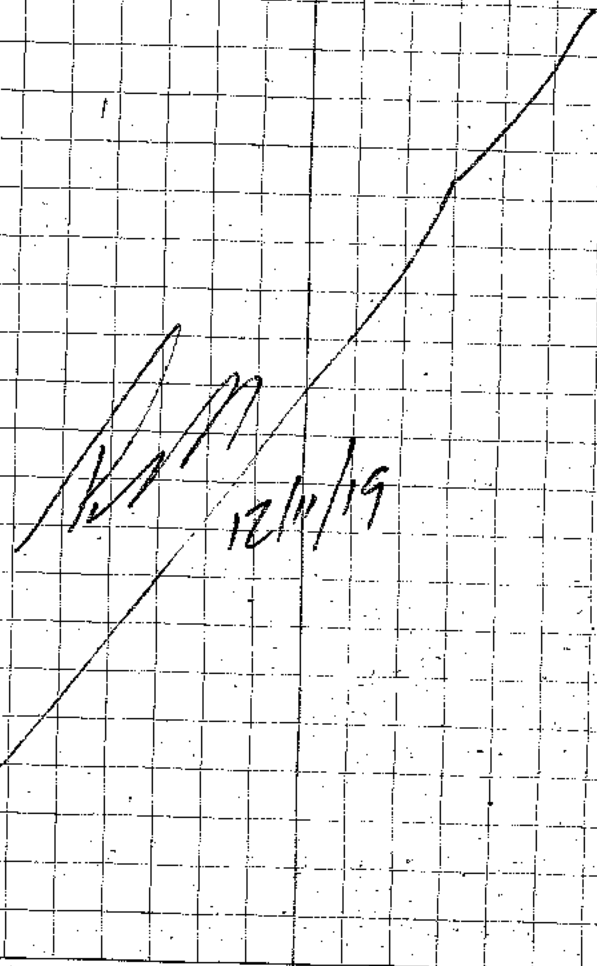
Date

12/12/19

Project / Client

CTS of Asheville6252-16-2017 Page 2 of 2

~~1530~~ ^{FRx arriving} 1515 - FRx personnel
 leave site for the day
 1530 - R. Clark leaves site.



Location Ashville, NC

Date

12/12/19

Project / Client

CTS of Asheville6252-16-2012 Page 1 of 3

0900-R. Clark onsite

0930-FRx onsite

- Conduct H & S Meeting

FRx begins pulling hoses
from building, unthawing
water supply connector
Reassemble injectors to
compressor, thaw magna
pump

12:00-FRx completed

unthawing hose/equipment

12:11^{ENC 12/11/19} FRx performs injection

@ 65' bgs @ EPW-70

Start: 12:11 Notched for

Stop: 12:16 3 minutes Ice
in injection hose / unthaw
ice / disassemble hose.

12:24 - FRx performs

injection @ 65' bgs @ EPW-70

Start: 12:24 Perm: 1,000 lbs

Stop: 12:35 Mud: 120 gallons

Chase: 38^{ENC 12/11/19} gallons

1241: FRx stops for lunch.

1310-FRx returns to site

Location

Ashville, NC

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12/12/19¹⁷

Project / Client

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13:33 FRx performs injection

@ EPW-70 @ 59' bgs

Start: 13:33 Perm: 1,000 lbs

Stop: 13:43 Mud: 120 gallons

Chase: 40 gallons

13:57 FRx performs injection @

EPW-70 @ 53' bgs

Start: 13:57 Perm: 1,000 lbs

Stop: 14:05 Mud: 100 gal

Chase: 45 gallons

14:18 FRx performs injection

@ EPW-70 @ 47' bgs

Start: 14:18 Perm: 1,000 lbs

Stop: 14:27 Mud: 100 gallons

Chase: 45 gallons

14:40 - FRx performs injection

@ EPW-70 @ 41' bgs

Start: 14:40 Perm: 1,000 lbs

Stop: 14:48 Mud: 100 gallons

Chase: 45 gallons

FRx moves to EPW-40

15:54: FRx performing injection

@ EPW-40 @ 88' bgs

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Location Asheville, NC Date 12/12/19

Project / Client CTS of Asheville
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EPW-40 @ 88' bgsStart 15:54 Perm: 1,000 lb
Stop: 16:04 Mud: 100 gallons

Chase: 40 gallons

Notched for 3 minutes

- Performed monitoring
on breathing zone = 0.0 ppm- FRx begins winterizing
hoses / walk out water16:37 FRx performs
injection @ EPW-40 @ 82' bgs

Start: 16:37 Perm: 1,000 gallons

Stop: 16:45 Mud: 100 gallons

Chase: 40 gallons

1700-FRx completes

winterizing

1730-FRx R. Clark offsite

12/12/19

19

Location Asheville, NC Date 12/13/19

Project / Client CTS of Asheville
6252-16-2012 Page 1 of 20800-FRx personnel (5) onsite
R. Clark w/ Wood onsite
- Conduct H&S MeetingFRx performs injection @
EPW-40 @ 76' bgs

Start: 8:33 Perm: 1,000 lbs

Stop: 8:46 Mud: 100 gal

Chase: 40 gal

09:07

FRx performs injection @
EPW-40 @ 70' bgs

Start: 9:07 Perm: 1,000 lbs

Stop: 9:22 Mud: 100 gal

Chase: 40 gallons

09:39

FRx performs injection @
EPW-40 @ 64' bgs

Start: 09:39 Perm: 1,000 lbs

Stop: 09:48 Mud: 100 gallons

Chase: 40 gallons

FRx performs injection @ 58' bgs

@ EPW-40 @ 58' bgs
Start: 10:00 Perm: 1,000 lbs

Stop: 10:08 Mud: 100 gal Chase: 40 gal

R. Clark offsite

Location Asheville, NC Date 12/13/19
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10:19 FRx performing injection @

CPW-40 @ 52' bgs

Start: 10:19 Perm: 1,000 lb

Stop: 10:33 Mud: 100 gal.

Chase: 40 gal Chase: 40 gal ^{enc}

- Conduct monitoring of ^{12/13/19}
 breathing zone = 0.0 ppm

10:43 FRx performing injection

@ CPW-40 @ 46' bgs

Start: 10:43 Perm: 1,000 lb

Stop: 11:06 Mud: 120 gal

Chase 120 gallon

FRx begin cleanup of
 trailer, clear out zone,
 load up supplies / clean up
 site

12:38 - FRx leaves site

12:40 - R. Clark off site

[Signature] 12/13/19

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PROD-A&D (1 personnel) onsite
 to excavate dewatering box

- Conduct H&S Meeting

Excavate material from
 dewatering box into haz
 soil roll off.

10:00 - Allen Giktrap w/ A&D onsite
 Delivers new haz roll off and
 picks up haz roll off
 for transport & disposal
 (see manifest)

11:00 - Allen Giktrap leaves site

11:40 - Receive call load is
 overweight

11:55 - Allen Giktrap returns to site
 - Excavate soil from haz
 roll off into new haz
 roll off onsite

12:30 - A&D personnel off site
 - Receive text weight is
 73,880

- R. Clark & B. Hutchins perform
 activities related to site
 water sampling

1700 - R. Clark & B. Hutchins leave site

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1600-1630 - United Rentals
onsite to pick up equipment

R. Clark open/close gate

1630 - Offsite

Pickup skid steer
for SAEDACCO

mini-excavator for A#17

12/18/19

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Asheville, NC

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0800 - R. Clark onsite for site wide
sampling event.0845 - Duke onsite to
remove powerline.1530 - Duke completes removal &
installation of new powerline
leave site

12/18/19

24

Location Asheville, NC Date 12/30/19
 Project / Client CTS of Asheville
6252162012 Page 1 of 1

0730 - R. Clark onsite
 0805 - Semi-truck w/ K permanganate
 onsite, drop trailer
 0815 - S. Arritt / Wood onsite
 signs for load of aircraft
 of potassium permanganate,
 (1 trailer). Driver picks
 up an empty trailer
 0845 - Leave site

Location Asheville, NC Date 12/20 25
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0900 - R. Clark onsite / Change lock
 - Tag DTB of EPL - 9, 10 & 18
 0930 - R. Clark offsite / Rig D-50
 1045 - SAEDACCO onsite /
 Unload rig & setup on EPW-7
 1100 - R. Clark onsite
 Drill w/ 3 7/8" roller cone
 from ~ 76.5 to 81' 6" gcs
 1215 - 1235 lunch
 1235 - SAEDACCO on/setup
 on EPW-45, drill from
 60' 1" to 77.0' gcs @ 76' gcs
 Drill rig pump stops working
 1430 - 1545 - Drillers
 offsite to obtain
 adapter for trash pump
 1615 - Completed EPW-45
 - MDTB = ~~60~~ 73' gcs
 but soft
 1630 - SAEDACCO sets up on EPW-76
 drill from 60' gcs to 67' 45"
 w/ 3 7/8" roller cone
 1745 - SAEDACCO / R. Clark
 offsite

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 Project / Client CTS of Asheville
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0900-R. Clark onsite, Spencer H.
 w/ FRx onsite.

0915-Dean w/ FRx onsite
 - Dean & Spencer begin setup
 on EPW-7.

1000-Justin B. & Jesse L. w/
 FRx onsite / continue
 setup.

1100-SAEDACCO 8150LS
 crew onsite. Set up on
 EPW-58. Begin drilling
 w/ 8" rods to ~~72~~ 65'
 contain 23' regular
 and 27' + w/ 6" rod.

1230-1400 FRx stops for lunch
 Buy supplies

1300-Encountered rock 68'; drill to 72' bgs

1440-SAEDACCO sheared
 threads on 8" rods @
 65' / 8" rods
 remain in boring; begin
 removing 6" rods

Recovered 3.8' light gray
 mod. indurated, mod.
 weathered, to friable

Location Asheville, NC Date 1/6/20
 Project / Client CTS of Asheville
GS2-16-2012 Page 2 of 2

to highly weathered GNEISS
 1500-1540 SAEDACCO make retrieval
 tool and retrieve 8" casing

~~1540~~ 1540-SAEDACCO 8150LS
 RMC
 1/6/20 begins setting 4" PUC
 casing @ EPW-58.

1620 FRx leaves site; completed
 setup; did not perform injections
 Only able to get injection
 equipment to 73' bgs (tooling
 below injection point 4'10")
 or at n 78' bgs

1730-SAEDACCO completes
 installation of EPW-58
 to n 72' bgs / Leave
 site for day

1745-R. Clark / Wood leaves site

[Signature]
 1/6/20

Location Ashville, NC Date 1/7/20
 Project / Client CTS of Ashville
G2S2-16-2012 Page 1 of 4

0730-SAEDACCO / R. Clark onsite

- Open roll off

- Conduct H & S Meeting w/ SAEDACCO

SAEDACCO sets up on CPW-52

& drills from 0' to 17' bgs w/

8" rods / certain 0-17' as

non-haz 0815-Jaws break on rig

0800-FRx onsite

0815-Conduct H & S Meeting
 w/ FRx.

FRx sets up to perform
 injection @ EPW-7

0830-Jaws on rod handler

bent; SAEDACCO disassembles jaws

0850-Replacement parts being sent from shop

FRx perform injection @ 73' bgs

@ EPW-7 @ 73' bgs

Start: 08:46

Perm 1000 lb

Stop: 08:57

Mud 160 gal

Chase 35 gal

- SAEDACCO hook. Hoses EPW-45 to 76' bgs

FRx performs injection @ EPW-7 @ 67' bgs

Start: 09:27

Perm: 1000

Stop: 09:36

Mud: 140

Chase: 40

Location Ashville, N.C. Date 1/7/20
 Project / Client CTS of Ashville
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10:00- Starts raining / FRx leaves
 site / SAEDACCO in trailer

10:30-Stops raining. SAEDACCO quots 58

10:45-FRx returns to site 11:00 SAEDACCO

FRx performs injection @ EPW-7 @ 67' bgs

Start: 11:02

Perm: 1000

Stop: 11:12

Mud: 140

Chase: 40 55'

FRx performs injection @ EPW-7 @ 67' bgs

Start: 11:38

Perm 1,000 lbs

Stop: 11:48

Mud 130 gal

Chase: 40 gallon

11:58-FRx leaves site for lunch

12:05-Mechanics w/ SAEDACCO

arrive to repair jaws

12:10-SAEDACCO returns to site

Assist mechanics w/ repair

- 2 Personnel begin cutting up
 sides of water poly tanks

12:40-FRx returns from lunch

- Attempt cutting casing @

65' @ EPW-7, but

jets clogged; pull tooling

from casing; repair jets

14:00-Begin lowering injection

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equipment to ⁴⁹ ~~5~~ ^{puc 1/7/20} bgs @ EPW-7
 FRx perform injection @
 EPW-7 @ 49 Perm: 1,000
 Start: 14:13 Mud: 130
 Stop 14:27 Chase: 45

1430: Rig repaired; SAEDACCO
 continues advancing EPW-52
 from 17' bgs; FRx performs injection
 EPW-7 @ 43' bgs

Start: 14:45 Perm: 1,000 lbs
 Stop: 14:56 Mud: 130
 Chase: 40

FRx performs injection @
 EPW-15 @ 75 Perm: 1000 lbs
 Start: 15:45 Mud: 130 gal.
 Stop: 16:08 Chase: 40 gal.

1620 SAEDACCO encountered
 rock @ 63' bgs; drilled to 67'
 bgs; advanced 8" rods to 67'
 & retrieved rock; recovered

3.8' of light gray, mod. indurated
 mod. weathered, GNEISS

1620-FRx stop for day / indicated

conditions too windy
 1630-SAEDACCO begins installation

Location Asheville, NC Date 1/8/20
 Project / Client CTS of Asheville
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of 4" PVC at EPW-52.
 1715-SAEDACCO completes
 installation of EPW-52; Move to
 EPW-44
 1800-SAEDACCO / R. Clark leave
 site for the day

[Signature]
 1/7/2020

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0730 - SAEDACCO/R. Clark, onsite

- Conduct H & S Meeting

SAEDACCO begin advancing

EPW-44 from ground surface

- Drill to 17' bgs w/ 8" rods

± 17' + w/ 6" rods; contain

0-27' as non haz ± 27' +

as haz

0800 - FRx arrives onsite

- Conduct H & S Meeting

FRx begins setup for day

SAEDACCO encounters

rock from 64-68' bgs @

EPW-44; Advance 8" rods; light green, friable
highly weathered GNEs

FRx perform injection @

EPW-15 @ 69' bgs Perm: 1,000 lbs

Start: 8:54

Mud: 130

Stop: 9:03

Chase: 45

EPW-15 @ 63'

Perm: 1,000 lbs

Start: 9:32

Mud: 130

Stop: 9:42

Chase: 40

EPW-15 @ 57'

Perm: 1,000 lbs

Start: 10:02

Mud: 130

Stop: 10:09

Chase: 40

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EPW-15 @ 51'

Perm: 1,000 lbs

Start: 10:24

Mud: 130 gal

Stop: 10:32

Chase: 40 gal

EPW-15 @ 45'

Perm: 1,000 lbs

Start: 10:45

Mud: 130

Stop: 10:52

Chase: 40 gal

1100 - FRx moves to and sets

up on EPW-23

1200 - SAEDACCO completes

installation @ EPW-44 to -68' bgs

- Move to and set up on EPW-63

FRx performs injection @

EPW-23 @ 78' bgs Perm: 1,000

Start: 11:41

Mud: 130 gal

Stop: 11:53

Chase: 40 gal

1210 - SAEDACCO & FRx stop

for lunch

1235 - SAEDACCO returns to site

1245 - FRx returns to site

1245 - SAEDACCO begins drilling

EPW-63 from 0' to 17' bgs

w/ 8" rods & 6" from 17'

Contain 0 to 27' as non haz

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FR_x performs injections @
 EPW-23 @ 72' bgs
 Start: 13:15 Perm: 1,000/lb
 Stop: 13:24 Mud: 130 Chase: 40
 Start: 13:36 @ 66' bgs
 Stop: 13:46 Perm: 1,000
 Mud: 130 Chase: 40 gal

EPW-23 @ 60' bgs
 Start: 13:55 Perm: 1,000/lb
 Stop: 14:03 Mud: 130
 Chase: 40

EPW-23 @ 54' bgs
 Start: 14:12 Perm: 1,000
 Stop: 14:20 Mud: 130 Chase: 40

EPW-23 @ 48' bgs
 Start: 14:37
 Stop: 14:44

EPW-23 @ 42' bgs
 Start: 14:58 Perm: 1,000/lb
 Stop: 15:06 Mud: 130
 Chase: 40 gal

SACDACC encountered rock
 @ ~74' bgs @ EPW-63
 + Quarte @ 45'-46' bgs advance
 8" rods to 78' bgs + install 4" PVC

Location Asheville, NC Date 1/8/20
 Project / Client CTS of Asheville
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Setup on EPW-31 w/ Inject. o.
 equipment.

FR_x performs injection @
 EPW-31 @ 85' bgs
 @ 91' bgs

Start: 15:40 Perm: 1,000/lb
 Stop: 15:51 Mud: 130 Chase: 40

16:20 - FR_x leaves site for day
 17:30 - SACDACC completes
 installation of EPW-63
 4" PVC casing

- Move to and setup on EPW-
 19. Complete grouting G3
 18:00 SACDACC / R. Clark
 off site.

[Signature]
 1/8/20

Asheville, NC

1/9/20

CTS of Asheville

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0730 R. Clark / SAEDACCO arrive
onsite / Conduct H & S Meeting
SAEDACCO begins drilling
EPW-19 from surface to
17' bgs w/ 8" rods
Continue 0-27' as normal
& 27' to 4' as late.

0800 FRx onsite / setup
for injections

0830 - Injector hose frozen
Magna & hoses frozen

FRx performs injections @

EPW-31 @ 85' bgs

Start: 09:25

Perm: 1,000 lb

Stop: 09:39

Mud: 150 gal

Chase: 55 gal

EPW-31 @ 79

Start: 10:10

Perm: 1,000 lb

Stop: 10:20

Mud: 140

Chase:

EPW-31 @ 73

Perm: 1,000

Start: 10:32

Mud: 140

Stop: 10:41

Chase: 40

Asheville, NC

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10:15 SAEDACCO encountered rock
@ 76' bgs @ EPW-19
Drill to 80' bgs & advance
8" rods to 80' bgs. Retrieved
gravel brown (highly weathered)
friable. BNE 135' observed
of quartz fragments @
top of driller indicated
border zone @ 63'-64'
- Begin installation of 4" PVC
FRx perform injections @
EPW-31 @ 67' bgs

Perm: 1,000 lb

Start: 10:51

Mud: 130 gal

Stop: 10:58

Chase: 40 gal

EPW-31 @ 61' bgs

Start: 11:06

Perm: 1,000 lb

Stop: 11:15

Mud: 130 gal

FRx @ lunch 11:30-12:20

Chase: 40 gal

EPW-31 @ 55' bgs

Start: 12:36

Perm: 1,000 lb

Stop: 12:44

Mud: 130

Chase: 40

R. Clark cuts PVC to sewer &
caps 3" PVC @ office for setup

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1200-SAEDACCO completes
 installation of EPW-19

Move to and setup on
 EPW-11

12:20-SAEDACCO stops for lunch
 12:45-SAEDACCO resumes drilling
 FRx performs injection @
 EPW-31 @ 49' bgs

Start 12:55 Perm: 1,000 lbs
 Stop: 13:03 Mud: 130 gal
 Chase: 40 gal

13:15 FRx moves from
 EPW-31 to EPW-6 &
 setup for injection

14:30 SAEDACCO encountered
 rock @ 76' bgs @
 EPW-11 w/ 6" rods advance
 8" rods to 80' bgs &
 retrieve rock; ^{granitic Diagen, friable} highly weathered GNEISS

12:30 - 14:30 Robert w/ SAEDACCO
 on site to cut up poly
 totes for disposal.

14:30 - Robert w/ SAEDACCO
 & Dylan w/ SAEDACCO top
 off grout in EPW-63,
 58, 52, 44 and 19

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 Project / Client CTS of Asheville
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FRx performs injections @
 EPW-6 @ 73' bgs

Start: 13:39 Perm: 1,000 lbs

Stop: 13:47 Mud: 130 gal Chase 45 gal

EPW-6 @ 67' bgs

Start: 14:10 Perm: 1,000

Stop: 14:18 Mud: 130 gal
 Chase: 40 gal 1/9/20

EPW-6 @ 61' bgs

Start: 14:27 Perm: 1,000

Stop: 14:35 Mud: 130 gal Chase: 40

EPW-6 @ 55' bgs

Start: 14:44 Perm: 1,000

Stop: 14:51 Mud: 130 gal Chase: 40

EPW-6 @ 49' bgs

Start: 15:03 Perm: 1,000

Stop: 15:12 Mud: 130 gal Chase: 40

EPW-6 @ 43' bgs

Start: 15:23 Perm: 1,000

Stop: 15:35 Mud: 130 gal Chase: 50 gal

15:45 FRx moves from
 EPW-6 to EPW-14 @ 76' bgs

Perform inj. Perm: 1,000 lbs

Start 16:03 Mud: 130 gal

Stop: 16:15 Chase: 45 gal

- Robert w/ SAEDACCO
cork top of PVC casings
@ EPW-63, 58, 52, 44 and 19
1800- SAEDACCO completes
installation of EPW-11
- Setup on EPW-35 / Relocated
1.5 to Northeast

[Signature]
1/9/20

- 07:30 - R. Clark / SAEDACCO onsite
08:00 - FRx onsite ^{Conduct H35 Meeting} Relocated 1.5' to NE
- Conduct H35 Meeting
SAEDACCO begins drilling EPW-35
from surface to 17' bgs w/ 8"
rods & 12' + ^{and 11' hole} w/ 6" rod
Contain 0' - 17' as non-haz
and 17' + as haz.
SAEDACCO encountered
rock from 76' to 82' bgs
FRx performs injections
@ EPW-14 @ 70' bgs
Start: 8:40 Perm: 1000 lbs
Stop: 8:49 Mud: 130 gal Chase: 40 gal
@ EPW-14 @ 67' bgs
Start: 8:56 Perm: 1,000 lbs
Stop: 9:08 Mud: 140 gal Chase: 40 gal
EPW-14 @ 58' bgs
Start: 9:19 Perm:
Stop: 9:28 Mud: 140 gal Chase: 40 gal
EPW-14 @ 52' bgs
Start: 9:37 Perm: 1,000 lbs
Stop: 9:45 Mud: 140 gal Chase: 40

[Signature]

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EPW-14 @ 46' bsc

Start: 9:56 Perm: 1,000 lbs

Stop: 10:05 Mud: 140 gal Chase: 40

09:30 SAEDACCO retrieves rock
from EPW-35; light gray, moderately
to highly weathered, mod. indurated
GNEISS, Begin installation
of 4" PVC

10:30 FRx sets up on EPW-30 @ 79'

Start: 10:47 Perm: 1,000 lbs

Stop: 10:55 Mud: 140

Chase: 40

EPW-30 @ 73' Perm: 1000

Start: 11:07 Mud: 140 gal

Stop: 11:18 Chase: 40 gal

EPW-30 @ 67'

Start: 11:28 Mud: 140 gal

Stop: 11:37 Chase: 40 gal

EPW-30 @ 61' Perm: 1,000 lbs

Start: 11:47 Mud: 140

Stop: 11:55 Chase: 40

EPW-30 @ 55' Perm: 1,000 lbs

Start: 12:04 Mud: 140 gallons

Stop: 12:12 Chase: 40 gallon

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EPW-30 @ 49' Perm: 1,000 lbs

Start: 12:23 Mud: 140 gal

Stop: 12:33 Chase: 40 gal

12:00 SAEDACCO completes

Installation of EPW-35

- Begin loading out equipment

- Decor rock / photos

- Load cut up tires / plastic &
metal on support truck- Grant TMP along east
boundary- Redistribute / remove gravel
@ frak tank from concrete
pad.- Pump out dewatering tank
12:25 SAEDACCO leaves
site.

Location Ashville, NC Date 1/13/20Project / Client CTS of Asheville
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0830 - R. Clark/Wood, FRx.
 * Truck from Double O
 Express onsite.
 - Drop truck load of
 43,596 lbs of potassium
 permanganate & pick up
 empty trailer. Conduct
 H&S Meeting. R. Clark signs for truck.
 - FRx moves from EPW-20
 to EPW-23.
 0950 - Unable to get
 tool beyond inj. depth
 of 56.5' (bottom of
 tool ~ 61.5' bgs)
 FRx removes tooling
 and advances 1" tremie
 pipe to ~ 68' bgs; flush
 boring w/ fresh water.
 - Remove tremie pipe &
 reattempt to get injection
 equipment down boring.
 Equipment again gets stopped
 @ 56.5' bgs
 10.30 - Move to and setup
 on EPW-21

Location Ashville, NC Date 1/13/20Project / Client CTS of Asheville
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11.30 - Starts raining slightly.

EPW-21 @ 74' bgs Perm: 1000/lb
Start: 11:11 Mud: 160 gallons

Stop: 11:27 Chase: 45 gallons

EPW-21 @ 68' Perm: 1000

Start: 11:42 Mud: 140 gallons

Stop: 11:52 Chase: 40 gallons

EPW-21 @ 62' Perm: 1000

Start: 12:00 Mud: 140 gallons

Stop: 12:09 Chase: 40 gallons

EPW-21 @ 56' bgs Perm: 1000/lb

Start: 12:24 Mud: 140 gal.

Stop: 12:33 Chase: 40 gal

EPW-21 @ 50' bgs Perm: 1,000/lb

Start: 13:40 Mud: 140 gal

Stop: 13:49 Chase: 40 gal

13.55 Move and setup on EPW-29

FRx performs injection @

EPW-29 @ 75' bgs

Start: 14:38 Perm: 1000/lb

Stop: 14:51 Mud: 150 gallons

Chase: 45 gallons

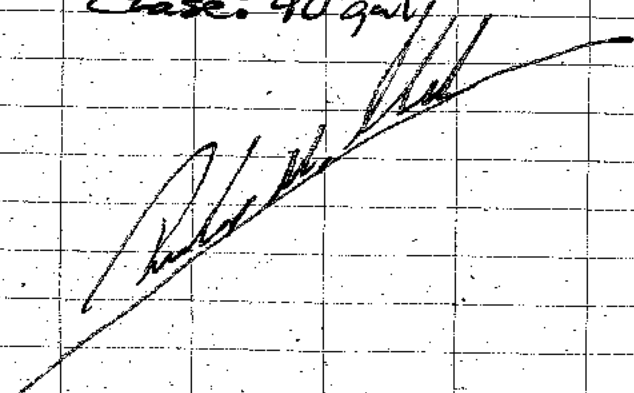
[Signature]

1/13/20

R. Clark

Location Asheville, NC Date 1/13/20Project / Client CTS of Asheville
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FRx performs injection
 @ EPW-29 @ 69' bgs
 Start: 15:03 Perm: 1,000/lb
 Stop: 15:11 Mud: 140 galls
 Chase: 40 gallons
 @ EPW-29 @ 53' bgs
 Start: 15:22 Perm: 1,000/lb
 Stop: 15:32 Mud: 40
 @ EPW-29 @ 57' bgs
 Start: 15:43 Perm: 1,000/lb
 Stop: 15:54 Mud: 140 gal
 Chase: 40 gal
 @ EPW-29 @ 51' bgs
 Start: 16:05 Perm: 1,000/lb
 Stop: 16:16 Mud: 146 gal
 Chase: 40 gal


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0815 - A&D/R. Clark onsite
 A&D (Doug) picks up nonhaz
 roll-off & loads for T&D to
 Enoree, SC. Manifest ID 200114-1
 (see roll-off management
 record)

0915 - A&D leaves site.
 1000 - FRx onsite, framing.
 FRx indicates they will return
 in an hour after rain subsides.
 1100 - FRx onsite / Conduct
 H&S Meeting.

FRx sets up on EPW-38
 Performs injections @
 EPW-38 @ 80' bgs; Perm: 1,000/lb
 Start: 12:04 Mud: 140 gallons
 Stop: 12:15 Chase: 40 gallons
 EPW-38 @ 74' Perm: 1,000/lb
 Start: 12:24 Mud: 140 gal
 Stop: 12:34 Chase: 40 gal
 EPW-38 @ 68' Perm: 1,000/lb
 Start: 12:44 Mud: 140 gallons
 Stop: 12:55 Chase: 40 gal

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EPW-38 @ 62' bgs
 Start: 13:03 Perm: 1,000 lbs
 Stop: 13:16 Mud: 140 gal.
 Chase: 40 gallons

EPW-38 @ 56' bgs
 Start: 14:08 Perm: 1,000 lbs
 Stop: 14:18 Mud: 140 gal.
 Chase: 40 gal.

EPW-38 @ 50' bgs Perm: 1,000 lbs
 Start: 14:27 Mud: 140 gal
 Stop: 14:37 Chase: 40

14:45 - FRx moves to and

sets up on EPW-4

15:00 United Rentals onsite
 to retrieve skid steer

15:15 - FRx encountered
 obstruction @ injection
 depth of 71.5' bgs or
 ~ 76.5 bgs; MDTB 77.6, 78.1
 LDTB BGS / FRx stand by

15:30 - Susan Arritt / Wood onsite
 indicates to resume
 injecting @ 70' bgs @
 EPW-4

Location Asheville, NC Date 1/14/20
 Project / Client CTS of Asheville
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FRx performs injection @
 EPW-4 @ 70' bgs
 Start 15:52 Perm: 1,000 lbs
 Stop: 16:02 Mud: 140 gallon

Chase: 40 gallons
 EPW-4 @ 64' bgs
 Start: 16:11 Perm: 1,000 lbs
 Stop: 16:28 Mud: 140 gallon
 Chase: 40 gallons

EPW-4 @ 58' bgs
 Start: 16:39 Perm: 1,000 lbs
 Stop: 16:51 Mud: 140 gal
 Chase: 40 gal

17:15 - FRx / R. Clark leave site

[Signature]
 1/14/20

Location Asheville, NC Date 1/15/20Project / Client CTS of Asheville6252-16-2012 Page 1 of 40800-R. Clark / A & D (Doug) & (Allen)
FRx on site.- Conduct H & S Meeting
- Allen G. w/ A & D evacuates
~ 2,000 gallons of
water from frak tank0900 - Doug (A & D) picks up haz.
soil roll off. Manifest
ID 013308090 FLE (see forms)0930 - A & D (4 personnel) arrive
to clean out frak tank.- Open portal on frak tank
Measured 14" of sludge at
portal; 0.9' at manway on
top; A & D indicates pit
will be easier to obtain
vac. box for removal ofsludge; wait on site
for approval from mg.1145 - A & D personnel leave
site. Haz. water is~ 2057 gallons (Manifest
ID: 013308096 FLE)leaves site in Brenner
Vac. truck.Location Asheville, NC Date 1/15/20Project / Client CTS of Asheville6252-16-2012 Page 2 of 4FRx performs injections @
EPW-4 @ 52' 65"

Start: 9:05 Perm: 1,000

Stop: 9:16 Mud: 140

~~Chase:~~ Chase: 40 gal.

EPW-4 @ 46' 65"

Start: 10:25 Perm: 1,000 lb

Stop: 10:35 Mud: 140

Chase: ~~60~~ 40 gallonsFRx moves to and sets
up an EPW-12FRx performs injections
@ EPW-12 @ 72' 65"

Start: 11:32 Perm: 1,000 lb

Stop: 11:44 Mud: 250 gal

Chase: 60 gal

FRx stops for lunch

FRx performs injections

@ EPW-12 @ 66' 65"

Start: 13:01 Perm: 1,000 lb

Stop: 13:28 Mud: 140

Chase: 40

Jul 1/15/20

Location Asheville, NC Date 1/15/20

Project / Client CTS of Asheville

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1300 - A & D drops vac box & leaves site -

FRx performs injections @

EPW-12 @ 60

Start: 13:18 Perm: 1,000 lbs

Stop: 13:28 Mud: 140 gal

Chase: 40 gal

EPW-12 @ 54'

Start: 13:37 Perm: 1,000 lbs

Stop: 13:45 Mud: 140 gal

Chase: 40 gal

EPW-12 @ 48 Perm: 1,000 lbs

Start: 13:54 Mud: 140

Stop: 14:04 Chase: 40

EPW-12 @ 42' bgs 1000 lbs

Start: 14:16 140 gal

Stop: 14:24 40 gal

FRx moves to EPW-20

Perform injections @

EPW-20 @ 74.8' bgs

Start: 15:09 Perm: 1,000 lbs

Stop: 15:17 Mud: 140 gal

Chase: 40 gal

EPW-20 @ 69' bgs

Start: 15:25 Perm: 1,000 lbs

Stop: 15:34 Mud: 140 gal

Chase: 40 gal

Location Asheville, NC Date 1/15/20

Project / Client CTS of Asheville

6252-16-2012

Page 4 of 4

EPW-20 @ 63' Perm: 1,000 lbs

Start: 15:45 Mud: 140 gal

Stop: 15:53 Chase: 40 gal

EPW-20 @ 57' bgs

Start: 16:03 Perm: 1,000 lbs

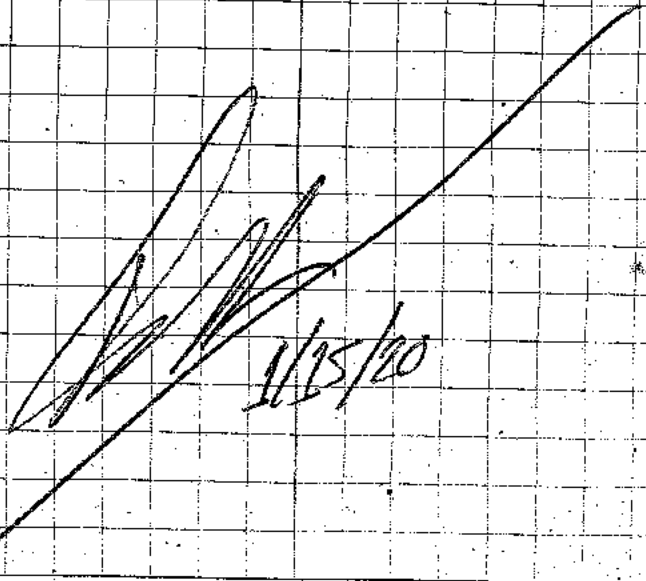
Stop: 16:12 Mud: 140 gal

Chase: 40 gal

1630 - FRx begins packing up

1645 - FRx leaves site

1650 - R. Claiter leaves site



Location Ashville, NC Date 1/16/20
 Project / Client CTS of Ashville
6252-16-2012 Page 1 of 3

0800-R. Clark/FRx onsite
 - Conduct H & S Meeting
 FRx resumes injection
 @ EPW-20
 EPW-20 @ 51' bgs
 Start: 8:47 Perm: 1,000 lbs
 Stop: 8:59 Mud: 550 gal
 Chase: 40 gal
 EPW-20 @ 45' bgs
 Start: 9:11 Perm: 1,000 lbs
 Stop: 9:20 Mud: 450 gal
 Chase: 40 gal
 0830 - A&D vac truck onsite
 (wait for other crew, late)
 0930-1015 - Move to EPW-28
 FRx performs injection @
 EPW-28 @ 74' bgs
 10:25 1,000 lbs
 10:38 525 125 gal
 40 gal
 EPW-28 @ 68' bgs
 10:49 Perm: 1,000 lbs
 10:58 Mud: 400 gal 125 gal
 Chase: 40 gal

Location Ashville, NC Date 1/16/20
 Project / Client CTS of Ashville
6252-16-2012 Page 2 of 3

EPW-28 @ 62' bgs
 Start: 11:14 Perm: 1,000 lbs
 Stop: 11:25 Mud: 125 gal
 Chase: 40 gal
 EPW-28 @ 56' bgs
 Start: 11:35 Perm: 1,000
 Stop: 11:46 Mud: 1,000
 Chase: 40 gal
 12:05 - FRx stops for lunch
 12:10 - A&D crew arrives
 to begin cleanout of
 brake tank via VAC box/
 VAC truck (4 personnel &
 1 driver) Evacuate sludge
 from portal prior to reentering
 tank 1300 Enter tank
 FRx performs injection @
 EPW-28 @ 50' bgs
 Start: 12:57 Perm: 1,000 lbs
 Stop: 13:06 Mud: 100 gal
 Chase: 40 gal
 EPW-28 @ 44'
 Start: 13:15 Perm: 1,000 lbs
 Stop: 13:26 Mud: 1,25 gal
 Chase: 40 gal

Location Ashville, NC Date 1/16/20Project / Client CTS of Asheville6252-16-2012 Page 3 of 3

FRx performs injections
 @ EPW-37 @ 75' bgs
 Start: 14:02 Mud: 100 gallons
 Stop: 14:14 Chase 40 gallons
 1000 lbs perm.
 EPW-37 @ 70' bgs
 Start: 14:26 Perm: 1,000 lbs
 Stop: 14:38 Mud: 100 gal
 Chase: 40 gal.

15:00 - APD completes
 cleaning fuel tank and
 leave site

2 Personnel w/ FRx leave site
 2 Personnel w/ FRx perform
 maintenance on Jetstream
 compressor & winterize
 equipment (blow freezing
 tonight)

16:15 - FRx/R. Clark off site

[Signature]
 1/16/20

Location Ashville, NC Date 1/17/20Project / Client CTS of Asheville6252-16-2012 Page 1 of 3

08:00 - Arrive on site / FRx (4 persons)
 - Conduct H+S Meeting
 - Reconnect hoses from
 winterizing
 - Replace cylinders on Jetstream
 compressor

FRx performs injections @
 EPW-37 64' bgs
 Start: 9:04 Perm: 1,000 lbs
 Stop: 9:18 Mud: 140
 Chase: 40

EPW-37 @ 58' bgs
 Start: 9:28 Perm: 1,000 lbs
 Stop: 9:37 Mud: 140 gal
 Chase: 40 gal

EPW-37 @ 52' bgs
 Start: 9:46 Perm: 1,000
 Stop: 10:01 Mud: 140
 Chase: 40 gallons

EPW-37 @ 46' bgs
 Start: 10:10 Perm: 1,000 lbs
 Stop: 10:19 Mud: 140
 Chase: 40 gallons

FRx moves to EPW-46

Location Ashville, NC Date 1/17/20Project / Client CTS of Asheville6252-16-2012 Page 1 of 3

FRx performs injections @

EPW-46 @ 69' bgs ^{one 1/17/20}

Start: 10:56 Perm: 1,000 lb

Stop: 11:12 Mud: 140 gal

Chase: 40 gallons

EPW-46 @ 69' ^{one 1/17/20}

Start: 11:20 Perm: 1,000 lb

Stop: 11:35 Mud: 110 gal

Chase: 40

EPW-46 @ 63' bgs

Start: 11:44 Perm: 1,000 lb

Stop: 11:55 Mud: 110 gal

Chase: 40 gal

EPW-46 @ 57' bgs

Start: 12:03 Perm: 1,000 lb

Stop: 12:12 Mud: 110 gal

Chase: 40 gallon

EPW-46 @ 51' bgs

Start: 12:20 Perm: 1,000 lb

Stop: 12:32 Mud: 130 gallon

Chase: 60 gallons

1240-1300 FRx break down location to mobilize injector truck off site.

Location Ashville, NC Date 1/17/20Project / Client CTS of Asheville6252-16-2012 Page 3 of 3

1300-1400 FRx winterizer equipment

Manna compressor, empty hoses

1430- FRx leaves site

1620- A&D arrives to pickup vac. box (see manifest) for details / Doug w/ A&D

1700- A&D / R. Clark leave site.

60

Location Ashville, NC Date 1/20/20Project / Client CTS of Ashville
6252-16-2012 Page 1 of 1

0 1330 - R. Clark arrives onsite
 1420 - A & D arrives onsite
 - Cut liner from dewatering box. Observe damage to cage in dewatering box after cutting liner free.
 After w/A & D picks up dewatering box / vac soil (see manifest)
 1530 - A & D leaves site
 R. Clark leaves site

R. Clark
 1/20/20

Location Ashville, NC Date 1/20/20Project / Client CTS of Ashville
6252-16-2012 Page 1 of 1

0730 - R. Clark arrives onsite
 0735 - Double D transport delivers trailer load of potassium permanganate
 # empty RUC 1121/203 picks up empty trailer.
 0815 - R. Clark / Double D. offsite

R. Clark
 1/21/20

Location Asheville, NC Date 1/22/20Project / Client CTS of Asheville6252-16-2012 Page 1 of 1

0800 - R. Clark arrives onsite
 0915 - M. Wallace, G. Hutchins w/ Wood
 & C. Zeller w/ USEPA onsite.

1020 - FRx arrives onsite
 (3 personnel) Conduct
 H & S Meeting

1030 - M. Wallace, C. Zeller
 & G. Hutchins leave site.

1030 - 1530 - FRx moves
 injection trailer &
 equipment from east portion
 of site to n. central
 portion of site. (in

access drive near
 office) Set up on EPW-11

1530 - FRx indicates
 there will not
 perform injections today
 & leave site.

[Signature] 1/22/20

Location Asheville, NC Date 1/23/20Project / Client CTS of Asheville6252-16-2012 Page 1 of 2

0930 FRx arrives onsite
 1000 - Craig Zeller w/ USEPA, S. Arritt
 & R. Clark w/ Wood onsite

1000-1030 - R. Clark offsite
 1030 - R. Clark returns

FRx working on unfreezing
 equipment; compressor not on pump

11:14 - Attempted 1st injection, but
 magno frozen; replace magno
 housing / stators bad.

11:30 - Craig Zeller & Susan Arritt
 leave site

FRx perform injection @
 EPW-11 @ 70' bgs

Start: 11:48 Perm: 1,000 lbs

Stop: 12:00 Mud: 225 gallons

Chase: 40 gallons

EPW-11 @ 64' bgs Perm: 1,000 lbs

Start: 13:01 Mud: 200 gal

Stop: 13:15 Chase: 40 gal

EPW-11 @

EPW-11 @ 58' bgs

Start: 13:58 Perm: 1,000

Stop: 14:14 Mud: 150 Chase: 40 gal

Location Asheville, NC Date 1/23/20Project / Client CTS of Asheville
6252-16-2017 Page 2 of 2

EPW-11 @ 52' bgs Perm: 1,000

Start: 14:33 Mud: 250 gal

Stop: 14:48 Chase: 40 gal

EPW-11 @ 46' Perm: 1,000 lbs

Start: 15:00 Mud: 375 gal

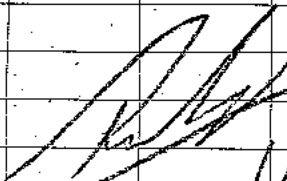
Stop: 15:15 Chase: 40 gal

EPW-19 @ 70' bgs

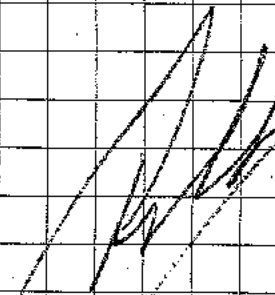
Start: 16:18 Perm: 1,000 lbs

Stop: 16:33 Mud: 225

Chase: 40 gal

16:40-17:15 - FRx patches
away to winterize
equipment12:30 FRx / R. Clark leave
site
1/23/20Location Asheville, NC Date 1/24/20Project / Client CTS of Asheville
6252-16-2017 Page 1 of 1

10:00 P. Clark on site

10:30 United Rental on site to
pick up frac tank &
secondary containment11:00 United Rental / R. Clark
leave site
1/24/20

Location Asheville, NCDate 1/27/20Project / Client CTS of Asheville6252-16-2012 Page 1 of 3

08:30 R. Clark onsite

08:55 - FRx Personnel onsite (3)

- Conduct H & S Meeting

- FRx sets up for injection

- FRx performs injection @

EPW-19 @ 64' bgs

Start: 10:03 Perm: 1,000 lbs

Stop: 10:21 Mud: 225 gal

Chase: 40 gal

EPW-19 @ 58' bgs

Start: 10:45 Perm: 1,000 lbs

Stop: 10:58 Mud: 175 gal

Chase: 40 gal

EPW-19 @ 52' bgs

Start: 11:19 Perm: 1,000 lbs

Stop: 11:30 Mud: 150 gal

Chase: 40 gal

EPW-19 @ 46' bgs

Start: 11:42 Perm: 1,000 lbs

Stop: 11:52 Mud: 150

Chase: 40 gal

1200

FRx stops for lunch

1240 - FRx returns from

lunch / Set up on EPW-27

Asheville, NC1/27/20³⁷CTS of Asheville6252-16-2012Page 2 of 3

FRx performs injection:

@ EPW-27 @ 70' bgs

Start: 13:35

Perm: 1,000 lbs

Stop: 13:42

Mud: 175 gal

Chase:

EPW-27 @ 64' bgs

Start: 13:58

Perm: 1,000 lbs

Stop: 14:08

Mud: 125 gal

Chase: 40 gal

EPW-27 @ 58' bgs

Start: 14:17

Perm: 1,000 lbs

Stop: 14:26

Mud: 135 gal

Chase: 40 gal

EPW-27 @ 52' bgs

Start: 14:43

Perm: 1,000 lbs

Stop: 14:52

Mud: 100 gal

Chase: 40 gal

EPW-27 @ 46' bgs

Start: 15:02

Perm: 1,000 lbs

Stop:

Mud:

Chase:

Move to and set up on
EPW-36

Location Ashville, NC Date 1/27/20Project / Client CTS of Asheville6252-16-2012 Page 3 of 3

FRx performs injections
 @ EPW-36 @ 69' bgs
 Start 15:46 Perm: 1,000 lb
 Stop: 15:59 Mud: 125 gal
 Chase: 40 gal

EPW-36 @ 63' bgs
 Start: 15:46 Perm: 1,000 lb
 Stop: 16:49 Mud: 125 gal
 Chase: 70 gal

FRx gets injectors clogged.
 FRx loses small volume
 ~5 gal liquid to ground
 surface from injection

@ 63' bgs while cleaning
 out injection rods / another
 ~5 gal liquid is contained
 with EPW casing during
 clean out (cleanout consisted
 of using garden hose to
 flush injection rods.)

1715 - Leave site (FRx(3) & R. Clark)

[Signature] 1/27/20

Location Ashville, NC Date 1/28/20 69Project / Client CTS of Asheville6252-16-2012 Page 1 of 2

0800 - FRx (2 personnel on site)
 - R. Clark w/ Wood onsite

FRx performs injections @
 EPW-36 @ 57' bgs
 Start: 08:53 Perm: 1,000 lbs
 Stop: 09:00 Mud: 125 gal
 Chase: 40 gal

EPW-36 @ 51' bgs
 Start: 09:16 Perm: 1,000 lbs
 Stop: 09:23 Mud: 125 gal
 Chase: 40 gal

EPW-36 @ 45' bgs
 Start: 09:52 Perm: 1,000 lbs
 Stop: 10:00 Mud: 115
 Chase: 40 gal

10:10 - FRx moves to EPW-35
 EPW-35 @ 64' Perm: 1,000 lb
 Start: 11:41 Perm: Mud: 115
 Stop: 11:49 Chase: 8

EPW-35 @ 58'
 Start: 13:08 Perm: 1,000 lb
 Stop: 13:16 Mud: 100
 Chase: 40 gal

Location Asheville, NC Date 1/28/20Project / Client CTS of AshevilleG2S2-16-2012 Page 2 of 2

EPW-35 @ 52' bgs
 Start: 13:27 Perm: 1,000 gal
 Stop: 13:34 Mud: 100 gal
 Chase: 40 gal

EPW-35 @ 46' bgs
 Start: 13:47 Perm: 1,000 lbs
 Stop: 13:59 Mud: 150 gal
 Chase: 40 gal

FRx moves to EPW-44

Perform injections @
 EPW-44 @ 58' bgs
 Start: 14:40 Perm: 1,000 lbs
 Stop: 14:48 Mud: 100 gal
 Chase: 40 gal

EPW-44 @ 52' bgs

- Jets on injector clogged.
 Start: 15:15 Perm: 1,000 lbs
 Stop: 16:06 Mud: 85 gal
 Chase: 50 gal

EPW-44 @ 46' bgs
 Start: 16:15 Perm: 1,000 lbs
 Stop: 16:24 Mud: 85 gal
 Chase: 50 gal

- FRx winterizes equipment
 1705 - Leave site.

Location Asheville, NC Date 1/29/20 71Project / Client CTS of AshevilleG2S2-16-2012 Page 1 of 4

0800 - R. Clark / FRx arrive onsite.

- Conduct H & S Meeting.

FRx sets up on EPW-45

Use injection pipe as tremie
 pipe and flush boring to
 78' bgs. 77' bgs; 6915 Begin
 installing injection equipment
 in boring; unable to get
 to depth; deepest injection
 depth is 63' bgs; bottom of
 tool @ ~68' bgs, which
 is same depth grout
 intrusion was previously
 recorded in well and
 redrilled on 1/2/20.

- Contact S. Avritt

0930 - S. Avritt indicates to inject
 @ depths 45, 51, 57, 63 & EPW-45

0940 - FRx performs injections @
 EPW-45 @ 63' bgs Perm: 1,000 lbs
 Start: 0946 Mud: 125 gal
 Stop: 09:58 Chase: 40 gal
 EPW-45 @ 57' bgs Perm: 1,000 lbs
 Start: 10:07 Mud: 100 gal
 Stop: 10:16 Chase: 40 gal

Location Asheville, NC Date 1/29/20Project / Client CTS of AshevilleGLS216-2012 Page 2 of 4

EPW-45 @ 51' bgs Perm: 1,000 lbs

Start: 10:22 Mud: 100 gallons

Stop: 10:35 Chase: 40 gallons

EPW-45 @ 45 Perm: 1,000 lbs

Start: 10:45 Mud: 100 gal

Stop: 10:52 Chase: 40 gal

- FRx moves to and sets up on

EPW-51

- FRx performs injection

@ EPW-51

EPW-51 @ 50' bgs

Start: 11:33 Perm: 1,000 lbs

Stop: 11:46 Mud: 100 gal

Chase

EPW-51 @ 44' bgs

Start: 12:53 Perm: 1,000 lbs

Stop: 13:02 Mud: 135 gal

Chase: 40 gal

FRx sets up on EPW-43 @ 56'

Start: 13:39 Perm: 1,000

Stop: 13:47 Mud: 90 gal

Chase: 40 gal

Location Asheville, NC Date 1/29/20Project / Client CTS of AshevilleGLS216-2012 Page 3 of 4

EPW-43 @ 50' bgs Perm: 1,000 lbs

Start: 13:39 13:58 Mud: 100 gal

Stop: 13:47 14:05 Chase: 50 gal

EPW-43 @ 44' bgs Perm: 1,000 lbs

Start: 14:20 Mud: 110 gal

Stop: 14:27 Chase: 40 gal

FRx move to & setup on EPW-34

- FRx injected

EPW-34 @ 61' bgs Perm: 1,000 lbs

Start: 15:06 Mud: 100 gal

Stop: 15:15 Chase: 40 gal

EPW-34 hydraulic connected

to EPW-43 @ 61' bgs

FRx performs injections @

EPW-34 @ 55' bgs

Start: 15:26 Perm: 1,000 lbs

Stop: 15:36 Mud: 90 gal

Chase: 40 gal

EPW-34 @ 49' bgs

Start: 15:46 Perm: 1,000 lbs

Stop: 15:56 Mud: 150

Chase: 40

EPW-34 @ 43' bgs

Start: 16:06 Perm: 1,000 lbs

Stop: 16:13 Mud: 100 Chase: 40 gal

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Location Ashville, NC Date 1/29/20Project / Client CTS of AshevilleG252-16-2012 Page 4 of 4

1630 FRx winterizes equipment
 1700 FRx / R. Clark leave site

[Signature]
 1/29/20

Location Ashville, NC Date 1/30/20⁷⁵Project / Client CTS of AshevilleG252-16-2012 Page 1 of 3

0800 FRx / R. Clark arrive onsite

Start: ~~09:00~~ RNC 1/30/20

Stop: RNC 1/30/20

- Conduct H & S Meeting

FRx sets up on EPW-26

FRx performs injections @

EPW-26 @ 64' bgs

Start: 09:01 Perm: 1,000 lb.

Stop: 09:53 Mud: 220 gal

Chase: 40 gal

EPW-26 @ 58' bgs

Start: 09:28 Perm: 1,000 lbs

Stop: 09:38 Mud: 115 gal

Chase: 45 gal

EPW-26 @ 52' bgs

Start: 09:45 Perm: 1,000 lb.

Stop: 09:55 Mud: 75 gal

Chase: 50 gal

EPW-26 @ 46' bgs

Start: 10:14 Perm: 1,000 lbs

Stop: 10:24 Mud: 100 gal.

Chase: 45 gal.

10:30

FRx moves to # sets up

on EPW: 18

Rite in the Rain

Location Asheville, NC Date 1/30/20Project / Client CTS of Asheville
6252-16-2012 Page 2 of 3

FRx performs injections @

EPW-18 @ 68' bgs

Start: 11:04 Perm: 1,000 lbs

Stop: 11:22 Mud: 160 gal

Chase: 75 gal

Hydraulic connection to EPW-26 @ 68' bgs

EPW-18 @ 62' Perm: 1,000 lbs

Start: 11:35 Mud: 125

Stop: 11:45 Chase: 55 gal

EPW-18 @ 56' bgs

Start: 11:55 Perm: 1,000 lbs

Stop: 12:02 Mud: 100 gal

Chase: 40 gal

1208-1300 - FRx stop for lunch

1300 - Resume injection @ EPW-18

EPW-18 @ 50' bgs

Start: 13:12 Perm: 1,000 lbs

Stop: 13:30 Mud: 110 gal

Chase: 40 gal

EPW-18 @ 44' bgs

Start: 13:38 Perm: 1,000 lbs

Stop: 13:46 Mud: 125 gal

Chase: 40 gal

FRx sets up on EPW-10

Location Asheville, NC Date 1/30/20Project / Client CTS of Asheville
6252-16-2012 Page 3 of 3

FRx performs injections @

EPW-10 @ 70' bgs

Start: 14:27 Perm: 1,000 lbs

Stop: 14:37 Mud: 100 gal

Chase: 50 gal

EPW-10 @ 64' bgs

Start: 14:47 Perm: 1,000 lbs

Stop: 14:56 Mud: 125 gal

Chase: 55 gal

EPW-10 @ 58' bgs

Start: 15:05 Perm: 1,000 lbs

Stop: 15:15 Mud: 100 gal

Chase: 55 gal

EPW-10 @ 52' bgs

Start: 15:22 Perm: 1,000 lbs

Stop: 15:31 Mud: 75 gal

Chase: 55 gal

EPW-10 @ 46' bgs

Start: 15:41 Perm: 1,000 lbs

Stop: 15:48 Mud: 100 gal

Chase: 50 gal

FRx sets up on EPW-9

Location Asheville, NC Date 1/31/20Project / Client CTS of Asheville6252-16-2012 Page 1

0800-R Clark arrives onsite
 - SAEDACCO (& personnel) onsite.

FRx onsite / conduct "1"
 meeting

SAEDACCO attempts to
 retrieve tremie pipe w/
 tremie pipe / unable.

Driller rents compressor
 / leaves site.

FRx completes set up on
 EPW-9 & perform injection

@ EPW-9 @ 70' bgs

Start: 09:07 Perm: 1,000%

Stop: 09:14 Mud: 125

Chase 40

EPW-9 @ 64' bgs

Start 09:27 Perm: 1000

Stop: 09:36 Mud: 100

Chase 40

EPW-9 @ 58' bgs Perm: 1000

Start: 09:49 Mud: 100

Stop: 09:52 40g

1000 - FRx leaves site.

SAEDACCO arrives w/
 air compressor

Location Asheville, NC Date 1/31/20Project / Client CTS of Asheville6252-16-2012 Page 2 of 2

- Drill out EPW-13 to ~80'
 bgs w/ air hammer

1130 - SAEDACCO drills
 out EPW-13 to ~81' bgs
 w/ 3 7/8" tricone

1230 - SAEDACCO completes
 drilling, cut EPW-13

- Remove tooling & pack
 up D-50 drill rig

- Return compressor to
 Sunbelt rental

1330 - SAEDACCO R. Clark
 offsite.

[Signature]
 1/31/20

Location Asheville, NC Date 2/3/20
 Project / Client CTS of Asheville
6252-16-2012 Page 1 of 3

0805 Received shipment of
 Potassium permanganate from
 Double D transport (21 pallets
 42,000 lbs)

0900 - Double D transport
 offsite / R. Clark offsite

1030 - R. Clark onsite /
 connect water meter &
 went on FRx

1120 - FRx arrives onsite
 (2 personnel)

1140 - 3rd Personnel arrives
 - Conduct H & S Meeting

FRx continues injections @
 EPW-9 @ 52' bgs

Start: 11:43 Perm: 1,000 lbs
 Stop: 11:57 Mud: 125 gal
 Chase: 0 gal

Potassium permanganate vents to ground
 surface during chase

Vented

Attempt notch @ 46' bgs,
 but also vents @ ground
 surface

Location Asheville, NC Date 2/3/20
 Project / Client CTS of Asheville
6252-16-2012 Page 2 of 3

Move to and setup on EPW-25

Perform injection @
 EPW-25 @ 64' bgs

Start: 13:26 Perm: 1,000 lbs
 Stop: 13:35 Mud: 115

Chase: 40 gallons

EPW-25 @ 58' bgs

Start: 13:48 Perm: 1,000 lbs
 Stop: 13:59 Mud: 150 gallons

Chase 40 gallons

EPW-25 @ 52' bgs

Start: 14:14 Perm: 1,000 lbs
 Stop: 14:22 Mud: 120 gal

Chase: 40 gallons

EPW-25 @ 46' bgs

Start: 14:35 Perm: 1,000 lbs
 Stop: 14:44 Mud: 115 gal

Chase 40 gallons

EPW-33 @ 58' bgs

Start: 15:42 Perm: 1,000 lbs
 Stop: 15:52 Mud: 110 gal

Chase: 40 gallons

Location Asheville, NC Date 2/3/20Project / Client CTS of Asheville
6252-16-2012 Page 3 of 3EPW-33 @ SZ Perm: 1,000 lbs
Start ~~16:42~~ 16:10 Mud: 115 gal
Stop: 16:18 Chase: 40 galEPW-33 @ 46'
Start: 16:31 Perm: 1,000 lbs
Stop: 16:37 Mud: 110 gal
Chase: 40 gal

- FRx stops for day

2/3/20

Location Asheville, NC Date 2/4/20Project / Client CTS of Asheville
6252-16-2012 Page 1 of 3

0800- FRx / R. Clark onsite.

- Conduct H.P.S. Meeting

Set up on EPW-42

FRx performs injections
@ EPW-42 @ 58' bgsStart: 9:24 Perm: 1,000 lbs
Stop: 9:34 Mud: 125

Chase: 40

EPW-42 @ 52' bgs

Start: ~~9:44~~ 9:44 Perm: 1,000 lbs
Stop: 9:53 Mud: 125 gal

Chase: 40 gal

EPW-42 @ 46' bgs 1000 lbs

Start: 9:47 10:12 Perm: 1,000 lbs
Stop: 9:53 10:19 Mud: 115 gal

Chase: 40 gal

- Load super sack that is
a metric ton (2,280 lbs)EPW-42 @ 46' was
1,100 lbs

FRx setup on EPW-41

- Perform injections @

EPW-41 @ 57' bgs

Rite in the Rain

Location Asheville, NC Date 2/4/20
 Project / Client CTS of Asheville
6152-16-2012 Page 2 of 3

EPW-41 @ 57' bgs
 Start: 11:09 Perm: 1,100 lb
 Stop: 11:16 Mud: 125 gal
 Chase: 40 gal

EPW-41 @ 51' bgs (2020 SS)
 Start: 11:30 Perm: 1,000 lb
 Stop: 11:39 Mud: 115 gal
 Chase: 40 gal

EPW-41 @ 45' bgs
 Start: 11:48 Perm: 1,000 lb
 Stop: 11:57 Mud: 115 lb
 Chase: 40 gal

EPW-41 @ 39' bgs
 Start: 13:33 Perm: 1,000 lb
 Stop: 13:39 Mud: 115 gal
 Chase: 40 gal

EPW-32 @ 65' bgs; Perm: 1,000 lb
 Start: 14:17 Mud: 116 gal
 Stop: 14:25 Chase: 40 gal

EPW-32 @ 59'
 Start: 14:39 Perm: 1,000 lb
 Stop: 14:49 Mud: 125 gal
 Chase: 40 gal

Location Asheville, NC Date 2/4/20
 Project / Client CTS of Asheville
6152-16-2012 Page 3 of 3

EPW-32 @ 53' bgs
 Start: 14:58 Perm: 1,000 lb
 Stop: 15:06 Mud: 115 gal
 Chase: 40 gal

EPW-32 @ 47' bgs
 Start: 15:25 Perm: 1,000 lb
 Stop: 15:33 Mud: 120 gal
 Chase: 40 gal

EPW-32 @ 41'
 Start: 15:47 Perm: 1,000 lb
 Stop: 15:53 Mud: 110 gal
 Chase: 40 gal

1630 - Complete removing
 tooling from EPW-32
 FRX Leaning Site
 1645 - R. Clark Leaning Site

[Signature]
 2/4/20

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Location Asheville, NC Date 2/5/2020Project / Client CTS of Asheville6252-16-2012 Page 1 of 1

0800 R. Clark / FRx arrive onsite
 - Move to and setup on EAW 24
 0945 - FRx stops work due
 to rain. Remove water
 meter
 1000 - FRx / R. Clark leave site

[Signature]
 2/5/20

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Location Asheville, NC Date 2/6/20Project / Client CTS of Asheville6252-16-2012 Page 1 of 1

0800
 Onsite to meet Double D
 Transport; Delivers trailer
 load (21 Supersacks) of
 potassium permanganate.
 Place @ back of concrete
 pad.
 0900 - Leave site

[Signature]
 2/6/20

Location Asheville, NC Date 2/7/20Project / Client CTS of Asheville6252-16-2012 Page 1 of

0800 - R. Clark / FRx (3 personnel)

Onsite

- Conduct H&S Meeting

FRx sets up on EPW-24

FRx perform injection @

EPW-24 @ 74' bgs

Start: 8.57 Perm: 1,000/lb

Stop: 9.16 Mud: 150

- FRx replaces stator. Chase: 40

EPW-24 @ 68' bgs

Start: 9.42 Perm: 1,000/lb

Stop: 9.59 Mud: 150 gal

Chase: 40

EPW-24 @ 62' bgs

Start: 10.20 Perm: 1,000/lb

Stop: 10.28 Mud: 110 gal

Chase: 40 gal

EPW-24 @ 56' bgs

Start: 10.42 Perm: 1,000/lb

Stop: 10.49 Mud: 115 Chase: 40

EPW-24 @ 50'

EPW-24 @ 50' bgs

Start: 11.16 Perm: 1,000/lb

Stop: 11.24 Mud: 110 Chase: 40

Location Asheville, NC Date 2/7/20Project / Client CTS of Asheville6252-16-2012 Page 2 of

EPW-24 @ 44' bgs

Start: 11.35 Perm: 1,000/lb

Stop: 11.42 Mud: 105 gallons

Chase: 40 gallons

Setup on EPW-16

FRx performs injections @

EPW-16 @ 76' bgs

Start: 13.36 Perm: 1,000/lb

Stop: 13.48 Mud: 120 gal

Chase: 40 gal

EPW-16 @ 70' bgs

Start: 13.58 Perm: 1,000/lb

Stop: 14.06 Mud: 110 gal

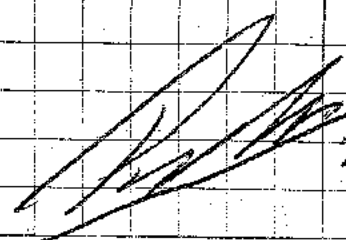
Chase: 40 gal

~~EPW-16 RMC 2/7/20~~

FRx begins winterizing

equipment

1500 - FRx / R. Clark offsite


 2/7/20

Location Ashville, NC Date 2/10/20Project / Client CTS of Asheville
6252-16-2012 Page 1 of 20800-R. Clark / FRx personnel (3) arrive
on site / Conduct H35 Meetings- FRx begins setup / Addition 1 personnel
FRx performs injections @

EPW-16 @ 64' bgs

Start: 10:02 Perm: 1,000 lb

Stop: 10:12 Mud: 130 gal

Chase: 40 gal

EPW-16 @ 58' bgs

Start: 10:23 Perm: 1,000 lb

Stop: 10:32 Mud: 120 gal

Chase: 40 gal

EPW-16 @ 52' bgs

Start: 10:41 Perm: 1,000 lb

Stop: 10:58 Mud: 100 gal

Chase: 40 gal

EPW-16 @ 46' bgs

Start: 10:58 Perm: 1,000 lb

Stop: 11:06 Mud: 100 gal

Chase: 40 gal

Setup on EPW-8

1200-FRx stops for lunch /
indicate FRx to pick up
pallet of bentonite at
lunch / will return 1330Location Ashville, N.C. Date 2/10/20Project / Client CTS of Asheville
6252-16-2012 Page 2 of 2

Raining from 1200-1330; Start drilling

1330-R. Clark returns to site

1400-FRx returns to site (4
personnel) / Complete setup on

EPW-8 @ 74' bgs Perm: 1,000 lb

Start: 14:55 Mud: 120 gal

Stop: 15:09 Chase: 40 gal

EPW-8 @ 68' bgs

Start: 15:20 Perm: 1,000 lb

Stop: 15:30 Mud: 100 gal

Chase: 40 gal

EPW-8 @ 62' bgs

Start: 15:40 Perm: 1,000 lb

Stop: 15:49 Mud: 110 gal

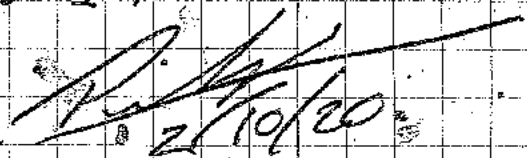
Chase: 40 gal

EPW-8 @ 56' bgs

Start: 15:57 Perm: 210 lb

Stop: 16:05 Mud: 90 gal

Chase: 40 gal

- Move to and setup on
EPW-17
2/10/20

Location Asheville, NC Date 2/11/20Project / Client CTS of Asheville6252-16-2012 Page 1 of 3

0800 - R. Clark / FRx arrive on site

- Conduct H&S Meeting

- FRx completes setup

on EPW-17

- FRx begins performing injections @

EPW-17 @ 60' bgs

Start: 08:48 Perm: 1,000 lb

Stop: 08:59 Mud: 120 gal

Chase: 45 gal

EPW-17 @ 54' bgs

Start: 09:07 Perm: 1,000

Stop: 9:17 Mud: 100

Chase: 45

EPW-17 @ 48' Perm: 1,000

Start: 9:28 Mud: 100

Stop: 9:38 Chase: 40

EPW-17 @ 42' bgs

Start 09:47 Perm: 1,000 lb

Stop: 09:57 Mud: 100

Chase: 45

FRx sets up on EPW-50

Start: 10:50 Perm: 1,000

Stop: 11:00 Mud: 100 gal

Chase: 45 gal

Asheville, NC2/11/20CTS of Asheville6252-16-2012 Page 2 of 3

EPW-50 @ 52' bgs

Start: 11:08

Perm: 1,000 lb

Stop: 11:17

Mud: 100 gal

Chase: 45 gal

EPW-50 @ 57' bgs

Start: 11:25 Perm: 1,000 lb

Stop: 11:35 Chase: 45

1200 - R. Clark off site

FRx stops for lunch

FRx sets up on EPW-52

~~EPW-50 @ 50' bgs~~

FRx performs injections

@ EPW-52 @ 60'

Start: 13:21 Perm: 500 lb

Stop: 13:29 Mud: 145

Chase: 40

EPW-52 @ 53' bgs

Start: 13:38 Perm: 500

Stop: 13:47 Mud: 100

Chase: 45

EPW-52 @ 46' bgs

Start: 13:55 Perm: 500 lb

Stop: 14:05 Mud: 100 gal

Chase: 40 gal

Rate in 100 Perm

Location Ashville, NC Date 2/11/20Project / Client CTS of AshvilleG252-16-2012 Page 3 of 3

EPW-S2 completed. FRx
 sets up on EPW-S8
 FRx performs injections
 @ EPW-S8 @ 61' bss
 Start: 14:43 Perm: 500 lbs
 Stop: 14:53 Mud: 200 gal
 Chase: 45 gal

EPW-S8 @ 54' bss
 Start: 15:05 Perm: 500
 Stop: 15:19 Mud: 140
 Chase: 45 gal

EPW-S8 @ 47' bss
 Start: 15:30 Perm: 500 lbs
 Stop: 15:45 Mud: 150 gal
 Chase: 40 gal

1530 FRx off site

Location Ashville, NC Date 2/12/20Project / Client CTS of AshvilleG252-16-2012 Page 1 of 2

0800-R. Clark onsite
 Conduct H+S Meeting
 - Discuss EPW-13 w/FRx
 FRx sets up on EPW-S8
 EPW-S3 Perform injections
 @ EPW-S3 @ 66
 Start: 8:58 Perm: 500 lbs
 Stop: 9:09 Mud: 170 Chase: 45
 EPW-S3 @ 59
 Start: 9:19 Perm: 500 lbs
 Stop: 9:27 Mud: 160 gal Chase: 45 gal
 EPW-S3 @ 52'
 Start: 9:36 Perm: 500 lbs
 Stop: 9:45 Mud: 150 gal Chase: 40 gal
 EPW-S3 @ 45' bss
 Start: 9:55 Perm: 500 lbs
 Stop: 10:06 Mud: 150 gal Chase: 40 gal
 - FRx stops to move frac rig.

1130-R. Clark off site
 FRx performs injections
 @ EPW-13 @ 75' bss
 Start: 13:41 Perm: 1,000 lbs
 Stop: 13:52 Mud: 170 gal Chase: 45 gal
 Rite in the Rain

Location Ashville, NC Date 2/12/20Project / Client CTS of Asheville
6252-16-2012 Page 1 of 2

FRx performs injection @
EPW-13 @ 69' bgs
Start: 14:04 Perm: 1,000 lbs
Stop: 14:16 Mud: 100 gal
Chase: 45 gal

EPW-13 @ 63' bgs
Start: 14:24 Perm: 1,000 lbs
Stop: 14:35 Mud: 100 gal
Chase: 40 gal

EPW-13 @ 57' bgs
Start: 14:42 Perm: 1,000 lbs
Stop: 14:51 Mud: 100
Chase: 40

EPW-13 @ 51' bgs
Start: 15:20 Perm: 1,000 lbs
Stop: 15:30 Mud: 100 gal
Chase: 40 gal

1630 - FRx offsite

[Signature]
2/12/20

Location Ashville, NC Date 2/13/20Project / Client CTS of Asheville
6252-16-2012 Page 1 of 2

FRx delays start due to rain
10:30 - arrive on site
FRx sets up on EPW-39

FRx performs injections
@ EPW-39 @ 76' bgs
Start: 11:11 Perm: 1,000 lbs
Stop: 11:26 Mud: 120 gal
Chase: 40 gal

EPW-39 @ 68' bgs
Start: 11:50 Perm: 1,000 lbs
Stop: 11:58 Mud: 120 gal
Chase: 40 gal

EPW-39 @ 60' bgs
Start: 12:09 Perm: 1,000 lbs
Stop: 12:17 Mud: 100 gal
Chase: 40 gal

EPW-39 @ 52' bgs
Start: 12:28 Perm: 1,000
Stop: 12:34 Mud: 150 gal
Chase: 60 gal

move to and set up
on EPW-76

- Move from rig

Rite in the Rain

Location Ashville, NC Date 2/13/20Project / Client CTS of Asheville6252-16-2012 Page 2 of 2

1230. R. Clark onsite
 1500-1600 - Waiting on
 OK to adjust frac
 depth. FRx unable to
 get injection equipment
 deeper than 57.5' bgs
 - M. Wallace gives OK to
 adjust depth

FRx performs injection
 NA @ EPW-76 @ 57.5
 Start: 16:07 Perm: 1000
 2/13/20 Stop: 16:19 Mud: 130
 Flow: 45

[Signature]
 2/13/20

Location Ashville, NC Date 2/14/20Project / Client CTS of Asheville6252-16-2012 Page 1 of 2

0800. R. Clark onsite / FRx onsite
 - Conduct H+S Meeting
 - FRx unfreezes hoses / equip.
 - Compressor (blaster cylinders
 frozen / unfreeze / reassemble &
 it refreezes.

EPW-76 @ 51.5' 1000
 Start: 10:57 Perm: ~~750~~
 Stop: 12:01 Mud: 220
 Chase: 45 gal

- Replaced stator on meynar
 pump half way through
 frac.

FRx performs injections @
 EPW-76 @ 45.5' bgs
 Start: 12:15 Perm: 1000
 Stop: 12:26 Mud: 140
 Chase: 40

EPW-76 @ 39.5' bgs
 Start: 12:40 Perm: 1,000 lbs
 Stop: 12:48 Mud: 90
 Chase: 40

Location Asheville, NC Date 2/14/20
 Project / Client CTS of Asheville
6252-16-2012 Page 2 of 2

EPW-76 @ 33.5' bgs
 Start: 12:57 Perm: 1,000
 Stop: 13:05 Mud: 100
 Chase: 40

EPW-76 @ 27.5' bgs
 Start: 13:17 Perm: 1,000 lbs
 Stop: 13:28 Mud: 100 gal
 Chase: 45 gal

1400 - Winterize equip
 1430 - FRx off site

~~2/14/20~~

Location Asheville, NC Date 2/17/20¹⁰¹
 Project / Client CTS of Asheville
6252-16-2012 Page 1 of 2

0800 - R. Clark onsite
 085 - Double D Transport arrives
 to deliver trailer of permagard
 (21 loads) Super sacks
 - Double D. picks up empty
 trailer & leaves site.
 R. Clark off site

0930 - FRx arrives. Repair
 part on mono pump &
 set up on EPW-79

FRx performs injection @
 EPW-79 @ 64' bgs
 Start 11:53 Perm: 500 lb
 Stop: 12:03 Mud: 120 gal
 Chase 45 gal

1210 R. Clark onsite; EPW-79 @ 57'
 Start: 12:13 Perm: 500 lbs
 Stop: 12:21 Mud: 150
 Chase: 40

EPW-79 @ 50'
 Start: 12:41 Perm: 500 lbs
 Stop: 12:52 Mud: 150 gal
 Chase: 45 gal

FRx stops for lunch

Location Asheville, NC Date 2/17/20
 Project / Client CTS of Asheville
6252-16-2012 Page 2 of 3

EPW-79 @ 43' bgs
 Start: 14:01 Perm: 500 lbs
 Stop: 14:11 Mud: 170 gal
 Chase: 40 gal

EPW-79 @ 36' bgs
 Start: 14:23 Perm: 500 lbs
 Stop: 14:30 Mud: 150 gal
 Chase: 40 gal

EPW-79 @ 29' Perm: 500 lbs
 Start: 14:40 Mud: 150
 Stop: 14:48 Chase: 40

Move to 3 setup EPW-77

EPW-77 @ 66' bgs
 Start: 15:28 Perm: 500 lbs
 Stop: 15:37 Mud: 150 gal
 Chase: 45 gal

EPW-77 @ 59' bgs
 Start: 15:46 Perm: 500
 Stop: 15:52 Mud: 150
 Chase: 40

EPW-77 @ 52
 Start: 16:02 Perm: 500
 Stop: 16:10 Mud: 150
 Chase

Location Asheville, NC Date 2/17/20
 Project / Client CTS of Asheville
6252-16-2012 Page 3 of 3

EPW-77 @ 45' bgs
 Start: 16:20 Perm: 500
 Stop: 16:26 Mud: 150
 Chase: 40

EPW-77 @ 38' bgs
 Start: 16:41 Perm: 500
 Stop: 16:48 Mud: 150
 Chase: 40

EPW-77 @ 31 Perm: 500
 Start: 16:57 Mud: 150
 Stop: 17:04 Chase: 45

17:30 - FR. / R. Clark leave
 Site.

[Signature] 2/12/20
[Signature]

Location

Asheville, NC Date 2/18/20

Project / Client

CTS of Asheville

GZS2-16-2012 Page 1 of 3

0800 - FRx ~~10~~ arrive on site

FRx sets up on EPW-74 @ 3

Start: 09:23 Perm: 500

Stop: 09:32 Mud: 160

Chase: 45

EPW-74 @ 66' bgs

Start: 09:43 Perm: 500

Stop: 09:50 Mud: 150

Chase: 40

EPW-74 @ 59' bgs

Start: 09:53 ^{Perm 2/18/20} 10:01 Perm: 500Stop: 09:58 ^{Perm 2/18/20} 10:09 Mud: 150

Chase: 40

EPW-74 @ 52' bgs

Start: 10:20 Perm: 500

Stop: 10:29 Mud: 160

Chase: 40

EPW-74 @ 45' bgs

Start: 10:49 Perm: 500

Stop: 10:56 Mud: 150

Chase: 40

EPW-74 @ 38' bgs

Start: 11:05 Perm: 500

Stop: 11:13 Mud: 160

Chase: 40

Location

Asheville, NC Date 2/18/20 ¹⁰⁵

Project / Client

CTS of Asheville

GZS2-16-2012 Page 2 of 3

EPW-74 @ 31' bgs

Start: 11:26 Perm: 500

Stop: 11:34 Mud: 145

Chase: 40

EPW-74 completed; FRx

sets up on EPW-71

1205' R Clark on site / conduct

H2S monitoring

EPW-71 @ 67'

Start: 12:08 Perm: 500

Stop: 12:17 Mud: 160

Chase: 45

EPW-71 @ 60' bgs

Start: 13:26 Perm: 500/160

Stop: 13:35 Mud: 170 gbl

Chase: 45 gbl

EPW-71 @ 53' bgs

Start: 13:42 Perm: 500

Stop: 13:51 Mud: 150

Chase: 40

EPW-71 @ 46' bgs

Start: 14:06 Perm: 500

Stop: 14:14 Mud: 170

Chase: 40

Location Asheville, NC Date _____Project / Client CTS of Asheville6252-16-2012 Page 3 of 3

EPW-71 @ 39 Perm: 500

Start: 14:22 Mud: 150

Stop: 14:30 Chase: 40

EPW-71 @ 32

Start: 14:39 Perm: 500

Stop: 14:47 Mud: 150

Chase: 45

FRx moves to and
sets up on EPW-67

1545 - BOSINS raining

1550 - FRx leaves site

R. Clark onsite for

some site work

R. Clark leaves site.

2/18/20

Location Asheville, NC Date 2/19/20Project / Client CTS of Asheville6252-16-2012 Page 1 of 30800 R. Clark / FRx onsite / Conduct H&S
Meeting

FRx completes setup on EPW-67

+ begins injections

EPW-67 @ 76' bgs

Start: 8:40 Perm: 500 lbs

Stop: 9:11 Mud: 250 gal

Chase: 45 gal

EPW-67 @ 69' bgs

Start: 9:22 Perm: 500 lbs

Stop: 9:30 Mud: 160

Chase: 40

EPW-67 @ 62' bgs

Start: 9:38 Perm: 500 lbs

Stop: 9:46 Mud: 250 gal

Chase: 40 gal

EPW-67 @ 55' bgs

Start: 09:58 Perm: 500 lbs

Stop: 10:07 Mud: 250 gal

Chase: 40

EPW-67 @ 48' bgs

Start: 10:40 Perm: 500

Stop: 10:47 Mud: 160

Chase: 45

Return to site

Location Asheville, NC Date 2/19/20Project / Client CTS of Asheville6252-16-2017 Page 2 of 3

EPW-67 @ 41' bgs

Start: 10:54 Perm: 500

Stop: 11:01 Mud: 160

Chase: 45

FRx moves to 3 sets up
on EPW-63

R. Clark leaves site @ 12:00

EPW-63 @ 70' Perm: 500

Start: 11:35 Mud: 150

Stop: 11:44 Chase: 40

EPW-63 @ 64' Perm: 500

Start: 13:22 Mud: 160

Stop: 13:33 Chase: 40

EPW-63 @ 58' bgs Perm: 500

Start: 13:43 Mud: 150

Stop: 13:52 Chase: 40

EPW-63 @ 52' bgs

Start: 14:02 Perm: 500

Stop: 14:12 Mud: 150

Chase: 40

EPW-63 @ 45

Start: 14:28 Perm: 500

Stop: 14:36 Mud: 150

Chase: 40

Location Asheville, NC Date 2/19/20 109Project / Client CTS of Asheville6252-16-2017 Page 3 of 3

FRx moves to 3 sets up on

EPW-54 @ 69' bgs

Start: 15:13 Perm: 500/60

Stop: 15:21 Mud: 120

Chase: 45 ga'

EPW-54 @ 62' bgs

Start: 15:30 Perm: 500

Stop: 15:40 Mud: 150

Chase: 40

EPW-54 @ 55' bgs

Start: 15:49 Perm: 500

Stop: 15:58 Mud: 150

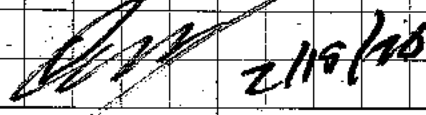
Chase: 40

EPW-54 @ 48' bgs

Start: 16:06 Perm: 500/60

Stop: 16:13 Mud: 170

Chase: 45 ga'

~~EPW-RMC 2/19/20~~1630 FRx stops for the
day 2/19/20

Rite in the Rain

Asheville, NC

2/20/20

CTS of Asheville

G252-16-2012 Page 1 of 2

0800

FRx onsite (3 personnel)

~~Resumen injections @ 2/20/20~~

Setup on EPW-59

Perform injections @

EPW-59 @ 59' bgs

Start: 9:26

Perm: 500

Stop: 9:36

Mud: 150

Clase: 60

EPW-59 @ 53' bgs

Start: 09:47

Perm: 500

Stop: 09:56

Mud: 150

Clase: 60

EPW-59 @ 47' bgs

Start: 10:16

Perm: 500

Stop: 10:19

Mud: 150 gal

Clase: 40 gal

EPW-59 @ 40'

Start: 10:36

Perm: 500

Stop: 10:45

Mud: 140

Clase: 35

1200-FRx lunch / R. Clark arrival

FRx moves to #80's

Up on EPW-47 @ 75' bgs

Start: 13:45

Perm: 1000

Stop: 13:58

Mud: 120

Asheville, NC

2/20/20

CTS of Asheville

G252-16-2012

Page 2 of 2

FRx winterizes equip
Leaves site for dam
@ 14:35

Location Asheville, NC Date 2/24/20
 Project / Client CTS of Asheville
6252162012 Page 1 of 1

0800 - 1 FRx Personnel onsite / R. Clark

onsite. / Conduct H & S Meeting

- FRx begins set up for day

0810 (Additional personnel onsite)

0900 - R. Clark leaves site.

1040 - Jesse w/ FRx indicates

FRx leaving site; need parts

in Greenville, SC; will return

afternoon

15:00 - R. Clark / FRx return to site

FRx performs injections @

• EPW-47 @ 66' bgs

Start: 15:20 Perm: 1,000

Stop: 15:33 Mud: 160

Chase: 43

EPW-47 @ 57' bgs

Start: 15:42 Perm: 1,000

Stop: 15:53 Mud: 110

Chase: 40

- Winterize equipment

1630 FRx / R. Clark

off site

[Signature]
2/24/20

Location Asheville, NC Date 2/26/20 113
 Project / Client CTS of Asheville
6252162012 Page 1 of 3

* R. Clark not onsite on 2/25/20
 refer to G. Huchling w/
 Woodfield notes & FRx
 field notes.

0800 - R. Clark / FRx arrive
 onsite / conduct H & S Meeting

- FRx indicated that they

were unable to frac

2.75' interval @ EPW-61

so they moved up @ 0.5'

interval & then 1' intervals

until they were able

to frac formation @ 73'

- Adjust frac spacing from

~~2' to 8'~~ to

2' apart @ EPW-61

FRx set up @ EPW-61

Perform injection

@ EPW-61 @ 66' bgs

Start: 8:52 Perm: 1,000/lbs

Stop: 9:04 Mud: 130 gal.

Chase: 45 gal.

EPW-61 @ 59' bgs, Perm: 1,000/lbs

Start: 9:14 Mud: 120 gal Chase: 40 gal

Stop: 9:28 *Return to the Rain*

Location Asheville NC
Project / Client Wood CTS

Date 2-25-20
STH

★ EPW-48 @ 77'
ON 9:29
OFF 9:40

Perm 1000
Mud 130
Chase 40

★ EPW-48 @ 68'
ON 9:49
OFF 9:59

Perm 1000
Mud 110
Chase 40

★ EPW-48 @ 59'
ON 10:08
OFF 10:18

Perm 1000
Mud 90
Chase 40

★ EPW-48 @ 51'
ON 10:26
OFF 10:34

Perm 1000
Mud 90
Chase 40

★ EPW-55 @ 74
ON 11:09
OFF 11:20

Perm 1000
Mud 100
Chase 45

★ EPW-55 @ 65'
ON 11:29
OFF 11:43

Perm 1000
Mud 100
Chase 40

Location Asheville NC
Project / Client Wood CTS

Date 2-25-20 81

★ EPW-55@ 56'
ON 11:53
OFF 12:05

Perm 1000
Mud 90
Chase 45

★ EPW-56@ 75.5'
ON 14:06
OFF 14:19

Perm 1000
Mud 100
Chase 55

★ EPW-56@ 67.5'
ON 14:30
OFF 14:44

Perm 1000
Mud 160
Chase 50

★ EPW-56@ 59.5'
ON 14:52
OFF 15:02

Perm 1000
Mud 90
Chase 45

★ EPW-56@ 51.5'
ON 15:12
OFF 15:21

Perm 1000
Mud 110
Chase 45

EPW-61@ 77.5' 77'
ON 15:55 16:15
OFF

Perm
Mud
Chase

No 60

Location Asheville NC

Date 2-25-20

82

Project / Client Wood CTS

EPW-61@73'

ON 16:39

OFF 17:06

Pcm ~~175~~ 1000

Mud 175

Chase 75

Attempted every foot from 77.5' until we
achieved a frac

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EPW-61 @ 52' bgs
 Start: 9:37 Perm: 1000 lbs
 Stop: 9:48 Mud: 100 gal
 Chase: 45 gal

~~EPW-61 @ 52' bgs~~

~~Start: RMX 2/26/20~~

~~Stop:~~

FRx sets up on EPW-60

EPW-60 @ 71' bgs

Start: 10:32 Perm: 1,000 lbs
 Stop: 10:45 Mud: 120 gal Chase 45

Hydraulic Connection to EPW-59

EPW-60 @ 62' bgs

Start: 13:51 Perm: 1,000
 Stop: 14:05 Mud: 100
 Chase 40

EPW-60 @ 53' bgs

Start: 14:16 Perm: 1,000
 Stop: 14:25 Mud: 90
 Chase 45

FRx sets up on EPW-65a7

Start: 15:20 Perm: 1,000 lbs
 Stop: 15:34 Mud: 150 gal
 Chase: 45 gal

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EPW-65 @ 66' bgs

Start: 15:43 Perm: 1,000 lbs
 Stop: 15:54 Mud: 100
 Chase: 50

EPW-65 @ 58' bgs

Start: 16:04 Perm: 1,000 lbs
 Stop: 16:14 Mud: 100
 Chase: 50

EPW-65 @ 50' bgs

Start: 16:23 Perm: 1,000
 Stop: 16:35 Mud: 100 gal
 Chase: 45 gal

1645-FRx offsite

[Signature]
 2/26/20

Location Asheville, NC Date 2/27/20Project / Client CTS of Asheville6252-16-2012 Page 1 of 2

0730 - R. Clark arrives onsite.

0745 - Double D. arrives onsite
to deliver load of permanganate
(7 super sacks) & pick up empty0830 - R. Clark / Double D
are off site / FRx unable
to work due to below
freezing temperature- FRx arrives 11:30 & begins
setup. / Indicated jets
were clogged. Trip out
of GS and trip in.

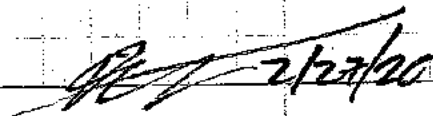
FRx performs injections

② EPW-65 @ 42' bgs
Start: 13:22 Perm: 1,000 lbs
Stop: 13:31 Mud: 140 gal
Chase: 50 gal

FRx sets up on EPW-69 @ 26'

Start: 14:18 Perm: 1,000
Stop: 14:27 Mud: 90
Chase: 45EPW-69 @ 57' bgs
Start: 14:36 Perm: 1,000
Stop: 14:43 Mud: 90
Chase: 45Location Asheville, NC Date 2/27/20Project / Client CTS of Asheville6252-16-2012 Page 2 of 2EPW-69 @ 49' bgs
Start: 14:51 Perm: 1,000
Stop: 14:59 Mud: 90
Chase: 40EPW-69 @ 41' bgs
Start: 15:10 Perm: 1,000 lbs
Stop: 15:19 Mud: 100
Chase: 45 gal

Move to and setup on EPW-73

EPW-73 @ 64' bgs
Start: 16:04 Perm: 1,000 lbs
Stop: 16:13 Mud: 100 gal
Chase: 45 galEPW-73 @ 56' bgs
Start: 16:14 Perm: 1,000
Stop: 16:31 Mud: 100
Chase: 40EPW-73 @ 48' bgs
Start: 16:42 Perm: 1,000 lbs
Stop: 16:49 Mud: 100
Chase: 45 2/27/20

Plot in the field

Location Asheville, NC Date 3/2/20Project / Client CTS of Asheville6252-16-2012 Page 1 of 2

0800 - FRx / R. Clark onsite.

*Conduct H & S Meeting
 FRx sets up for day
 previously winterized
 equipment.

Perform injections @

EPW-73 @ 40' bgs

Start: 9:27 Perm: 1,000

Stop: 9:43 Mud: 140

Chase: 65

EPW-78 @ 55' bgs

Start: 10:29 Perm: 1,000

Stop: 10:47 Mud: 120

Chase: 50

EPW-78 @ 49' bgs

Start: 10:56 Perm: 1,000 lbs

Stop: 11:11 Mud: 110 gal

Chase: 45 gal

EPW-78 @ 43' bgs

Start: 11:25 Perm: 1,000

Stop: 11:37 Mud: 100

Chase: 40

EPW-78 @ 37' bgs

Start: 11:55 Perm: 1,000

Stop: 12:05 Mud: 120 Chase: 40

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EPW-31 @ 31

Start: 12:15

Perm: 1,000 lbs

Stop: 12:25

Mud: 120

EPW-64 @ 64' bgs

Start: 12:54 Perm: 500

Stop: 13:34 Mud: 160 Chase: 40

EPW-64 @ 63' bgs

Start: 13:34

Perm: 1,000 lbs

Stop: 13:44

Mud: 110 gal

Chase: 45 gal

EPW-64 @ 53' bgs

Start: 13:53

Perm: 1,000 lbs

Stop: 14:02

Mud: 90

Chase: 45

EPW-64 @ 44' bgs

Start: 14:16

Perm: 1,000 lbs

Stop: 14:18

Mud: 90 gal

Chase: 45 gal

EPW-68 @ 69' bgs

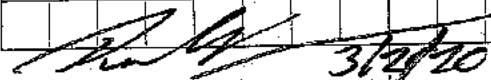
Start: 14:52

Perm: 500 lbs

Stop: 14:59

Mud: 250 gal

Chase: 40 gal

 3/2/20

Rite in the Rain

Location Asheville, NC Date 3/3/20
 Project / Client CTS of Asheville
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FRx arrives @ 13:00 due
 to rain in morning.

FRx performs injection
 @ EPW-68 @ 63' bgs
 Start 13:26 Perm: 1,000
 Stop: 13:36 Mud: 120
 Chase: 45

EPW-68 @ 57' bgs
 Start: 13:45 Perm: 500
 Stop: 13:54 Mud: 150
 Chase: 45

EPW-68 @ 51' bgs
 Start: 14:05 Perm: 1,000 lbs
 Stop: 14:15 Mud: 130 Chase: 40

EPW-68 @ 45' bgs
 Start: 14:23 Perm: 1,000 lbs
 Stop: 14:31 Mud: 90 Chase: 4

EPW-68 @ 39' bgs
 Start: 14:41 Perm: 1,000
 Stop: 14:50 Mud: 90
 Chase: 55

EPW-72 @ 70' bgs
 Start: 15:23 Perm: 500
 Stop: 15:30 Mud: 160
 Chase: 50

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EPW-72 @ 64' bgs
 Start: 15:39 Perm: 1,000 lbs
 Stop: 15:48 Mud: 90 gal
 Chase: 45 gal

EPW-72 @ 58' bgs
 Start: 15:55 Perm: 1,000 lbs
 Stop: 16:04 Mud: 90
 Chase: 50

EPW-72 @ 52' bgs
 Start: 16:11 Perm: 500
 Stop: 16:16 Mud: 160
 Chase: 45

EPW-72 @ 46' bgs
 Start: 16:47 Perm: 1,000 lbs
 Stop: 16:56 Mud: 160 gal
 Chase: 45 gal

R. Clark did not visit site
 on 3/3/20 / Notes from FRx

[Signature]
 3/3/20

Asheville, NC

3/4/20

CTS of Asheville

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0800 - FRx on site

- Conduct H & S Meeting

FRx perform injections @

EPW-72 @ 40' bgs

Start: 09:01 Perm: 1,000

Stop: 09:12 Mud: 200

Chase: 45

EPW-72 @ 34'

Start: 09:21 Perm: 1,000

Stop: 09:28 Mud: 140

Chase: 45

FRx sets up on EPW-75

FRx performs injection

@ EPW-75 @ 54' bgs

Start: 10:18 Perm: 500

Stop: 10:25 Mud: 160

Chase: 45

EPW-75 @ 58' bgs

Start: 10:33 Perm: 1,000

Stop: 10:41 Mud: 110

Chase: 45

EPW-75 @ 52' bgs

Start: 10:47 Perm: 1,000

Stop: 10:56 Mud: 110

Chase: 45

Asheville, NC

3/4/20

CTS of Asheville

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EPW-75 @ 46' bgs

Start: 11:04

Perm: 1,000 lbs

Stop: 11:11

Mud: 110 gal

Chase: 45 gal

EPW-75 @ 40'

Start: 11:19

Perm: 1,000 lbs

Stop: 11:28

Mud: 110 gal

Chase: 45 gal

EPW-75 @ 34' bgs

Start: 11:35

Perm: 1,000

Stop: 11:54

Mud: 160 gal

Chase: 80 gal

- Daylighted @ ERH drip tube

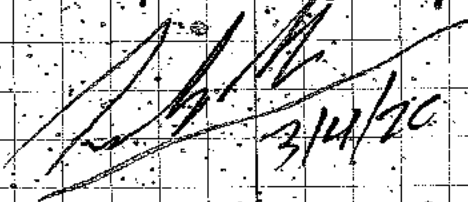
@ M14 during chase

~ 30' to the west of

EPW-75

12:00-15:00 FRx cleans up

site & packs up



Location Asheville, NC Date 3/5/20Project / Client CTS of Asheville
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12:30 - Onsite to obtain water meter from F.R. Complete cleanup. Check MW 38, 39 & TMW-1 for presence of potassium permanganate visually. Did not observe "purple" water in walls via bailer.

13:30 - Return water meter to city of Asheville

~~R. Clark~~
3/5/20

Location Asheville, NC Date 3/9/20Project / Client CTS of Asheville
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0800 Onsite to meet Double D transport to pick up empty trailer.

- Disconnect power from meter (power deactivated by Duke on 3/6/20) to office trailer.

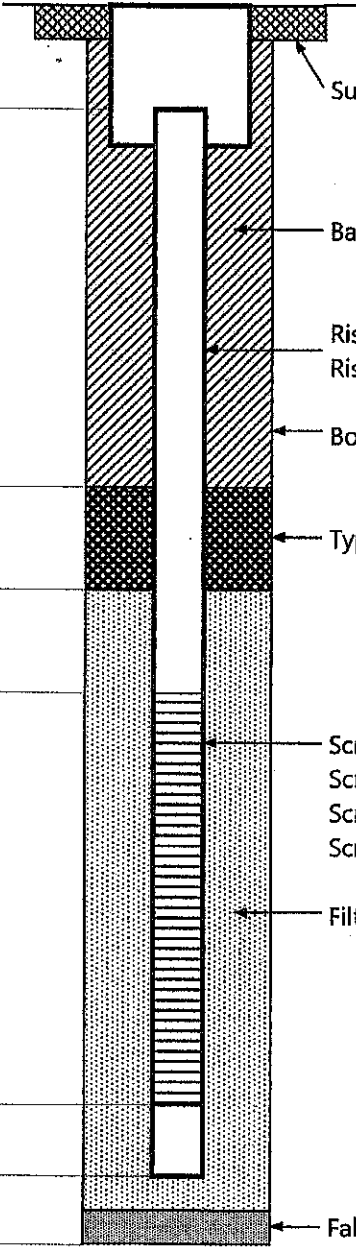
- Contact TEG to pickup office trailer.

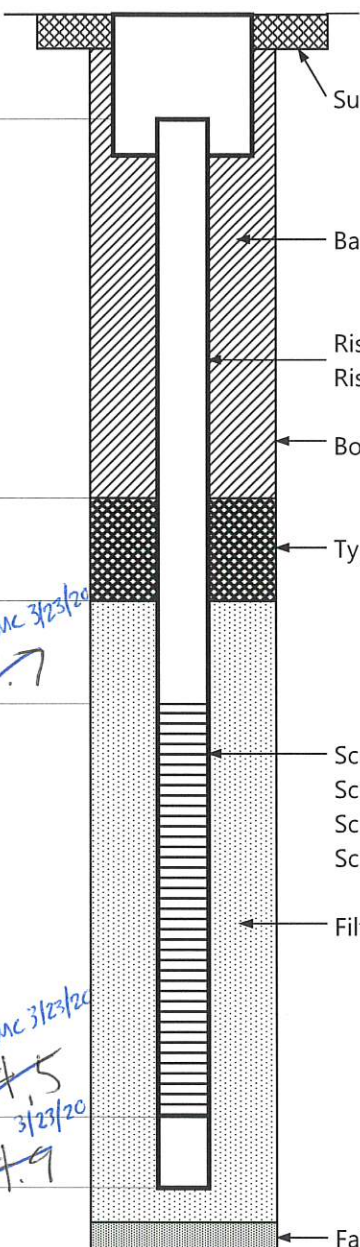
1000 R. Clark offsite

~~R. Clark~~
3/9/20

APPENDIX C

MONITORING WELL CONSTRUCTION DIAGRAMS AND NCDEQ WELL CONSTRUCTION RECORDS

MONITORING WELL CONSTRUCTION DETAIL		WELL ID
CTS of Asheville, Inc. Superfund Site Wood Project 6252-16-2012.06		MW-33
Installation Date: <u>10/3/19</u> Drilling Method: <u>4 1/4" HSA</u> Contractor: SAEDACCO Driller: <u>RICHY LEMIRE-2953A</u>	24-hour Depth to Water: <u>1014.119</u> <u>13.50' bgs</u> Northing: <u>653039.8</u> Easting: <u>956552.8</u>	Completed By: <u>RODNEY M. CLARK</u> Measuring Point (MP) Type: ground surface Elevation (ft msl): <u>2410.2</u>
Item	Depth below MP (ft)	Description
Riser Pipe:	<u>0.4</u>	 Surface Seal Type: <u>concrete</u>
		Backfill/Grout Type: <u>Portland cement/bentonite</u>
		Riser Pipe Type: <u>Sch. 40 PVC</u>
		Riser Pipe ID: <u>2 inch</u>
		Borehole Diameter: <u>8 inch</u>
Top of Seal:	<u>36.0</u>	Type of Seal: <u>3/8-inch bentonite chips</u>
Top of Filter Pack:	<u>38.0</u>	
Top of Screen:	<u>40.3'</u>	Screen Type: <u>Sch. 40 PVC</u> Screen ID: <u>2 inch</u> Screen Slot Size: <u>0.010 inch</u> Screen Length: <u>4.8</u>
		Filter Pack Type: <u>GP#2#1 silica sand</u> <u>5 bags (0.5 cu ft)</u>
Bottom of Screen:	<u>45.1'</u>	
End Cap:	<u>45.4'</u>	
Drilled Depth:	<u>45.8'</u>	Fallback/Backfill: <u>GP#2 0.4'</u>
Notes: drill rig: <u>D-50; encountered hard zone @ ~10' bgs</u> <u>Female Threads Up</u>		

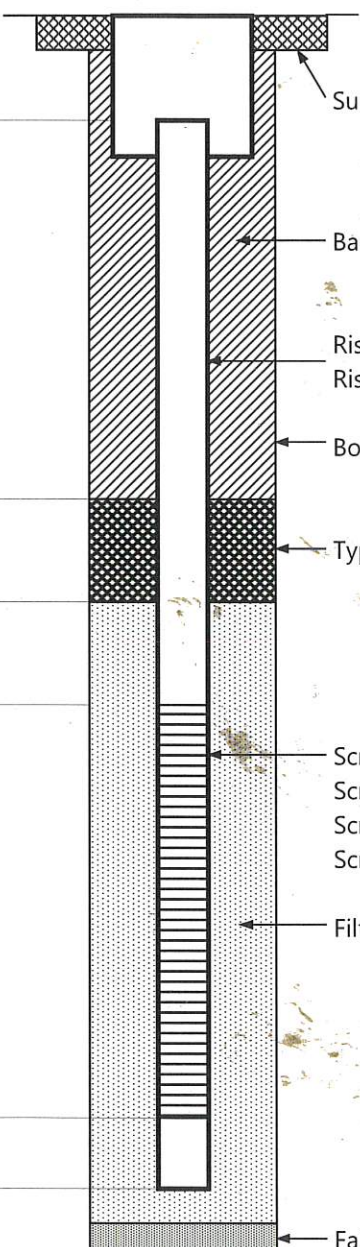
MONITORING WELL CONSTRUCTION DETAIL		WELL ID
CTS of Asheville, Inc. Superfund Site Wood Project 6252-16-2012.06		MW-33A
Installation Date: 10/4/19 Drilling Method: 4 1/4" HSA Contractor: SAEDACCO Driller: RICHY LEMIRE NC: 2953A	24-hour Depth to Water: 10/7/19 13.60 bgs Northing: 653040.8 Easting: 956551.5	Completed By: RODNEY CLARK Measuring Point (MP) Type: ground surface Elevation (ft msl): 2410.2
Item	Depth below MP (ft)	Description
Riser Pipe:	-0.4	
		Surface Seal Type: concrete
		Backfill/Grout Type: Portland cement/bentonite
		Riser Pipe Type: Sch. 40 PVC
		Riser Pipe ID: 2 inch
		Borehole Diameter: 8 inch
Top of Seal:	56.0	
Top of Filter Pack:	58.0	Type of Seal: 1/4" RMC 10/4/19 pellet 3/8-inch bentonite chips RMC 10/4/19
Top of Screen:	60.1 59.7	
		Screen Type: Sch. 40 PVC
		Screen ID: 2 inch
		Screen Slot Size: 0.010 inch
		Screen Length: 4.8
		Filter Pack Type: GPHZ #1 silica sand RMC 10/4/19 6 bags (0.5 CF per bag)
Bottom of Screen:	64.9 64.5	
End Cap:	65.3 64.9	
Drilled Depth:	66.0	Fallback/Backfill: GPHZ 0.7
Notes: drill rig: D-50; encountered harder drilling @ 60' bgs to 66.0' bgs Make Threads Up		

MONITORING WELL CONSTRUCTION DETAIL		WELL ID
CTS of Asheville, Inc. Superfund Site Wood Project 6252-16-2012.06		MW-34
Installation Date: 10/1/19	24-hour Depth to Water: 23.68' bgs	Completed By: RODNEY CLARK
Drilling Method: 4 1/4" HSAF	Northing: 652927.1	Measuring Point (MP)
Contractor: SAEDACCO	Easting: 956716.8	Type: ground surface
Driller: RICHY LEMIRE 25934 (NC)		Elevation (ft msl): 2419.0

Item	Depth below MP (ft)	Description
Riser Pipe:	0.5	
Top of Seal:	41.0'	Surface Seal Type: concrete
Top of Filter Pack:	43.0'	Backfill/Grout Type: Portland cement/bentonite
Top of Screen:	45.4'	Riser Pipe Type: Sch. 40 PVC
		Riser Pipe ID: 2 inch
		Borehole Diameter: 8 inch
		Type of Seal: 3/8-inch bentonite chips
		Screen Type: Sch. 40 PVC
		Screen ID: 2 inch
		Screen Slot Size: 0.010 inch
		Screen Length: 4.8
		Filter Pack Type: GP#2 #1 silica sand 6 Bags (0.5 CF per bag)
Bottom of Screen:	50.2	
End Cap:	50.6	
Drilled Depth:	51.0	Fallback/Backfill: 0.4' GP#2

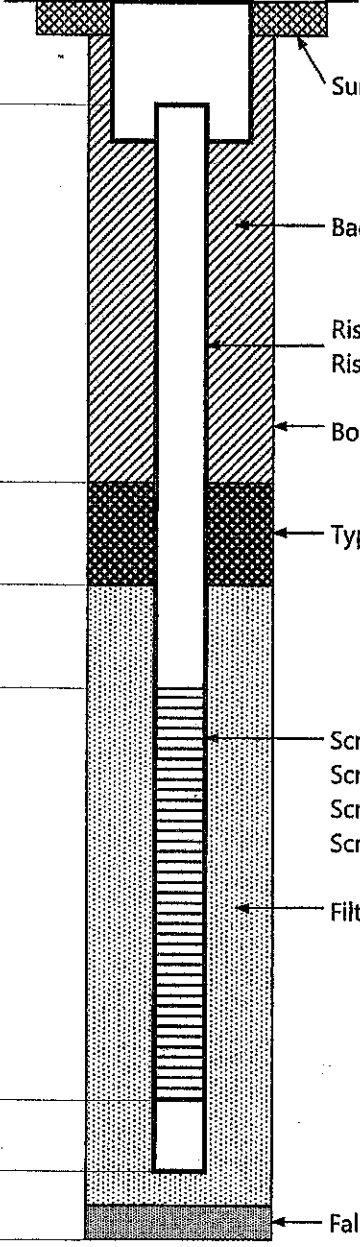
Notes: drill rig: D-50; Encountered drill chatter from 32.0'-32.5' Male Thread Up

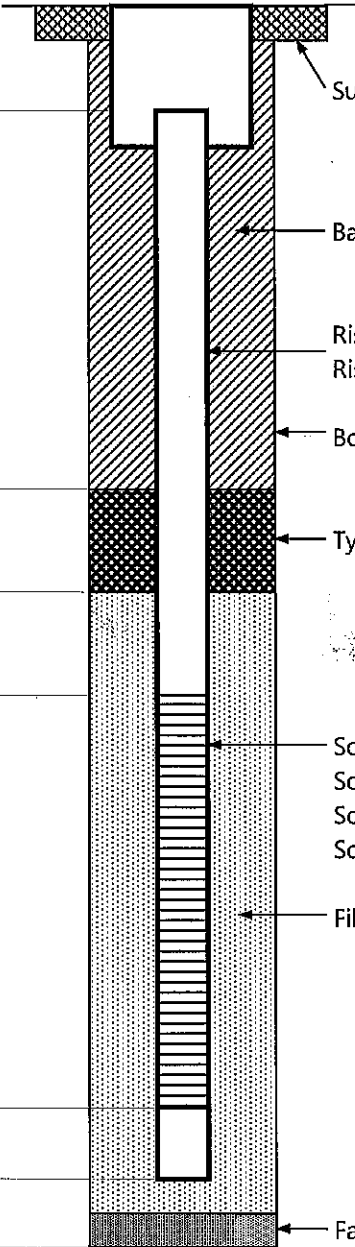
MONITORING WELL CONSTRUCTION DETAIL		WELL ID
CTS of Asheville, Inc. Superfund Site Wood Project 6252-16-2012.06		MW-34A
Installation Date: 10/1/19	24-hour Depth to Water: 23.63' bgs	Completed By: RODNEY CLARK
Drilling Method: 4 1/2" HSA	Northing: 652927.3 Easting: 956714.0	Measuring Point (MP)
Contractor: SAEDACCO	Type: ground surface	Elevation (ft msl): 2418.9
Driller: RICHY LEMIRE <small>NC-25939</small>		

Item	Depth below MP (ft)	Description	
Riser Pipe:	0.4		Surface Seal Type: concrete
			Backfill/Grout Type: Portland cement/bentonite
			Riser Pipe Type: Sch. 40 PVC Riser Pipe ID: 2 inch
			Borehole Diameter: 8 inch
Top of Seal:	56.0		
Top of Filter Pack:	58.0		Type of Seal: 1/4-inch TR30 bentonite pellets 3/8-inch bentonite chips <small>RMC 10/1/19</small>
Top of Screen:	60.1		
			Screen Type: Sch. 40 PVC Screen ID: 2 inch Screen Slot Size: 0.010 inch Screen Length: 4.8'
			Filter Pack Type: GPH2 #1 silica sand <small>RMC 10/1/19</small> 6 bags (0.5 CF) per bag
Bottom of Screen:	64.9'		
End Cap:	65.2		
Drilled Depth:	66.0		Fallback/Backfill: 0.8

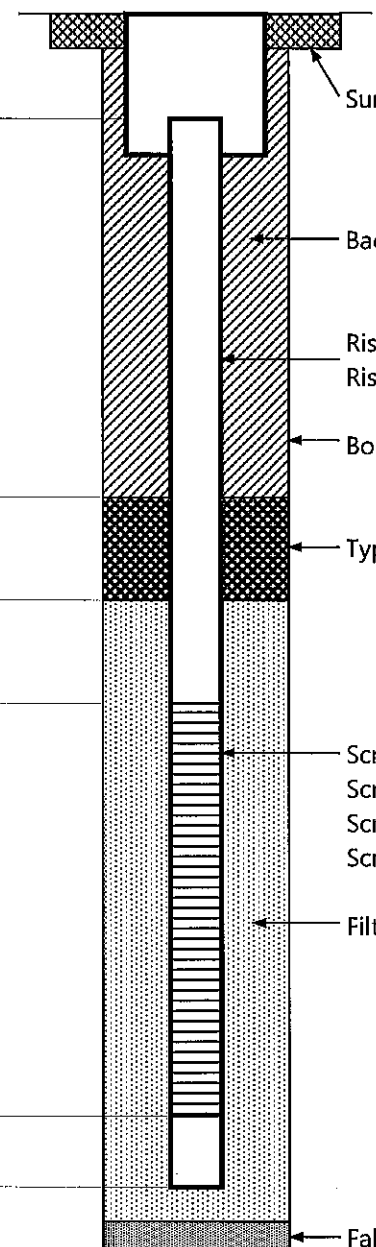
Notes: drill rig: D-50 ; encountered drill chatter from 29.0'-29.5'
 Female thread up

MONITORING WELL CONSTRUCTION DETAIL		WELL ID	
CTS of Asheville, Inc. Superfund Site Wood Project 6252-16-2012.06		MW-35	
Installation Date: 10/3/19 Drilling Method: 4 1/4" HSA Contractor: SAEDACCO Driller: RICHY LEMIRE NC-2393A	24-hour Depth to Water: 10/4/19 1300 14.70 Northing: 652943.2 Easting: 956535.2	Completed By: RODNEY M. CLARK Measuring Point (MP) Type: ground surface Elevation (ft msl): 2412.1	
Item	Depth below MP (ft)	Description	
Riser Pipe:	0.5		
Top of Seal:	41.0		
Top of Filter Pack:	43.0		
Top of Screen:	45.2		
Bottom of Screen:	50.0'		
End Cap:	50.3'		
Drilled Depth:	50.5'		
			Surface Seal Type: concrete Backfill/Grout Type: Portland cement/bentonite Riser Pipe Type: Sch. 40 PVC Riser Pipe ID: 2 inch Borehole Diameter: 8 inch Type of Seal: 3/8-inch bentonite chips Screen Type: Sch. 40 PVC Screen ID: 2 inch Screen Slot Size: 0.010 inch Screen Length: 4.8' Filter Pack Type: GP #2 silica sand RMC 10/3/19 5.5 bag (0.5 CF per bag) Fallback/Backfill: 0.2 GP #2
Notes: drill rig: D-50; encountered hard drilling from 45' - 50.5' Female Thread UP			

MONITORING WELL CONSTRUCTION DETAIL		WELL ID
CTS of Asheville, Inc. Superfund Site Wood Project 6252-16-2012.06		MW-35A
Installation Date: <u>10/3/19</u> Drilling Method: <u>4 1/4" HSA</u> Contractor: SAEDACCO Driller: <u>RICHY LEMIRE</u> <u>NC-2593A</u>	24-hour Depth to Water: <div style="text-align: center;"> ^{10/4/19 13:00} <u>14.85</u> </div> Northing: <u>652944.3</u> Easting: <u>956533.6</u>	Completed By: <u>RODNEY CLARK</u> Measuring Point (MP) Type: ground surface Elevation (ft msl): <u>2412.0</u>
Item	Depth below MP (ft)	Description
Riser Pipe:	<u>0.5</u>	 Surface Seal Type: <u>concrete</u>
		Backfill/Grout Type: <u>Portland cement/bentonite</u>
		Riser Pipe Type: <u>Sch. 40 PVC</u> Riser Pipe ID: <u>2 inch</u>
		Borehole Diameter: <u>8 inch</u>
Top of Seal:	<u>51.0</u>	Type of Seal: <u>(R-30) 1/4 3/8-inch bentonite chips</u>
Top of Filter Pack:	<u>53.0</u>	
Top of Screen:	<u>55.2</u>	Screen Type: <u>Sch. 40 PVC</u> Screen ID: <u>2 inch</u> Screen Slot Size: <u>0.010 inch</u> Screen Length: <u>4.8'</u>
		Filter Pack Type: <u>GP#2 silica sand</u> <u>5 bags (0.5 cu ft per bag)</u>
Bottom of Screen:	<u>60.0</u>	
End Cap:	<u>60.4</u>	
Drilled Depth:	<u>60.7</u>	Fallback/Backfill: <u>0.3' GP#2</u>
Notes: <u>drill rig: D-50; Harder drilling noted @ ~50' to 60' bgs</u> <u>Male Thread Op</u>		

MONITORING WELL CONSTRUCTION DETAIL		WELL ID
CTS of Asheville, Inc. Superfund Site Wood Project 6252-16-2012.06		MW-36
Installation Date: 10/2/19 Drilling Method: 4 1/4 HSA's Contractor: SAEDACCO Driller: RICHY LEMIRE NC-2593A	10/3/19 17:00 24-hour Depth to Water: 23.50' bgs Northing: 652852.8 Easting: 95666.8	Completed By: RODNEY CLARK Measuring Point (MP) Type: ground surface Elevation (ft msl): 2,419.2
Item	Depth below MP (ft)	Description
Riser Pipe:	0.4	 Surface Seal Type: concrete
		Backfill/Grout Type: Portland cement/bentonite
		Riser Pipe Type: Sch. 40 PVC
		Riser Pipe ID: 2 inch
		Borehole Diameter: 8 inch
Top of Seal:	46.0	Type of Seal: 3/8-inch bentonite chips
Top of Filter Pack:	48.0	
Top of Screen:	50.1	Screen Type: Sch. 40 PVC Screen ID: 2 inch Screen Slot Size: 0.010 inch Screen Length: 4.8
		Filter Pack Type: GP#2 silica sand 6 bags (0.5 cu yd) bgs
Bottom of Screen:	54.9	
End Cap:	55.3	
Drilled Depth:	55.8	Fallback/Backfill: 0.5 GP#2
Notes: drill rig: D-50 ; Harder drilling noted @ ~ 50' bgs - 55.8' Male Threads up		

MONITORING WELL CONSTRUCTION DETAIL			WELL ID
CTS of Asheville, Inc. Superfund Site Wood Project 6252-16-2012.06			MW-36A
Installation Date: 10/2/19	24-hour Depth to Water: 10/3/19 - 17:00 22.15' bgs	Completed By: RODNEY CLARK	
Drilling Method: 4 1/4" HSA3		Measuring Point (MP)	
Contractor: SAEDACCO	Northing: 652854.3	Type: ground surface	
Driller: RICHY LEMIRE NC-2593A	Easting: 95666.5	Elevation (ft msl): 2,419.1	

Item	Depth below MP (ft)	Description
Riser Pipe:	0.4	 Surface Seal Type: concrete
		Backfill/Grout Type: Portland cement/bentonite
		Riser Pipe Type: Sch. 40 PVC
		Riser Pipe ID: 2 inch
		Borehole Diameter: 8 inch
Top of Seal:	61.0	Type of Seal: 1/4 inch bentonite pellets
Top of Filter Pack:	63.0	3/8 inch bentonite chips RMC 10/2/19
Top of Screen:	65.2	Screen Type: Sch. 40 PVC
		Screen ID: 2 inch
		Screen Slot Size: 0.010 inch
		Screen Length: 4.8'
		Filter Pack Type: GP#2 #1 silica sand RMC 10/2/19
		4.5 bags (0.5 cf per bag)
Bottom of Screen:	70.0	
End Cap:	70.4'	
Drilled Depth:	70.7'	Fallback/Backfill: 0.3

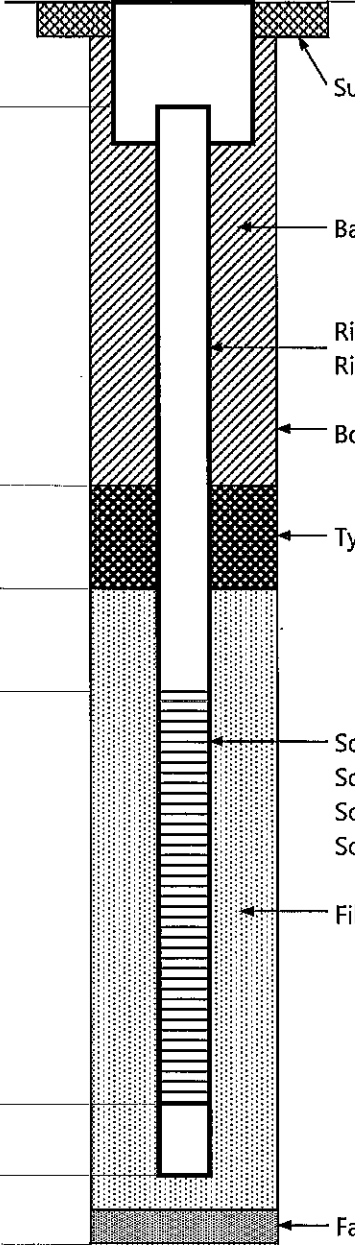
Notes: drill rig: D-50 ; Harder drilling noted @ ~50' bgs to 70.7' Male Threads up Auger Refusal @ 70.7' bgs

MONITORING WELL CONSTRUCTION DETAIL		WELL ID
CTS of Asheville, Inc. Superfund Site Wood Project 6252-16-2012.06		MW-37
Installation Date: 10/9/19	24-hour Depth to Water: 21.80	Completed By: Rodney M. Clark
Drilling Method: 4 1/4" HSA		Measuring Point (MP)
Contractor: SAEDACCO	Northing: 652679.3	Type: ground surface
Driller: RICH LEMIRE-2593A	Easting: 956577.6	Elevation (ft msl): 2,417.7

Item	Depth below MP (ft)	Description
Riser Pipe:	0.4	
Top of Seal:	31.0	Surface Seal Type: concrete
Top of Filter Pack:	33.0	Backfill/Grout Type: Portland cement/bentonite
Top of Screen:	35.0	Riser Pipe Type: Sch. 40 PVC
		Riser Pipe ID: 2 inch
		Borehole Diameter: 8 inch
		Type of Seal: 3/8-inch bentonite chips
		Screen Type: Sch. 40 PVC
		Screen ID: 2 inch
		Screen Slot Size: 0.010 inch
		Screen Length: 4.8
		Filter Pack Type: GP#2 silica sand
Bottom of Screen:	39.8	
End Cap:	40.1	
Drilled Depth:	40.5	Fallback/Backfill: 0.4' GP#2

Notes: drill rig: D-50

MONITORING WELL CONSTRUCTION DETAIL			WELL ID
CTS of Asheville, Inc. Superfund Site Wood Project 6252-16-2012.06			MW. 37A
Installation Date: 10/7/19	24-hour Depth to Water: 21.63	Completed By: RODNEY CLARK	
Drilling Method: 4 1/4" HSA		Measuring Point (MP)	
Contractor: SAEDACCO	Northing: 652682.4	Type: ground surface	
Driller: RICHY LEMIRE, NC-2593A	Easting: 956596.8	Elevation (ft msl): 2,417.7	

Item	Depth below MP (ft)	Description
Riser Pipe:	0.5	 Surface Seal Type: concrete
		Backfill/Grout Type: Portland cement/bentonite
		Riser Pipe Type: Sch. 40 PVC
		Riser Pipe ID: 2 inch
		Borehole Diameter: 8 inch
Top of Seal:	51.0	Type of Seal: 1/4 TR30 pellets
Top of Filter Pack:	53.0	3/8 inch bentonite chips
Top of Screen:	55.1	Screen Type: Sch. 40 PVC
		Screen ID: 2 inch
		Screen Slot Size: 0.010 inch
		Screen Length: 4.8
		Filter Pack Type: GPH2 silica sand
		5 bags (0.5 cf per bag)
Bottom of Screen:	59.9	
End Cap:	60.2	
Drilled Depth:	61.0'	Fallback/Backfill: 0.8' GPH2

Female Threads Up
 Notes: drill rig: D-50; Encountered hard drilling @ 59.0' to 61'

MONITORING WELL CONSTRUCTION DETAIL		WELL ID
CTS of Asheville, Inc. Superfund Site Wood Project 6252-16-2012.06		MW-38
Installation Date: 10/8/19	24-hour Depth to Water: 4.1	Completed By: S. Avritt
Drilling Method: 4 1/4" HSA		Measuring Point (MP)
Contractor: SAEDACCO	Northing: 652680.3	Type: ground surface
Driller: 2593A Richy Lemire	Easting: 956903.8	Elevation (ft msl): 2.376.7

Item	Depth below MP (ft)	Description
Riser Pipe:	-0.3' - 0.4'	Surface Seal Type: concrete Backfill/Grout Type: Portland cement/bentonite Riser Pipe Type: Sch. 40 PVC Riser Pipe ID: 2 inch Borehole Diameter: 8 inch
Top of Seal:	3.0'	Type of Seal: 3/8-inch bentonite chips
Top of Filter Pack:	4.0'	
Top of Screen:	20.4 5.4	Screen Type: Sch. 40 PVC Screen ID: 2 inch Screen Slot Size: 0.010 inch Screen Length: 19.8 Filter Pack Type: #1 silica sand
Bottom of Screen:	25.2	
End Cap:	0.4	
Drilled Depth:	26'	Fallback/Backfill: 0.4'

Notes: drill rig: Diedrich D-50

MONITORING WELL CONSTRUCTION DETAIL		WELL ID
CTS of Asheville, Inc. Superfund Site Wood Project 6252-16-2012.06		MW-39
Installation Date: 10/8/19 Drilling Method: 4 1/4" HSA Contractor: SAEDACCO 2593A Driller: Ricky Lemire	24-hour Depth to Water: 2.0 Northing: 652583.5 Easting: 956816.4	Completed By: S. Avritt Measuring Point (MP) Type: ground surface Elevation (ft msl): 2,377.1
Item	Depth below MP (ft)	Description
Riser Pipe:	0.3	Surface Seal Type: concrete
Top of Seal:	3.0'	Backfill/Grout Type: Portland cement/bentonite
Top of Filter Pack:	4.0'	Riser Pipe Type: Sch. 40 PVC
Top of Screen:	5.7	Riser Pipe ID: 2 inch
Bottom of Screen:	25.5	Borehole Diameter: 8 inch
End Cap:	0.4	Type of Seal: 3/8-inch bentonite chips
Drilled Depth:	26	Screen Type: Sch. 40 PVC
		Screen ID: 2 inch
		Screen Slot Size: 0.010 inch
		Screen Length: 19.8
		Filter Pack Type: #1 silica sand
		Fallback/Backfill: 0.1
Notes: drill rig: Diedrich D-50		

WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

Rich Lemire

Well Contractor Name

2593A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10-1-2019 Well ID# MW-34A

5a. Well Location:

CTS OF ASHEVILLE

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd Asheville, NC 28803 Buncombe Coun,

ASHEVILLE, NC, 28803

Physical Address, City, and Zip

BUNCOMBE

9655625706

County

Parcel Identification No. (PIN)

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

35.4934047 N -82.5057286 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: 65' (ft.)

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

10. Static water level below top of casing: 32' (ft.)

If water level is above casing, use "+"

11. Borehole diameter: 8.25" (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	ft.	60' ft.	2" in.	SCH40 PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
60' ft.	65' ft.	2" in.	.010	SCH40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	56' ft.	PORTLAND TREMIE
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
58' ft.	66' ft.	SAND	#2
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	50'	ft.	BROWN SILTY/SAND
50'	ft.	65'	ft.	PWR
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

BENTONITE FROM 56' TO 58'

22. Certification:


Signature of Certified Well Contractor

10/2/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Rich Lemire

Well Contractor Name

2593A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10-1-2019 Well ID# MW-34

5a. Well Location:

CTS OF ASHEVILLE

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd Asheville, NC 28803 Buncombe Coun,

ASHEVILLE, NC, 28803

Physical Address, City, and Zip

BUNCOMBE

9655625706

County

Parcel Identification No. (PIN)

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

35.4934043 N -82.5057189 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' (ft.)

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

10. Static water level below top of casing: 32' (ft.)

If water level is above casing, use "+"

11. Borehole diameter: 8.25" (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	ft.	45' ft.	2" in.	SCH40 PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
45' ft.	50' ft.	2" in.	.010	SCH40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	41' ft.	PORTLAND TREMIE
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
43' ft.	51' ft.	SAND	#2
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft. 50'	BROWN SILTY/SAND
	ft.	
	ft.	
	ft.	
	ft.	
	ft.	
	ft.	

21. REMARKS

BENTONITE FROM 41' TO 43'.

22. Certification:


Signature of Certified Well Contractor

10/2/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Rich Lemire

Well Contractor Name

2593A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10-2-2019 Well ID# MW-36A

5a. Well Location:

CTS OF ASHEVILLE

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd Asheville, NC 28803 Buncombe Coun,

ASHEVILLE, NC, 28803

Physical Address, City, and Zip

BUNCOMBE

9655625706

County

Parcel Identification No. (PIN)

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

35.4931995 N -82.5058824 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: 70' (ft.)

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

10. Static water level below top of casing: 32' (ft.)

If water level is above casing, use "+"

11. Borehole diameter: 8.25" (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 ft.	65' ft.	2" in.	SCH40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
65' ft.	70' ft.	2" in.	.010	SCH40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0 ft.	61 ft.	PORTLAND	TREMI
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
63' ft.	71' ft.	SAND	#2
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0 ft.	50' ft.	BROWN SILTY/SAND
50' ft.	71' ft.	PWR
71' ft.	ft.	ROCK
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

BENTONITE FROM 61' TO 63'.

22. Certification:

Rich Lemire
Signature of Certified Well Contractor

10/2/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Rich Lemire

Well Contractor Name

2593A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10-2-2019 Well ID# MW-36

5a. Well Location:

CTS OF ASHEVILLE

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd Asheville, NC 28803 Buncombe Coun,

ASHEVILLE, NC, 28803

Physical Address, City, and Zip

BUNCOMBE

9655625706

County

Parcel Identification No. (PIN)

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

35.4931995 N -82.5058725 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' (ft.)

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

10. Static water level below top of casing: 32' (ft.)

If water level is above casing, use "+"

11. Borehole diameter: 8.25" (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 ft.	50' ft.	2" in.	SCH40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
50' ft.	55' ft.	2" in.	.010	SCH40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0 ft.	46' ft.	PORTLAND	TREMIE
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
48' ft.	56' ft.	SAND	#2
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0 ft.	50' ft.	BROWN SILTY/SAND
50' ft.	56' ft.	PWR
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

BENTONITE FROM 46' TO 48'.

22. Certification:


Signature of Certified Well Contractor

10/2/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Rich Lemire

Well Contractor Name

2593A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10-3-2019 Well ID# MW-35A

5a. Well Location:

CTS OF ASHEVILLE

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd Asheville, NC 28803 Buncombe Coun,

ASHEVILLE, NC, 28803

Physical Address, City, and Zip

BUNCOMBE

9655625706

County

Parcel Identification No. (PIN)

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

35.4934339 N -82.5063362 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: 60' (ft.)

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

10. Static water level below top of casing: 32' (ft.)

If water level is above casing, use "+"

11. Borehole diameter: 8.25" (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	ft.	55' ft.	2" in.	SCH40 PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
55' ft.	60' ft.	2" in.	.010	SCH40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	51' ft.	PORTLAND TREMIE
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
53' ft.	61' ft.	SAND	#2
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	50'	ft.	BROWN SILTY/SAND
50'	ft.	61'	ft.	PWR
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

BENTONITE FROM 51' TO 53'.

22. Certification:


Signature of Certified Well Contractor

10/2/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Rich Lemire

Well Contractor Name

2593A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10-3-2019 Well ID# MW-35

5a. Well Location:

CTS OF ASHEVILLE

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd Asheville, NC 28803 Buncombe Coun,

ASHEVILLE, NC, 28803

Physical Address, City, and Zip

BUNCOMBE

9655625706

County

Parcel Identification No. (PIN)

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

35.4934310 N -82.5063299 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' (ft.)

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

10. Static water level below top of casing: 32' (ft.)

If water level is above casing, use "+"

11. Borehole diameter: 8.25" (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	ft.	50' ft.	2" in.	SCH40 PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
45' ft.	50' ft.	2" in.	.010	SCH40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	41' ft.	PORTLAND TREMIE
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
43' ft.	51' ft.	SAND	#2
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	50'	ft.	BROWN SILTY/SAND
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

BENTONITE FROM 41' TO 43'.

22. Certification:


Signature of Certified Well Contractor

10/2/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Rich Lemire

Well Contractor Name

2593A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10-3-2019 Well ID# MW-33

5a. Well Location:

CTS OF ASHEVILLE

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd Asheville, NC 28803 Buncombe Coun,

ASHEVILLE, NC, 28803

Physical Address, City, and Zip

BUNCOMBE

9655625706

County

Parcel Identification No. (PIN)

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

35.4936979 N -82.5062832 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' (ft.)

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

10. Static water level below top of casing: 14' (ft.)

If water level is above casing, use "+"

11. Borehole diameter: 8.25" (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 ft.	40' ft.	2" in.	SCH40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
40' ft.	45' ft.	2" in.	.010	SCH40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0 ft.	36' ft.	PORTLAND	TREMIE
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
38' ft.	46' ft.	SAND	#2
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0 ft.	46 ft.	BROWN SILTY/SAND
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

BENTONITE FROM 36' TO 38'.

22. Certification:

Rich Lemire
Signature of Certified Well Contractor

10/3/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Rich Lemire

Well Contractor Name

2593A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10-4-2019 Well ID# MW-33A

5a. Well Location:

CTS OF ASHEVILLE

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd Asheville, NC 28803 Buncombe Coun,

ASHEVILLE, NC, 28803

Physical Address, City, and Zip

BUNCOMBE

9655625706

County

Parcel Identification No. (PIN)

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

35.4937005 N -82.5062877 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: 65' (ft.)

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

10. Static water level below top of casing: 14' (ft.)

If water level is above casing, use "+"

11. Borehole diameter: 8.25" (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 ft.	60' ft.	2" in.	SCH40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
60' ft.	65' ft.	2" in.	.010	SCH40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0 ft.	56' ft.	PORTLAND	TREMIE
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
58' ft.	66' ft.	SAND	#2
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0 ft.	46 ft.	BROWN SILTY/SAND
46' ft.	66' ft.	SAPROLITE/PWR
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

BENTONITE FROM 56' TO 58'.

22. Certification:


Signature of Certified Well Contractor

10/4/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Rich Lemire

Well Contractor Name

2593A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10-7-2019 Well ID# MW-37A

5a. Well Location:

CTS OF ASHEVILLE

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd Asheville, NC 28803 Buncombe Coun,

ASHEVILLE, NC, 28803

Physical Address, City, and Zip

BUNCOMBE

9655625706

County

Parcel Identification No. (PIN)

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

35.4927209 N -82.5060929 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: 60' (ft.)

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

10. Static water level below top of casing: 14' (ft.)

If water level is above casing, use "+"

11. Borehole diameter: 8.25" (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 ft.	55' ft.	2" in.	SCH40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
55' ft.	60 ft.	2" in.	.010	SCH40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0 ft.	51 ft.	PORTLAND	TREME
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
53' ft.	61' ft.	SAND	#2
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0 ft.	46 ft.	BROWN SILTY/SAND
46' ft.	61' ft.	SAPROLITE/PWR
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

BENTONITE FROM 51' TO 53'.

22. Certification:


Signature of Certified Well Contractor

10/7/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Rich Lemire

Well Contractor Name

2593A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10-7-2019 Well ID# MW-37

5a. Well Location:

CTS OF ASHEVILLE

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd Asheville, NC 28803 Buncombe Coun,

ASHEVILLE, NC, 28803

Physical Address, City, and Zip

BUNCOMBE

9655625706

County

Parcel Identification No. (PIN)

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

35.4927124 N -82.5060897 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: 40' (ft.)

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

10. Static water level below top of casing: 14' (ft.)

If water level is above casing, use "+"

11. Borehole diameter: 8.25" (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	ft.	35' ft.	2" in.	SCH40 PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
35' ft.	40' ft.	2" in.	.010	SCH40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	33' ft.	PORTLAND TREMIE
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
53' ft.	40' ft.	SAND	#2
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	40'	ft.	BROWN SILTY/SAND
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

BENTONITE FROM 31' TO 33'.

22. Certification:


Signature of Certified Well Contractor

10/9/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Rich Lemire

Well Contractor Name

2593A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10-8-2019 Well ID# MW-38

5a. Well Location:

CTS OF ASHEVILLE

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd Asheville, NC 28803 Buncombe Coun,

ASHEVILLE, NC, 28803

Physical Address, City, and Zip

BUNCOMBE

96556257349

County

Parcel Identification No. (PIN)

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

35.4927448 N -82.5050619 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' (ft.)

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

10. Static water level below top of casing: 11' (ft.)

If water level is above casing, use "+"

11. Borehole diameter: 8.25" (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 ft.	5' ft.	2" ft.	in. SCH40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
5' ft.	25' ft.	2" ft.	in. .010	SCH40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0 ft.	3' ft.	PORTLAND	TREMI
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
4 ft.	25' ft.	SAND	#2
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0 ft.	25' ft.	BROWN SILTY/SAND
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

BENTONITE FROM 3' TO 4'.

22. Certification:


Signature of Certified Well Contractor

10/9/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Rich Lemire

Well Contractor Name

2593A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10-8-2019 Well ID# MW-39

5a. Well Location:

CTS OF ASHEVILLE

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd Asheville, NC 28803 Buncombe Coun,

ASHEVILLE, NC, 28803

Physical Address, City, and Zip

BUNCOMBE

96556257349

County

Parcel Identification No. (PIN)

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

35.4924707 N -82.5053438 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' (ft.)

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

10. Static water level below top of casing: 11' (ft.)

If water level is above casing, use "+"

11. Borehole diameter: 8.25" (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 ft.	5' ft.	2" in.	SCH40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
5' ft.	25' ft.	2" in.	.010	SCH40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0 ft.	3' ft.	PORTLAND	TREMIE
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
4 ft.	25' ft.	SAND	#2
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0 ft.	25' ft.	BROWN SILTY/SAND
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

BENTONITE FROM 3' TO 4'.

22. Certification:

Rich Lemire
Signature of Certified Well Contractor

10/9/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/23/19 Well ID# EPW77

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 77 (ft.)
For multiple wells list all depths if different (example- 3 @ 200' and 2 @ 100')

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

11. Borehole diameter: 8" (in.)

12. Well construction method: Sonic

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

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) NA Method of test: NA

13b. Disinfection type: NA Amount: NA

For Internal Use ONLY:

14. WATER ZONES

FROM	TO	DESCRIPTION
NA	ft.	NA
ft.	ft.	

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0	ft.	77	ft.	4 in. SCH 40 PVC

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	77	ft. Portland Tremmie
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

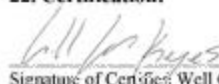
FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft. 77	ft. Brownish tan silty SAND
	ft.	ft.
	ft.	ft.
	ft.	ft.
	ft.	ft.
	ft.	ft.
	ft.	ft.

21. REMARKS

22. Certification:



Signature of Certified Well Contractor

10/27/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/24/19 Well ID# EPW79

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 74 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	74	ft.	4" in. schedule 40PVC

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	74	ft.
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

22. Certification:

Will Keyes

Signature of Certified Well Contractor

10/27/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/25/19 Well ID# EPW74

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 82 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	82	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	82	ft.
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

22. Certification:



Signature of Certified Well Contractor

10/27/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/29/19 Well ID# EPW71

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 77 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	77	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	77	ft.
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

22. Certification:



Signature of Certified Well Contractor

10/27/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/31/19 Well ID# EPW68

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 77 (ft.)
For multiple wells list all depths if different (example- 3@200' and 2@100')

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

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	77	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	77	ft.
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

22. Certification:



Signature of Certified Well Contractor

10/27/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 11/1/19 Well ID# EPW59

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 67 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	67	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	67	ft.
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

22. Certification:



Signature of Certified Well Contractor

10/27/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/1/19 Well ID# EPW-50

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 67 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	67	ft.	4" in. schedule 40 pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	67	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	64	ft.	PWR
64	ft.	67	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

22. Certification:

Will Keyes

Signature of Certified Well Contractor

10/27/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/2/19 Well ID# EPW-51

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

United States

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 58 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	58	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	58	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	50	ft.	sandy silts
50	ft.	54	ft.	PWR
54	ft.	58	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

10/27/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/3/19 Well ID# EPW-41

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 64 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	64	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	64	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	50	ft.	sandy silts
50	ft.	60	ft.	PWR
60	ft.	64	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

10/27/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/4/19 Well ID# EPW-32

5a. Well Location:

CTS Of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 74 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	74	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	73	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	50	ft.	sandy silts
50	ft.	70	ft.	PWR
70	ft.	74	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

10/27/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/7/19 Well ID# EPW-24

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 81 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	81	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	81	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	60	ft.	sandy silts
60	ft.	77	ft.	PWR
77	ft.	81	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

10/27/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/8/19 Well ID# EPW-16

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 85 (ft.)
For multiple wells list all depths if different (example- 3@200' and 2@100')

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

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	85	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	85	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	60	ft.	sandy silts
60	ft.	81	ft.	PWR
81	ft.	85	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

4" casing set into bedrock

22. Certification:

Will Keyes

Signature of Certified Well Contractor

10/27/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/9/19 Well ID# EPW-42

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

82.5062485° N 82.5062485° 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: 67 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	67	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	67	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	60	ft.	sandy silts
60	ft.	63	ft.	PWR
63	ft.	67	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

10/27/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/9/19 Well ID# EPW-33

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 68 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	68	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	68	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	60	ft.	sandy silts
60	ft.	64	ft.	PWR
64	ft.	68	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

4" casing set into bedrock

22. Certification:

Will Keyes

Signature of Certified Well Contractor

10/27/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/9/19 Well ID# EPW-17

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 69 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	69	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	69	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	60	ft.	sandy silts
60	ft.	64	ft.	PWR
64	ft.	69	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

4" casing set into bedrock

22. Certification:

Will Keyes

Signature of Certified Well Contractor

10/27/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/10/19 Well ID# EPW-8

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 84 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0 ft.	84 ft.	4" in.	schedule 40	pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0 ft.	84 ft.	Portland	pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0 ft.	20 ft.	backfill material
20 ft.	60 ft.	sandy silts
60 ft.	80 ft.	PWR
80 ft.	84 ft.	bedrock
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

10/27/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/11/19 Well ID# EPW-25

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 74 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	74	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	74	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	60	ft.	sandy silts
60	ft.	70	ft.	PWR
70	ft.	74	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

10/27/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/14/19 Well ID# EPW-70

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 78 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	78	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	78	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	60	ft.	sandy silts
60	ft.	70	ft.	PWR
74	ft.	78	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

10/27/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/15/19 Well ID# EPW-66

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 84 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	84	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	84	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	60	ft.	sandy silts
60	ft.	80	ft.	PWR
80	ft.	84	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

10/27/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/22/19 Well ID# EPW-62

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 88 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	88	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	88	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	60	ft.	sandy silts
60	ft.	80	ft.	PWR
84	ft.	88	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

10/27/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/16/19 Well ID# EPW-40

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

82.5062485° N 82.5062485° 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: 97 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	97	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	97	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	60	ft.	sandy silts
60	ft.	93	ft.	PWR
93	ft.	97	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

10/27/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/17/19 Well ID# EPW-31

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.4943 N -82.5058 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: 99 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0 ft.	99 ft.	4" in.	schedule 40	pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0 ft.	99 ft.	Portland	pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0 ft.	20 ft.	backfill material
20 ft.	60 ft.	sandy silts
60 ft.	94 ft.	PWR
94 ft.	99 ft.	bedrock
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

10/27/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/18/19 Well ID# EPW-23

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.4943 N -82.5058 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: 90 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	90	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	90	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	60	ft.	sandy silts
60	ft.	84	ft.	PWR
84	ft.	90	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

10/27/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/21/19 Well ID# EPW-7

5a. Well Location:

CTS Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.4943 N -82.5058 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: 82 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	82	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	82	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	60	ft.	sandy silts
60	ft.	78	ft.	PWR
78	ft.	82	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

10/27/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/22/19 Well ID# EPW-6

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 83 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	83	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	83	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	60	ft.	sandy silts
60	ft.	78	ft.	PWR
78	ft.	83	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

4" casing set into bedrock

22. Certification:

Will Keyes

Signature of Certified Well Contractor

10/27/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/22/19 Well ID# EPW-14

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 84 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	84	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	84	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	60	ft.	sandy silts
60	ft.	80	ft.	PWR
80	ft.	84	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

10/27/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/24/19 Well ID# EPW-30

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

United States

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 89 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0 ft.	89 ft.	4" in.	schedule 40	pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0 ft.	89 ft.	Portland	pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0 ft.	20 ft.	backfill material
20 ft.	60 ft.	sandy silts
60 ft.	84 ft.	PWR
84 ft.	89 ft.	bedrock
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

10/27/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/25/19 Well ID# EPW-39

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 88 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	88	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	88	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	60	ft.	sandy silts
60	ft.	84	ft.	PWR
84	ft.	88	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

4" casing set into bedrock

22. Certification:

Will Keyes

Signature of Certified Well Contractor

10/27/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/14/19 Well ID# EPW-12

5a. Well Location:

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

United States

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 80 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: (in.)

12. Well construction method:

(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
0	ft.	80	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	80	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	60	ft.	sandy silts
60	ft.	76	ft.	PWR
76	ft.	80	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

10/27/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/28/19 Well ID# EPW-20

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 81 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method:

(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
0	ft.	81	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	81	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	60	ft.	sandy silts
60	ft.	77	ft.	PWR
77	ft.	81	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

10/28/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/29/19 Well ID# EPW-21

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 85 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	85	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	85	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	60	ft.	sandy silts
60	ft.	81	ft.	PWR
81	ft.	85	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

10/29/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/29/19 Well ID# EPW-13

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 82 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	82	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	82	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	60	ft.	sandy silts
60	ft.	79	ft.	PWR
79	ft.	83	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

10/29/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 10/14/19 Well ID# EPW-4

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 78 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	78	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	78	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	60	ft.	sandy silts
60	ft.	74	ft.	PWR
74	ft.	78	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

10/27/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 11/8/19 Well ID# EPW-65

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 78 (ft.)
For multiple wells list all depths if different (example- 3@200' and 2@100')

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

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	82	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	82	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
78	ft.	82	ft.	Rock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

11/8/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 11/7/19 Well ID# EPW-69

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 77 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	77	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	76	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
73	ft.	77	ft.	Rock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

11/7/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 11/6/19 Well ID# EPW-64

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 84 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0 ft.	84 ft.	4" in.	schedule 40	pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0 ft.	84 ft.	Portland	pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
80 ft.	84 ft.	Rock
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

11/4/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 11/5/19 Well ID# EPW-60

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 82 (ft.)
For multiple wells list all depths if different (example- 3@200' and 2@100')

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

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	82	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	82	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

11/7/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 11/14/19 Well ID# EPW-76

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 67 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	67	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	67	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	63	ft.	sand, silts,clay
63	ft.	67	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

11/14/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 11/12/19 Well ID# EPW-73

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 72 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: (in.)

12. Well construction method:

(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
0	ft.	72	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	72	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft. 68	ft. sand, silts,clay
68	ft. 72	ft. bedrock
	ft.	ft.
	ft.	ft.
	ft.	ft.
	ft.	ft.
	ft.	ft.

21. REMARKS

4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

11/12/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 11/14/19 Well ID# EPW-27

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 80 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	80	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	80	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	76	ft.	PWR
76	ft.	80	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

11/14/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 11/5/19 Well ID# EPW-29

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 83 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	83	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	83	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	79	ft.	PWR
79	ft.	83	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

11/5/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 11/5/19 Well ID# EPW-22

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 85 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	85	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	85	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	81	ft.	PWR
81	ft.	85	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock to be used fo

22. Certification:

Will Keyes

Signature of Certified Well Contractor

11/5/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 11/6/19 Well ID# EPW-5

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 84 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	84	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	84	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	79	ft.	PWR
79	ft.	84	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

11/6/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 11/7/19 Well ID# EPW-28

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

United States

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 82 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	82	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	82	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	78	ft.	PWR
78	ft.	82	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:

Will Keyes

Signature of Certified Well Contractor

11/7/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 11/7/19 Well ID# EPW-36

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 77 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	77	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	77	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	73	ft.	PWR
73	ft.	77	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

11/7/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 11/7/19 Well ID# EPW-37

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 82 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	82	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	82	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	78	ft.	PWR
78	ft.	82	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

11/7/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 11/8/19 Well ID# EPW-15

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 85 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	85	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	85	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	81	ft.	PWR
81	ft.	85	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

11/8/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 11/8/19 Well ID# EPW-57

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 97.5 (ft.)
For multiple wells list all depths if different (example- 3@200' and 2@100')

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

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	97.5	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	97.5	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20 ft. backfill material
20	ft.	55 ft. sandy silts
55	ft.	93.5 ft. PWR
93.5	ft.	97.5 ft. bedrock
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

11/8/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 11/12/19 Well ID# EPW-38

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 88 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	88	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	88	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	84	ft.	PWR
84	ft.	88	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

11/12/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 11/15/19 Well ID# EPW-49

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 99 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	99	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	99	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	94	ft.	PWR
94	ft.	99	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

11/15/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 11/18/19 Well ID# EPW-48

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 88 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	88	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	88	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	84	ft.	PWR
84	ft.	88	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

11/18/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 11/19/19 Well ID# EPW-56

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 87 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	87	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	87	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	83	ft.	PWR
83	ft.	87	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

11/19/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 11/19/19 Well ID# EPW-61

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 87 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	87	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	87	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	83	ft.	PWR
83	ft.	87	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

11/19/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 11/20/19 Well ID# EPW-78

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 64 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	64	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	64	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	60	ft.	PWR
60	ft.	64	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:

Will Keyes

Signature of Certified Well Contractor

11/20/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 11/20/19 Well ID# EPW-75

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 72 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	72	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	72	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	68	ft.	PWR
68	ft.	72	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

11/20/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 11/21/19 Well ID# EPW-72

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 78 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	78	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	78	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	74	ft.	PWR
74	ft.	78	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

11/21/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 11/21/19 Well ID# EPW-55

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 87 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	87	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	87	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	83	ft.	PWR
83	ft.	87	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

11/21/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 11/22/19 Well ID# EPW-54

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 80 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	80	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	80	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	76	ft.	PWR
76	ft.	80	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:

Will Keyes

Signature of Certified Well Contractor

11/22/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 11/24/19 Well ID# EPW-67

5a. Well Location:

CTS Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 85 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	85	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	85	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	81	ft.	PWR
81	ft.	85	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

11/24/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 11/24/19 Well ID# EPW-47

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 88 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	88	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	88	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	84	ft.	PWR
84	ft.	88	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

11/24/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 12/2/19 Well ID# EPW-46

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 83 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	83	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	83	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	81	ft.	PWR
81	ft.	83	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

12/2/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 12/2/19 Well ID# EPW-45

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 78 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	78	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	78	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	74	ft.	PWR
74	ft.	78	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

12/2/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 11/22/19 Well ID# EPW-53

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

United States

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 73 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	73	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	73	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	69	ft.	PWR
69	ft.	73	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:

Will Keyes

Signature of Certified Well Contractor

11/22/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 12/2/19 Well ID# EPW-43

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 64 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: (in.)

12. Well construction method:

(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
0	ft.	64	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	64	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	60	ft.	PWR
60	ft.	64	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

12/2/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 11/4/19 Well ID# EPW-34

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 68 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	68	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	68	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	64	ft.	PWR
64	ft.	68	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

11/4/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 12/2/19 Well ID# EPW-26

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 74 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: (in.)

12. Well construction method:

(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
0	ft.	74	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	74	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	68	ft.	PWR
68	ft.	74	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:

Will Keyes

Signature of Certified Well Contractor

12/2/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 12/5/19 Well ID# EPW-9

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 79 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	79	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	79	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	75	ft.	PWR
75	ft.	79	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

12/5/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 12/5/19 Well ID# EPW-10

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 79 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0 ft.	79 ft.	4" in.	schedule 40	pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0 ft.	79 ft.	Portland	pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0 ft.	20 ft.	backfill material
20 ft.	55 ft.	sandy silts
55 ft.	75 ft.	PWR
75 ft.	79 ft.	bedrock
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

12/5/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 12/6/19 Well ID# EPW-18

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 77 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	77	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	77	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	73	ft.	PWR
73	ft.	77	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

12/6/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 1-10-2020 Well ID# EPW-35

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 72 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	72	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	72	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	68	ft.	PWR
68	ft.	72	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

1/10/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 1-6-2020 Well ID# EPW-58

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 72 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	72	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	72	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	68	ft.	PWR
68	ft.	72	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:

Will Keyes

Signature of Certified Well Contractor

1/6/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 1-7-2020 Well ID# EPW-52

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 68 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	68	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	68	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	64	ft.	PWR
64	ft.	68	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

1/7/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 1-9-2020 Well ID# EPW-44

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 68 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: (in.)

12. Well construction method:

(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
0	ft.	68	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	68	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	64	ft.	PWR
64	ft.	68	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:

Will Keyes

Signature of Certified Well Contractor

1/9/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 1-9-2020 Well ID# EPW-63

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 78 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	78	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	78	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	74	ft.	PWR
74	ft.	78	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

1/9/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 1-9-2020 Well ID# EPW-19

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 80 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	80	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	80	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	76	ft.	PWR
76	ft.	80	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

1/9/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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:

Will Keyes

Well Contractor Name

4220 A

NC Well Contractor Certification Number

SAEDACCO Inc

Company Name

2. Well Construction Permit #:

List all applicable well permits (i.e. County, State, Variance, Injection, 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: 1-9-2020 Well ID# EPW-11

5a. Well Location:

CTS of Asheville

Facility/Owner Name

Facility ID# (if applicable)

235 Mills Gap Rd, Asheville, NC, 28803

Physical Address, City, and Zip

Buncombe

9655625706

County

Parcel Identification No. (PIN)

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

35.49281410° N 82.5062485° 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: 80 (ft.)

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

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

If water level is above casing, use "+"

11. Borehole diameter: 8 (in.)

12. Well construction method: Sonic

(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
0	ft.	80	ft.	4" in. schedule 40pvc

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

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0	ft.	80	ft. Portland pressure cap
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM		TO		DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0	ft.	20	ft.	backfill material
20	ft.	55	ft.	sandy silts
55	ft.	76	ft.	PWR
76	ft.	80	ft.	bedrock
	ft.		ft.	
	ft.		ft.	
	ft.		ft.	

21. REMARKS

This is a 4" casing set into bedrock

22. Certification:



Signature of Certified Well Contractor

1/9/2019

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 INSTRUCTIONS

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

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

24b. For Injection Wells ONLY: 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 Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells:

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.

*CTS of Asheville, Inc. Superfund Site
In-Situ Chemical Oxidation Remedial Action Report
Wood Project 6252-16-2012
May 19, 2020*

APPENDIX D

ANALYTICAL REPORTS FOR WASTE CHARACTERIZATION

October 09, 2019

Susan Avritt
Wood E&S
1308 Patton Avenue
Asheville, NC 28806

RE: Project: CTS of Asheville
Pace Project No.: 92447960

Dear Susan Avritt:

Enclosed are the analytical results for sample(s) received by the laboratory on October 02, 2019. 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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: CTS of Asheville

Pace Project No.: 92447960

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: CTS of Asheville

Pace Project No.: 92447960

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92447960001	IDW-ISCO-3	Solid	10/02/19 12:00	10/02/19 16:16
92447960002	IDW-ISCO-4	Solid	10/02/19 13:30	10/02/19 16:16

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: CTS of Asheville

Pace Project No.: 92447960

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92447960001	IDW-ISCO-3	EPA 6010D	SH1	7	PASI-A
		EPA 6010D	DS	7	PASI-A
		EPA 7470A	SOO	1	PASI-A
		EPA 7471B	SOO	1	PASI-A
		EPA 8270E	BPJ	75	PASI-C
		EPA 8260D	CL	70	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92447960002	IDW-ISCO-4	EPA 6010D	SH1	7	PASI-A
		EPA 6010D	DS	7	PASI-A
		EPA 7470A	SOO	1	PASI-A
		EPA 7471B	SOO	1	PASI-A
		EPA 8270E	BPJ	75	PASI-C
		EPA 8260D	CL	70	PASI-C
		ASTM D2974-87	KDF	1	PASI-C

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: CTS of Asheville

Pace Project No.: 92447960

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92447960001	IDW-ISCO-3					
EPA 6010D	Arsenic	0.62J	mg/kg	0.99	10/08/19 22:11	
EPA 6010D	Barium	33.0	mg/kg	0.49	10/08/19 06:30	
EPA 6010D	Cadmium	0.050J	mg/kg	0.099	10/08/19 06:30	
EPA 6010D	Chromium	24.5	mg/kg	0.49	10/08/19 06:30	
EPA 6010D	Lead	14.1	mg/kg	0.49	10/08/19 06:30	
EPA 6010D	Selenium	1.5	mg/kg	0.99	10/08/19 22:11	
EPA 6010D	Arsenic	0.023J	mg/L	0.050	10/06/19 20:11	B
EPA 6010D	Barium	0.58	mg/L	0.25	10/06/19 20:11	B
EPA 6010D	Chromium	0.049J	mg/L	0.050	10/06/19 20:11	
EPA 6010D	Lead	0.030	mg/L	0.025	10/06/19 20:11	
EPA 7471B	Mercury	0.020	mg/kg	0.0032	10/04/19 18:37	
ASTM D2974-87	Percent Moisture	12.7	%	0.10	10/03/19 12:56	
92447960002	IDW-ISCO-4					
EPA 6010D	Arsenic	3.1J	mg/kg	4.1	10/08/19 22:14	
EPA 6010D	Barium	124	mg/kg	0.41	10/08/19 06:33	
EPA 6010D	Cadmium	0.095	mg/kg	0.082	10/08/19 06:33	
EPA 6010D	Chromium	20.4	mg/kg	0.41	10/08/19 06:33	
EPA 6010D	Lead	6.9	mg/kg	0.41	10/08/19 06:33	
EPA 6010D	Selenium	0.51J	mg/kg	0.82	10/08/19 06:33	
EPA 6010D	Arsenic	0.022J	mg/L	0.050	10/06/19 20:15	B
EPA 6010D	Barium	1.1	mg/L	0.25	10/06/19 20:15	
EPA 6010D	Chromium	0.0025J	mg/L	0.050	10/06/19 20:15	B
EPA 6010D	Lead	0.0086J	mg/L	0.025	10/06/19 20:15	
EPA 6010D	Silver	0.0026J	mg/L	0.025	10/06/19 20:15	B
EPA 8260D	Trichloroethene	1700	ug/kg	195	10/08/19 16:19	
EPA 8260D	o-Xylene	48.5J	ug/kg	195	10/08/19 16:19	
ASTM D2974-87	Percent Moisture	36.5	%	0.10	10/03/19 12:57	

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: CTS of Asheville
Pace Project No.: 92447960

Method: EPA 6010D
Description: 6010 MET ICP
Client: Wood E&I - Asheville
Date: October 09, 2019

General Information:

2 samples were analyzed for EPA 6010D. 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 3050B 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: 501866

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92447592001

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

- MS (Lab ID: 2698893)
 - Barium
 - Chromium
- MSD (Lab ID: 2698894)
 - Barium
 - Chromium

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: CTS of Asheville
Pace Project No.: 92447960

Method: EPA 6010D
Description: 6010 MET ICP, TCLP
Client: Wood E&I - Asheville
Date: October 09, 2019

General Information:

2 samples were analyzed for EPA 6010D. 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.

QC Batch: 501893

B: Analyte was detected in the associated method blank.

- LB for HBN 501524 [MPRP/37374] (Lab ID: 2697238)
 - Arsenic
 - Barium
 - Chromium
 - Silver

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:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: CTS of Asheville
Pace Project No.: 92447960

Method: EPA 7470A
Description: 7470 Mercury, TCLP
Client: Wood E&I - Asheville
Date: October 09, 2019

General Information:

2 samples were analyzed for EPA 7470A. 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 7470A 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:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: CTS of Asheville
Pace Project No.: 92447960

Method: EPA 7471B
Description: 7471 Mercury
Client: Wood E&I - Asheville
Date: October 09, 2019

General Information:

2 samples were analyzed for EPA 7471B. 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 7471B 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: 501337

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92447592001

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

- MS (Lab ID: 2696397)
 - Mercury
- MSD (Lab ID: 2696398)
 - Mercury

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: CTS of Asheville
Pace Project No.: 92447960

Method: EPA 8270E
Description: 8270E MSSV Microwave
Client: Wood E&I - Asheville
Date: October 09, 2019

General Information:

2 samples were analyzed for EPA 8270E. 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.

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.

QC Batch: 501719

L2: Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

- LCS (Lab ID: 2698026)
- 4-Nitrophenol

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: CTS of Asheville
Pace Project No.: 92447960

Method: EPA 8260D
Description: 8260D/5035A Volatile Organics
Client: Wood E&I - Asheville
Date: October 09, 2019

General Information:

2 samples were analyzed for EPA 8260D. 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 5035A 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.

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:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CTS of Asheville
Pace Project No.: 92447960

Sample: IDW-ISCO-3 Lab ID: 92447960001 Collected: 10/02/19 12:00 Received: 10/02/19 16:16 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 6010D Preparation Method: EPA 3050B									
Arsenic	0.62J	mg/kg	0.99	0.49	1	10/04/19 21:22	10/08/19 22:11	7440-38-2	
Barium	33.0	mg/kg	0.49	0.25	1	10/04/19 21:22	10/08/19 06:30	7440-39-3	
Cadmium	0.050J	mg/kg	0.099	0.049	1	10/04/19 21:22	10/08/19 06:30	7440-43-9	
Chromium	24.5	mg/kg	0.49	0.25	1	10/04/19 21:22	10/08/19 06:30	7440-47-3	
Lead	14.1	mg/kg	0.49	0.25	1	10/04/19 21:22	10/08/19 06:30	7439-92-1	
Selenium	1.5	mg/kg	0.99	0.49	1	10/04/19 21:22	10/08/19 22:11	7782-49-2	
Silver	ND	mg/kg	0.49	0.25	1	10/04/19 21:22	10/08/19 06:30	7440-22-4	
6010 MET ICP, TCLP Analytical Method: EPA 6010D Preparation Method: EPA 3010A Leachate Method/Date: EPA 1311; 10/03/19 22:22 Initial pH: 5.3; Final pH: 4.5									
Arsenic	0.023J	mg/L	0.050	0.0047	1	10/05/19 00:25	10/06/19 20:11	7440-38-2	B
Barium	0.58	mg/L	0.25	0.0010	1	10/05/19 00:25	10/06/19 20:11	7440-39-3	B
Cadmium	ND	mg/L	0.0050	0.00040	1	10/05/19 00:25	10/06/19 20:11	7440-43-9	
Chromium	0.049J	mg/L	0.050	0.0010	1	10/05/19 00:25	10/06/19 20:11	7440-47-3	
Lead	0.030	mg/L	0.025	0.0016	1	10/05/19 00:25	10/06/19 20:11	7439-92-1	
Selenium	ND	mg/L	0.10	0.0047	1	10/05/19 00:25	10/06/19 20:11	7782-49-2	
Silver	ND	mg/L	0.025	0.0025	1	10/05/19 00:25	10/06/19 20:11	7440-22-4	
7470 Mercury, TCLP Analytical Method: EPA 7470A Preparation Method: EPA 7470A Leachate Method/Date: EPA 1311; 10/03/19 22:22 Initial pH: 5.3; Final pH: 4.5									
Mercury	ND	mg/L	0.00020	0.00010	1	10/06/19 12:35	10/07/19 12:47	7439-97-6	
7471 Mercury Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	0.020	mg/kg	0.0032	0.0016	1	10/03/19 20:15	10/04/19 18:37	7439-97-6	
8270E MSSV Microwave Analytical Method: EPA 8270E Preparation Method: EPA 3546									
Acenaphthene	ND	ug/kg	382	98.3	1	10/04/19 10:35	10/07/19 12:03	83-32-9	
Acenaphthylene	ND	ug/kg	382	90.4	1	10/04/19 10:35	10/07/19 12:03	208-96-8	
Aniline	ND	ug/kg	382	85.8	1	10/04/19 10:35	10/07/19 12:03	62-53-3	
Anthracene	ND	ug/kg	382	99.1	1	10/04/19 10:35	10/07/19 12:03	120-12-7	
Benzo(a)anthracene	ND	ug/kg	382	122	1	10/04/19 10:35	10/07/19 12:03	56-55-3	
Benzo(a)pyrene	ND	ug/kg	382	166	1	10/04/19 10:35	10/07/19 12:03	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	382	154	1	10/04/19 10:35	10/07/19 12:03	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	382	149	1	10/04/19 10:35	10/07/19 12:03	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	382	161	1	10/04/19 10:35	10/07/19 12:03	207-08-9	
Benzoic Acid	ND	ug/kg	1910	412	1	10/04/19 10:35	10/07/19 12:03	65-85-0	v2
Benzyl alcohol	ND	ug/kg	764	203	1	10/04/19 10:35	10/07/19 12:03	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	382	100	1	10/04/19 10:35	10/07/19 12:03	101-55-3	
Butylbenzylphthalate	ND	ug/kg	382	102	1	10/04/19 10:35	10/07/19 12:03	85-68-7	
4-Chloro-3-methylphenol	ND	ug/kg	764	233	1	10/04/19 10:35	10/07/19 12:03	59-50-7	
4-Chloroaniline	ND	ug/kg	1910	234	1	10/04/19 10:35	10/07/19 12:03	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	382	102	1	10/04/19 10:35	10/07/19 12:03	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	382	81.1	1	10/04/19 10:35	10/07/19 12:03	111-44-4	
2-Chloronaphthalene	ND	ug/kg	382	85.1	1	10/04/19 10:35	10/07/19 12:03	91-58-7	
2-Chlorophenol	ND	ug/kg	382	88.9	1	10/04/19 10:35	10/07/19 12:03	95-57-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CTS of Asheville

Pace Project No.: 92447960

Sample: IDW-ISCO-3 Lab ID: 92447960001 Collected: 10/02/19 12:00 Received: 10/02/19 16:16 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
8270E MSSV Microwave Analytical Method: EPA 8270E Preparation Method: EPA 3546									
4-Chlorophenylphenyl ether	ND	ug/kg	382	99.2	1	10/04/19 10:35	10/07/19 12:03	7005-72-3	
Chrysene	ND	ug/kg	382	111	1	10/04/19 10:35	10/07/19 12:03	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	382	153	1	10/04/19 10:35	10/07/19 12:03	53-70-3	
Dibenzofuran	ND	ug/kg	382	95.5	1	10/04/19 10:35	10/07/19 12:03	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	382	82.6	1	10/04/19 10:35	10/07/19 12:03	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	382	86.0	1	10/04/19 10:35	10/07/19 12:03	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	382	84.0	1	10/04/19 10:35	10/07/19 12:03	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	1910	266	1	10/04/19 10:35	10/07/19 12:03	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	382	126	1	10/04/19 10:35	10/07/19 12:03	120-83-2	
Diethylphthalate	ND	ug/kg	382	82.9	1	10/04/19 10:35	10/07/19 12:03	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	382	95.1	1	10/04/19 10:35	10/07/19 12:03	105-67-9	
Dimethylphthalate	ND	ug/kg	382	86.3	1	10/04/19 10:35	10/07/19 12:03	131-11-3	
Di-n-butylphthalate	ND	ug/kg	382	94.2	1	10/04/19 10:35	10/07/19 12:03	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	764	616	1	10/04/19 10:35	10/07/19 12:03	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	1910	1220	1	10/04/19 10:35	10/07/19 12:03	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	382	101	1	10/04/19 10:35	10/07/19 12:03	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	382	99.9	1	10/04/19 10:35	10/07/19 12:03	606-20-2	
Di-n-octylphthalate	ND	ug/kg	382	218	1	10/04/19 10:35	10/07/19 12:03	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/kg	382	125	1	10/04/19 10:35	10/07/19 12:03	117-81-7	
Fluoranthene	ND	ug/kg	382	115	1	10/04/19 10:35	10/07/19 12:03	206-44-0	
Fluorene	ND	ug/kg	382	102	1	10/04/19 10:35	10/07/19 12:03	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	382	92.8	1	10/04/19 10:35	10/07/19 12:03	87-68-3	
Hexachlorobenzene	ND	ug/kg	382	97.0	1	10/04/19 10:35	10/07/19 12:03	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	382	153	1	10/04/19 10:35	10/07/19 12:03	77-47-4	
Hexachloroethane	ND	ug/kg	382	87.0	1	10/04/19 10:35	10/07/19 12:03	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	382	175	1	10/04/19 10:35	10/07/19 12:03	193-39-5	
Isophorone	ND	ug/kg	382	83.0	1	10/04/19 10:35	10/07/19 12:03	78-59-1	
1-Methylnaphthalene	ND	ug/kg	382	102	1	10/04/19 10:35	10/07/19 12:03	90-12-0	
2-Methylnaphthalene	ND	ug/kg	382	97.2	1	10/04/19 10:35	10/07/19 12:03	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	382	84.6	1	10/04/19 10:35	10/07/19 12:03	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	382	96.1	1	10/04/19 10:35	10/07/19 12:03	15831-10-4	
Naphthalene	ND	ug/kg	382	91.4	1	10/04/19 10:35	10/07/19 12:03	91-20-3	
2-Nitroaniline	ND	ug/kg	1910	192	1	10/04/19 10:35	10/07/19 12:03	88-74-4	
3-Nitroaniline	ND	ug/kg	1910	203	1	10/04/19 10:35	10/07/19 12:03	99-09-2	
4-Nitroaniline	ND	ug/kg	764	189	1	10/04/19 10:35	10/07/19 12:03	100-01-6	
Nitrobenzene	ND	ug/kg	382	91.2	1	10/04/19 10:35	10/07/19 12:03	98-95-3	
2-Nitrophenol	ND	ug/kg	382	118	1	10/04/19 10:35	10/07/19 12:03	88-75-5	
4-Nitrophenol	ND	ug/kg	1910	609	1	10/04/19 10:35	10/07/19 12:03	100-02-7	L2
N-Nitrosodimethylamine	ND	ug/kg	382	107	1	10/04/19 10:35	10/07/19 12:03	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	382	107	1	10/04/19 10:35	10/07/19 12:03	621-64-7	v2
N-Nitrosodiphenylamine	ND	ug/kg	382	97.5	1	10/04/19 10:35	10/07/19 12:03	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/kg	382	106	1	10/04/19 10:35	10/07/19 12:03	108-60-1	
Pentachlorophenol	ND	ug/kg	1910	175	1	10/04/19 10:35	10/07/19 12:03	87-86-5	
Phenanthrene	ND	ug/kg	382	96.2	1	10/04/19 10:35	10/07/19 12:03	85-01-8	
Phenol	ND	ug/kg	382	91.2	1	10/04/19 10:35	10/07/19 12:03	108-95-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CTS of Asheville

Pace Project No.: 92447960

Sample: IDW-ISCO-3 **Lab ID:** 92447960001 **Collected:** 10/02/19 12:00 **Received:** 10/02/19 16:16 **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
8270E MSSV Microwave Analytical Method: EPA 8270E Preparation Method: EPA 3546									
Pyrene	ND	ug/kg	382	105	1	10/04/19 10:35	10/07/19 12:03	129-00-0	
Pyridine	ND	ug/kg	382	96.6	1	10/04/19 10:35	10/07/19 12:03	110-86-1	
1,2,4-Trichlorobenzene	ND	ug/kg	382	87.5	1	10/04/19 10:35	10/07/19 12:03	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	382	99.2	1	10/04/19 10:35	10/07/19 12:03	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	382	95.9	1	10/04/19 10:35	10/07/19 12:03	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	45	%	23-110		1	10/04/19 10:35	10/07/19 12:03	4165-60-0	
2-Fluorobiphenyl (S)	52	%	30-110		1	10/04/19 10:35	10/07/19 12:03	321-60-8	
Terphenyl-d14 (S)	54	%	28-110		1	10/04/19 10:35	10/07/19 12:03	1718-51-0	
Phenol-d6 (S)	48	%	22-110		1	10/04/19 10:35	10/07/19 12:03	13127-88-3	
2-Fluorophenol (S)	51	%	13-110		1	10/04/19 10:35	10/07/19 12:03	367-12-4	
2,4,6-Tribromophenol (S)	53	%	27-110		1	10/04/19 10:35	10/07/19 12:03	118-79-6	
8260D/5035A Volatile Organics Analytical Method: EPA 8260D Preparation Method: EPA 5035A									
Acetone	ND	ug/kg	123	11.6	1	10/04/19 15:16	10/07/19 20:50	67-64-1	
Benzene	ND	ug/kg	6.1	1.1	1	10/04/19 15:16	10/07/19 20:50	71-43-2	
Bromobenzene	ND	ug/kg	6.1	1.7	1	10/04/19 15:16	10/07/19 20:50	108-86-1	
Bromochloromethane	ND	ug/kg	6.1	1.5	1	10/04/19 15:16	10/07/19 20:50	74-97-5	
Bromodichloromethane	ND	ug/kg	6.1	1.2	1	10/04/19 15:16	10/07/19 20:50	75-27-4	
Bromoform	ND	ug/kg	6.1	3.0	1	10/04/19 15:16	10/07/19 20:50	75-25-2	v1
Bromomethane	ND	ug/kg	12.3	2.9	1	10/04/19 15:16	10/07/19 20:50	74-83-9	
2-Butanone (MEK)	ND	ug/kg	123	14.6	1	10/04/19 15:16	10/07/19 20:50	78-93-3	
n-Butylbenzene	ND	ug/kg	6.1	3.5	1	10/04/19 15:16	10/07/19 20:50	104-51-8	
sec-Butylbenzene	ND	ug/kg	6.1	2.6	1	10/04/19 15:16	10/07/19 20:50	135-98-8	
tert-Butylbenzene	ND	ug/kg	6.1	2.1	1	10/04/19 15:16	10/07/19 20:50	98-06-6	
Carbon tetrachloride	ND	ug/kg	6.1	1.2	1	10/04/19 15:16	10/07/19 20:50	56-23-5	
Chlorobenzene	ND	ug/kg	6.1	1.2	1	10/04/19 15:16	10/07/19 20:50	108-90-7	
Chloroethane	ND	ug/kg	12.3	2.6	1	10/04/19 15:16	10/07/19 20:50	75-00-3	v1
Chloroform	ND	ug/kg	6.1	1.3	1	10/04/19 15:16	10/07/19 20:50	67-66-3	
Chloromethane	ND	ug/kg	12.3	4.0	1	10/04/19 15:16	10/07/19 20:50	74-87-3	
2-Chlorotoluene	ND	ug/kg	6.1	1.9	1	10/04/19 15:16	10/07/19 20:50	95-49-8	
4-Chlorotoluene	ND	ug/kg	6.1	1.8	1	10/04/19 15:16	10/07/19 20:50	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	6.1	3.1	1	10/04/19 15:16	10/07/19 20:50	96-12-8	v1
Dibromochloromethane	ND	ug/kg	6.1	3.1	1	10/04/19 15:16	10/07/19 20:50	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	6.1	1.4	1	10/04/19 15:16	10/07/19 20:50	106-93-4	
Dibromomethane	ND	ug/kg	6.1	1.8	1	10/04/19 15:16	10/07/19 20:50	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	6.1	2.2	1	10/04/19 15:16	10/07/19 20:50	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	6.1	2.2	1	10/04/19 15:16	10/07/19 20:50	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	6.1	2.1	1	10/04/19 15:16	10/07/19 20:50	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	12.3	5.0	1	10/04/19 15:16	10/07/19 20:50	75-71-8	
1,1-Dichloroethane	ND	ug/kg	6.1	0.90	1	10/04/19 15:16	10/07/19 20:50	75-34-3	
1,2-Dichloroethane	ND	ug/kg	6.1	1.2	1	10/04/19 15:16	10/07/19 20:50	107-06-2	
1,1-Dichloroethene	ND	ug/kg	6.1	1.4	1	10/04/19 15:16	10/07/19 20:50	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	6.1	1.1	1	10/04/19 15:16	10/07/19 20:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	6.1	1.2	1	10/04/19 15:16	10/07/19 20:50	156-60-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CTS of Asheville

Pace Project No.: 92447960

Sample: IDW-ISCO-3 Lab ID: 92447960001 Collected: 10/02/19 12:00 Received: 10/02/19 16:16 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
8260D/5035A Volatile Organics Analytical Method: EPA 8260D Preparation Method: EPA 5035A									
1,2-Dichloropropane	ND	ug/kg	6.1	2.3	1	10/04/19 15:16	10/07/19 20:50	78-87-5	
1,3-Dichloropropane	ND	ug/kg	6.1	2.3	1	10/04/19 15:16	10/07/19 20:50	142-28-9	
2,2-Dichloropropane	ND	ug/kg	6.1	0.61	1	10/04/19 15:16	10/07/19 20:50	594-20-7	
1,1-Dichloropropene	ND	ug/kg	6.1	2.6	1	10/04/19 15:16	10/07/19 20:50	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	6.1	2.8	1	10/04/19 15:16	10/07/19 20:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	6.1	1.1	1	10/04/19 15:16	10/07/19 20:50	10061-02-6	
Diisopropyl ether	ND	ug/kg	6.1	3.5	1	10/04/19 15:16	10/07/19 20:50	108-20-3	
Ethylbenzene	ND	ug/kg	6.1	1.3	1	10/04/19 15:16	10/07/19 20:50	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	6.1	3.0	1	10/04/19 15:16	10/07/19 20:50	87-68-3	
2-Hexanone	ND	ug/kg	61.3	6.4	1	10/04/19 15:16	10/07/19 20:50	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	6.1	1.8	1	10/04/19 15:16	10/07/19 20:50	98-82-8	
p-Isopropyltoluene	ND	ug/kg	6.1	3.0	1	10/04/19 15:16	10/07/19 20:50	99-87-6	
Methylene Chloride	ND	ug/kg	24.5	7.3	1	10/04/19 15:16	10/07/19 20:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	61.3	4.6	1	10/04/19 15:16	10/07/19 20:50	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	6.1	3.5	1	10/04/19 15:16	10/07/19 20:50	1634-04-4	
Naphthalene	ND	ug/kg	6.1	5.2	1	10/04/19 15:16	10/07/19 20:50	91-20-3	
n-Propylbenzene	ND	ug/kg	6.1	2.0	1	10/04/19 15:16	10/07/19 20:50	103-65-1	
Styrene	ND	ug/kg	6.1	1.8	1	10/04/19 15:16	10/07/19 20:50	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	6.1	1.5	1	10/04/19 15:16	10/07/19 20:50	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.1	2.1	1	10/04/19 15:16	10/07/19 20:50	79-34-5	
Tetrachloroethene	ND	ug/kg	6.1	1.9	1	10/04/19 15:16	10/07/19 20:50	127-18-4	
Toluene	ND	ug/kg	6.1	2.0	1	10/04/19 15:16	10/07/19 20:50	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	6.1	4.4	1	10/04/19 15:16	10/07/19 20:50	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	6.1	3.3	1	10/04/19 15:16	10/07/19 20:50	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	6.1	1.1	1	10/04/19 15:16	10/07/19 20:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	6.1	1.4	1	10/04/19 15:16	10/07/19 20:50	79-00-5	
Trichloroethene	ND	ug/kg	6.1	1.6	1	10/04/19 15:16	10/07/19 20:50	79-01-6	
Trichlorofluoromethane	ND	ug/kg	6.1	1.4	1	10/04/19 15:16	10/07/19 20:50	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	6.1	2.1	1	10/04/19 15:16	10/07/19 20:50	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	6.1	2.4	1	10/04/19 15:16	10/07/19 20:50	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	6.1	2.0	1	10/04/19 15:16	10/07/19 20:50	108-67-8	
Vinyl acetate	ND	ug/kg	61.3	20.0	1	10/04/19 15:16	10/07/19 20:50	108-05-4	IK
Vinyl chloride	ND	ug/kg	12.3	2.3	1	10/04/19 15:16	10/07/19 20:50	75-01-4	
Xylene (Total)	ND	ug/kg	12.3	4.3	1	10/04/19 15:16	10/07/19 20:50	1330-20-7	
m&p-Xylene	ND	ug/kg	12.3	2.9	1	10/04/19 15:16	10/07/19 20:50	179601-23-1	
o-Xylene	ND	ug/kg	6.1	1.4	1	10/04/19 15:16	10/07/19 20:50	95-47-6	
Surrogates									
Toluene-d8 (S)	106	%	70-130		1	10/04/19 15:16	10/07/19 20:50	2037-26-5	
4-Bromofluorobenzene (S)	101	%	70-130		1	10/04/19 15:16	10/07/19 20:50	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-132		1	10/04/19 15:16	10/07/19 20:50	17060-07-0	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	12.7	%	0.10	0.10	1	10/03/19 12:56
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ANALYTICAL RESULTS

Project: CTS of Asheville

Pace Project No.: 92447960

Sample: IDW-ISCO-4 Lab ID: 92447960002 Collected: 10/02/19 13:30 Received: 10/02/19 16:16 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 6010D Preparation Method: EPA 3050B									
Arsenic	3.1J	mg/kg	4.1	2.1	5	10/04/19 21:22	10/08/19 22:14	7440-38-2	
Barium	124	mg/kg	0.41	0.21	1	10/04/19 21:22	10/08/19 06:33	7440-39-3	
Cadmium	0.095	mg/kg	0.082	0.041	1	10/04/19 21:22	10/08/19 06:33	7440-43-9	
Chromium	20.4	mg/kg	0.41	0.21	1	10/04/19 21:22	10/08/19 06:33	7440-47-3	
Lead	6.9	mg/kg	0.41	0.21	1	10/04/19 21:22	10/08/19 06:33	7439-92-1	
Selenium	0.51J	mg/kg	0.82	0.41	1	10/04/19 21:22	10/08/19 06:33	7782-49-2	
Silver	ND	mg/kg	0.41	0.21	1	10/04/19 21:22	10/08/19 06:33	7440-22-4	
6010 MET ICP, TCLP Analytical Method: EPA 6010D Preparation Method: EPA 3010A Leachate Method/Date: EPA 1311; 10/03/19 22:22 Initial pH: 5.94; Final pH: 4.5									
Arsenic	0.022J	mg/L	0.050	0.0047	1	10/05/19 00:25	10/06/19 20:15	7440-38-2	B
Barium	1.1	mg/L	0.25	0.0010	1	10/05/19 00:25	10/06/19 20:15	7440-39-3	
Cadmium	ND	mg/L	0.0050	0.00040	1	10/05/19 00:25	10/06/19 20:15	7440-43-9	
Chromium	0.0025J	mg/L	0.050	0.0010	1	10/05/19 00:25	10/06/19 20:15	7440-47-3	B
Lead	0.0086J	mg/L	0.025	0.0016	1	10/05/19 00:25	10/06/19 20:15	7439-92-1	
Selenium	ND	mg/L	0.10	0.0047	1	10/05/19 00:25	10/06/19 20:15	7782-49-2	
Silver	0.0026J	mg/L	0.025	0.0025	1	10/05/19 00:25	10/06/19 20:15	7440-22-4	B
7470 Mercury, TCLP Analytical Method: EPA 7470A Preparation Method: EPA 7470A Leachate Method/Date: EPA 1311; 10/03/19 22:22 Initial pH: 5.94; Final pH: 4.5									
Mercury	ND	mg/L	0.00020	0.00010	1	10/06/19 12:35	10/07/19 12:49	7439-97-6	
7471 Mercury Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	ND	mg/kg	0.0071	0.0035	1	10/03/19 20:15	10/04/19 18:40	7439-97-6	
8270E MSSV Microwave Analytical Method: EPA 8270E Preparation Method: EPA 3546									
Acenaphthene	ND	ug/kg	515	132	1	10/04/19 10:35	10/07/19 18:42	83-32-9	
Acenaphthylene	ND	ug/kg	515	122	1	10/04/19 10:35	10/07/19 18:42	208-96-8	
Aniline	ND	ug/kg	515	116	1	10/04/19 10:35	10/07/19 18:42	62-53-3	
Anthracene	ND	ug/kg	515	133	1	10/04/19 10:35	10/07/19 18:42	120-12-7	
Benzo(a)anthracene	ND	ug/kg	515	164	1	10/04/19 10:35	10/07/19 18:42	56-55-3	
Benzo(a)pyrene	ND	ug/kg	515	223	1	10/04/19 10:35	10/07/19 18:42	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	515	207	1	10/04/19 10:35	10/07/19 18:42	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	515	201	1	10/04/19 10:35	10/07/19 18:42	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	515	217	1	10/04/19 10:35	10/07/19 18:42	207-08-9	
Benzoic Acid	ND	ug/kg	2570	555	1	10/04/19 10:35	10/07/19 18:42	65-85-0	
Benzyl alcohol	ND	ug/kg	1030	273	1	10/04/19 10:35	10/07/19 18:42	100-51-6	
4-Bromophenylphenyl ether	ND	ug/kg	515	135	1	10/04/19 10:35	10/07/19 18:42	101-55-3	
Butylbenzylphthalate	ND	ug/kg	515	137	1	10/04/19 10:35	10/07/19 18:42	85-68-7	v1
4-Chloro-3-methylphenol	ND	ug/kg	1030	313	1	10/04/19 10:35	10/07/19 18:42	59-50-7	
4-Chloroaniline	ND	ug/kg	2570	315	1	10/04/19 10:35	10/07/19 18:42	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/kg	515	137	1	10/04/19 10:35	10/07/19 18:42	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/kg	515	109	1	10/04/19 10:35	10/07/19 18:42	111-44-4	
2-Chloronaphthalene	ND	ug/kg	515	115	1	10/04/19 10:35	10/07/19 18:42	91-58-7	
2-Chlorophenol	ND	ug/kg	515	120	1	10/04/19 10:35	10/07/19 18:42	95-57-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CTS of Asheville
Pace Project No.: 92447960

Sample: IDW-ISCO-4 Lab ID: 92447960002 Collected: 10/02/19 13:30 Received: 10/02/19 16:16 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
8270E MSSV Microwave Analytical Method: EPA 8270E Preparation Method: EPA 3546									
4-Chlorophenylphenyl ether	ND	ug/kg	515	134	1	10/04/19 10:35	10/07/19 18:42	7005-72-3	
Chrysene	ND	ug/kg	515	149	1	10/04/19 10:35	10/07/19 18:42	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	515	206	1	10/04/19 10:35	10/07/19 18:42	53-70-3	
Dibenzofuran	ND	ug/kg	515	129	1	10/04/19 10:35	10/07/19 18:42	132-64-9	
1,2-Dichlorobenzene	ND	ug/kg	515	111	1	10/04/19 10:35	10/07/19 18:42	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	515	116	1	10/04/19 10:35	10/07/19 18:42	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	515	113	1	10/04/19 10:35	10/07/19 18:42	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/kg	2570	359	1	10/04/19 10:35	10/07/19 18:42	91-94-1	
2,4-Dichlorophenol	ND	ug/kg	515	170	1	10/04/19 10:35	10/07/19 18:42	120-83-2	
Diethylphthalate	ND	ug/kg	515	112	1	10/04/19 10:35	10/07/19 18:42	84-66-2	
2,4-Dimethylphenol	ND	ug/kg	515	128	1	10/04/19 10:35	10/07/19 18:42	105-67-9	
Dimethylphthalate	ND	ug/kg	515	116	1	10/04/19 10:35	10/07/19 18:42	131-11-3	
Di-n-butylphthalate	ND	ug/kg	515	127	1	10/04/19 10:35	10/07/19 18:42	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/kg	1030	830	1	10/04/19 10:35	10/07/19 18:42	534-52-1	
2,4-Dinitrophenol	ND	ug/kg	2570	1640	1	10/04/19 10:35	10/07/19 18:42	51-28-5	
2,4-Dinitrotoluene	ND	ug/kg	515	136	1	10/04/19 10:35	10/07/19 18:42	121-14-2	
2,6-Dinitrotoluene	ND	ug/kg	515	135	1	10/04/19 10:35	10/07/19 18:42	606-20-2	
Di-n-octylphthalate	ND	ug/kg	515	293	1	10/04/19 10:35	10/07/19 18:42	117-84-0	v1
bis(2-Ethylhexyl)phthalate	ND	ug/kg	515	168	1	10/04/19 10:35	10/07/19 18:42	117-81-7	v1
Fluoranthene	ND	ug/kg	515	155	1	10/04/19 10:35	10/07/19 18:42	206-44-0	
Fluorene	ND	ug/kg	515	138	1	10/04/19 10:35	10/07/19 18:42	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/kg	515	125	1	10/04/19 10:35	10/07/19 18:42	87-68-3	
Hexachlorobenzene	ND	ug/kg	515	131	1	10/04/19 10:35	10/07/19 18:42	118-74-1	
Hexachlorocyclopentadiene	ND	ug/kg	515	206	1	10/04/19 10:35	10/07/19 18:42	77-47-4	v2
Hexachloroethane	ND	ug/kg	515	117	1	10/04/19 10:35	10/07/19 18:42	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	515	235	1	10/04/19 10:35	10/07/19 18:42	193-39-5	
Isophorone	ND	ug/kg	515	112	1	10/04/19 10:35	10/07/19 18:42	78-59-1	
1-Methylnaphthalene	ND	ug/kg	515	137	1	10/04/19 10:35	10/07/19 18:42	90-12-0	
2-Methylnaphthalene	ND	ug/kg	515	131	1	10/04/19 10:35	10/07/19 18:42	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/kg	515	114	1	10/04/19 10:35	10/07/19 18:42	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/kg	515	129	1	10/04/19 10:35	10/07/19 18:42	15831-10-4	
Naphthalene	ND	ug/kg	515	123	1	10/04/19 10:35	10/07/19 18:42	91-20-3	
2-Nitroaniline	ND	ug/kg	2570	259	1	10/04/19 10:35	10/07/19 18:42	88-74-4	
3-Nitroaniline	ND	ug/kg	2570	273	1	10/04/19 10:35	10/07/19 18:42	99-09-2	
4-Nitroaniline	ND	ug/kg	1030	254	1	10/04/19 10:35	10/07/19 18:42	100-01-6	
Nitrobenzene	ND	ug/kg	515	123	1	10/04/19 10:35	10/07/19 18:42	98-95-3	
2-Nitrophenol	ND	ug/kg	515	159	1	10/04/19 10:35	10/07/19 18:42	88-75-5	
4-Nitrophenol	ND	ug/kg	2570	820	1	10/04/19 10:35	10/07/19 18:42	100-02-7	L2
N-Nitrosodimethylamine	ND	ug/kg	515	145	1	10/04/19 10:35	10/07/19 18:42	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/kg	515	144	1	10/04/19 10:35	10/07/19 18:42	621-64-7	
N-Nitrosodiphenylamine	ND	ug/kg	515	131	1	10/04/19 10:35	10/07/19 18:42	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/kg	515	143	1	10/04/19 10:35	10/07/19 18:42	108-60-1	v1
Pentachlorophenol	ND	ug/kg	2570	235	1	10/04/19 10:35	10/07/19 18:42	87-86-5	
Phenanthrene	ND	ug/kg	515	130	1	10/04/19 10:35	10/07/19 18:42	85-01-8	
Phenol	ND	ug/kg	515	123	1	10/04/19 10:35	10/07/19 18:42	108-95-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CTS of Asheville
Pace Project No.: 92447960

Sample: IDW-ISCO-4 Lab ID: 92447960002 Collected: 10/02/19 13:30 Received: 10/02/19 16:16 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
8270E MSSV Microwave Analytical Method: EPA 8270E Preparation Method: EPA 3546									
Pyrene	ND	ug/kg	515	142	1	10/04/19 10:35	10/07/19 18:42	129-00-0	
Pyridine	ND	ug/kg	515	130	1	10/04/19 10:35	10/07/19 18:42	110-86-1	
1,2,4-Trichlorobenzene	ND	ug/kg	515	118	1	10/04/19 10:35	10/07/19 18:42	120-82-1	
2,4,5-Trichlorophenol	ND	ug/kg	515	134	1	10/04/19 10:35	10/07/19 18:42	95-95-4	
2,4,6-Trichlorophenol	ND	ug/kg	515	129	1	10/04/19 10:35	10/07/19 18:42	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	60	%	23-110		1	10/04/19 10:35	10/07/19 18:42	4165-60-0	
2-Fluorobiphenyl (S)	66	%	30-110		1	10/04/19 10:35	10/07/19 18:42	321-60-8	
Terphenyl-d14 (S)	71	%	28-110		1	10/04/19 10:35	10/07/19 18:42	1718-51-0	
Phenol-d6 (S)	58	%	22-110		1	10/04/19 10:35	10/07/19 18:42	13127-88-3	
2-Fluorophenol (S)	62	%	13-110		1	10/04/19 10:35	10/07/19 18:42	367-12-4	
2,4,6-Tribromophenol (S)	80	%	27-110		1	10/04/19 10:35	10/07/19 18:42	118-79-6	
8260D/5035A Volatile Organics Analytical Method: EPA 8260D Preparation Method: EPA 5035A									
Acetone	ND	ug/kg	3900	368	25	10/08/19 13:24	10/08/19 16:19	67-64-1	
Benzene	ND	ug/kg	195	35.0	25	10/08/19 13:24	10/08/19 16:19	71-43-2	
Bromobenzene	ND	ug/kg	195	53.0	25	10/08/19 13:24	10/08/19 16:19	108-86-1	
Bromochloromethane	ND	ug/kg	195	48.0	25	10/08/19 13:24	10/08/19 16:19	74-97-5	
Bromodichloromethane	ND	ug/kg	195	38.1	25	10/08/19 13:24	10/08/19 16:19	75-27-4	
Bromoform	ND	ug/kg	195	95.1	25	10/08/19 13:24	10/08/19 16:19	75-25-2	
Bromomethane	ND	ug/kg	390	92.0	25	10/08/19 13:24	10/08/19 16:19	74-83-9	
2-Butanone (MEK)	ND	ug/kg	3900	464	25	10/08/19 13:24	10/08/19 16:19	78-93-3	
n-Butylbenzene	ND	ug/kg	195	110	25	10/08/19 13:24	10/08/19 16:19	104-51-8	
sec-Butylbenzene	ND	ug/kg	195	82.6	25	10/08/19 13:24	10/08/19 16:19	135-98-8	
tert-Butylbenzene	ND	ug/kg	195	65.9	25	10/08/19 13:24	10/08/19 16:19	98-06-6	
Carbon tetrachloride	ND	ug/kg	195	37.3	25	10/08/19 13:24	10/08/19 16:19	56-23-5	
Chlorobenzene	ND	ug/kg	195	37.7	25	10/08/19 13:24	10/08/19 16:19	108-90-7	
Chloroethane	ND	ug/kg	390	81.5	25	10/08/19 13:24	10/08/19 16:19	75-00-3	v1
Chloroform	ND	ug/kg	195	41.3	25	10/08/19 13:24	10/08/19 16:19	67-66-3	
Chloromethane	ND	ug/kg	390	128	25	10/08/19 13:24	10/08/19 16:19	74-87-3	
2-Chlorotoluene	ND	ug/kg	195	59.3	25	10/08/19 13:24	10/08/19 16:19	95-49-8	
4-Chlorotoluene	ND	ug/kg	195	58.5	25	10/08/19 13:24	10/08/19 16:19	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	195	99.0	25	10/08/19 13:24	10/08/19 16:19	96-12-8	
Dibromochloromethane	ND	ug/kg	195	97.5	25	10/08/19 13:24	10/08/19 16:19	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	195	43.7	25	10/08/19 13:24	10/08/19 16:19	106-93-4	
Dibromomethane	ND	ug/kg	195	58.1	25	10/08/19 13:24	10/08/19 16:19	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	195	68.6	25	10/08/19 13:24	10/08/19 16:19	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	195	69.4	25	10/08/19 13:24	10/08/19 16:19	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	195	67.4	25	10/08/19 13:24	10/08/19 16:19	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	390	160	25	10/08/19 13:24	10/08/19 16:19	75-71-8	
1,1-Dichloroethane	ND	ug/kg	195	28.7	25	10/08/19 13:24	10/08/19 16:19	75-34-3	
1,2-Dichloroethane	ND	ug/kg	195	39.0	25	10/08/19 13:24	10/08/19 16:19	107-06-2	
1,1-Dichloroethene	ND	ug/kg	195	45.2	25	10/08/19 13:24	10/08/19 16:19	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	195	33.8	25	10/08/19 13:24	10/08/19 16:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	195	38.2	25	10/08/19 13:24	10/08/19 16:19	156-60-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CTS of Asheville

Pace Project No.: 92447960

Sample: IDW-ISCO-4 Lab ID: 92447960002 Collected: 10/02/19 13:30 Received: 10/02/19 16:16 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
8260D/5035A Volatile Organics Analytical Method: EPA 8260D Preparation Method: EPA 5035A									
1,2-Dichloropropane	ND	ug/kg	195	73.3	25	10/08/19 13:24	10/08/19 16:19	78-87-5	
1,3-Dichloropropane	ND	ug/kg	195	73.7	25	10/08/19 13:24	10/08/19 16:19	142-28-9	
2,2-Dichloropropane	ND	ug/kg	195	19.3	25	10/08/19 13:24	10/08/19 16:19	594-20-7	
1,1-Dichloropropene	ND	ug/kg	195	82.6	25	10/08/19 13:24	10/08/19 16:19	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	195	88.5	25	10/08/19 13:24	10/08/19 16:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	195	34.1	25	10/08/19 13:24	10/08/19 16:19	10061-02-6	
Diisopropyl ether	ND	ug/kg	195	111	25	10/08/19 13:24	10/08/19 16:19	108-20-3	
Ethylbenzene	ND	ug/kg	195	41.3	25	10/08/19 13:24	10/08/19 16:19	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	195	96.3	25	10/08/19 13:24	10/08/19 16:19	87-68-3	
2-Hexanone	ND	ug/kg	1950	202	25	10/08/19 13:24	10/08/19 16:19	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	195	56.5	25	10/08/19 13:24	10/08/19 16:19	98-82-8	
p-Isopropyltoluene	ND	ug/kg	195	94.0	25	10/08/19 13:24	10/08/19 16:19	99-87-6	
Methylene Chloride	ND	ug/kg	780	230	25	10/08/19 13:24	10/08/19 16:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	1950	145	25	10/08/19 13:24	10/08/19 16:19	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	195	111	25	10/08/19 13:24	10/08/19 16:19	1634-04-4	
Naphthalene	ND	ug/kg	195	166	25	10/08/19 13:24	10/08/19 16:19	91-20-3	
n-Propylbenzene	ND	ug/kg	195	65.1	25	10/08/19 13:24	10/08/19 16:19	103-65-1	
Styrene	ND	ug/kg	195	57.7	25	10/08/19 13:24	10/08/19 16:19	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	195	48.0	25	10/08/19 13:24	10/08/19 16:19	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	195	67.4	25	10/08/19 13:24	10/08/19 16:19	79-34-5	
Tetrachloroethene	ND	ug/kg	195	61.6	25	10/08/19 13:24	10/08/19 16:19	127-18-4	
Toluene	ND	ug/kg	195	63.2	25	10/08/19 13:24	10/08/19 16:19	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	195	139	25	10/08/19 13:24	10/08/19 16:19	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	195	103	25	10/08/19 13:24	10/08/19 16:19	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	195	33.9	25	10/08/19 13:24	10/08/19 16:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	195	44.1	25	10/08/19 13:24	10/08/19 16:19	79-00-5	
Trichloroethene	1700	ug/kg	195	50.7	25	10/08/19 13:24	10/08/19 16:19	79-01-6	
Trichlorofluoromethane	ND	ug/kg	195	46.0	25	10/08/19 13:24	10/08/19 16:19	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	195	65.9	25	10/08/19 13:24	10/08/19 16:19	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	195	76.0	25	10/08/19 13:24	10/08/19 16:19	95-63-6	v1
1,3,5-Trimethylbenzene	ND	ug/kg	195	65.1	25	10/08/19 13:24	10/08/19 16:19	108-67-8	
Vinyl acetate	ND	ug/kg	1950	635	25	10/08/19 13:24	10/08/19 16:19	108-05-4	IK
Vinyl chloride	ND	ug/kg	390	74.1	25	10/08/19 13:24	10/08/19 16:19	75-01-4	
Xylene (Total)	ND	ug/kg	390	136	25	10/08/19 13:24	10/08/19 16:19	1330-20-7	
m&p-Xylene	ND	ug/kg	390	92.0	25	10/08/19 13:24	10/08/19 16:19	179601-23-1	
o-Xylene	48.5J	ug/kg	195	45.6	25	10/08/19 13:24	10/08/19 16:19	95-47-6	
Surrogates									
Toluene-d8 (S)	104	%	70-130		25	10/08/19 13:24	10/08/19 16:19	2037-26-5	
4-Bromofluorobenzene (S)	101	%	70-130		25	10/08/19 13:24	10/08/19 16:19	460-00-4	
1,2-Dichloroethane-d4 (S)	115	%	70-132		25	10/08/19 13:24	10/08/19 16:19	17060-07-0	
Percent Moisture Analytical Method: ASTM D2974-87									
Percent Moisture	36.5	%	0.10	0.10	1		10/03/19 12:57		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CTS of Asheville

Pace Project No.: 92447960

QC Batch: 501895

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury TCLP

Associated Lab Samples: 92447960001, 92447960002

METHOD BLANK: 2697238

Matrix: Water

Associated Lab Samples: 92447960001, 92447960002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	0.00010J	0.00020	0.00010	10/07/19 13:27	

LABORATORY CONTROL SAMPLE: 2698981

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0029	114	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2698982 2698983

Parameter	Units	92446774001 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	0.0025	0.0025	0.0026	0.0025	103	98	75-125	5	20	

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

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QUALITY CONTROL DATA

Project: CTS of Asheville

Pace Project No.: 92447960

QC Batch: 501337

Analysis Method: EPA 7471B

QC Batch Method: EPA 7471B

Analysis Description: 7471 Mercury

Associated Lab Samples: 92447960001, 92447960002

METHOD BLANK: 2696395

Matrix: Solid

Associated Lab Samples: 92447960001, 92447960002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.0060	0.0030	10/04/19 17:31	

LABORATORY CONTROL SAMPLE: 2696396

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.083	0.085	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2696397 2696398

Parameter	Units	92447592001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	0.056	0.075	0.062	0.10	0.088	65	52	75-125	17	20	M1

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

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QUALITY CONTROL DATA

Project: CTS of Asheville

Pace Project No.: 92447960

QC Batch:	501866	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3050B	Analysis Description:	6010 MET
Associated Lab Samples: 92447960001, 92447960002			

METHOD BLANK: 2698891 Matrix: Solid

Associated Lab Samples: 92447960001, 92447960002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/kg	ND	1.0	0.50	10/08/19 12:23	
Barium	mg/kg	ND	0.50	0.25	10/08/19 12:23	
Cadmium	mg/kg	ND	0.10	0.050	10/08/19 12:23	
Chromium	mg/kg	ND	0.50	0.25	10/08/19 12:23	
Lead	mg/kg	ND	0.50	0.25	10/08/19 12:23	
Selenium	mg/kg	ND	1.0	0.50	10/08/19 12:23	
Silver	mg/kg	ND	0.50	0.25	10/08/19 12:23	

LABORATORY CONTROL SAMPLE: 2698892

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	43.6	87	80-120	
Barium	mg/kg	50	47.5	95	80-120	
Cadmium	mg/kg	50	44.5	89	80-120	
Chromium	mg/kg	50	46.4	93	80-120	
Lead	mg/kg	50	46.9	94	80-120	
Selenium	mg/kg	50	41.4	83	80-120	
Silver	mg/kg	25	22.1	88	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2698893 2698894

Parameter	Units	92447592001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	1.4	48.4	48.4	41.1	42.4	82	85	75-125	3	20	
Barium	mg/kg	36.5	48.4	48.4	106	117	143	166	75-125	10	20	M1
Cadmium	mg/kg	0.14	48.4	48.4	42.0	43.7	87	90	75-125	4	20	
Chromium	mg/kg	42.8	48.4	48.4	66.2	68.7	48	53	75-125	4	20	M1
Lead	mg/kg	41.5	48.4	48.4	83.4	101	87	122	75-125	19	20	
Selenium	mg/kg	1.4	48.4	48.4	38.8	39.5	77	79	75-125	2	20	
Silver	mg/kg	ND	24.1	24.1	21.1	21.8	87	90	75-125	3	20	

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QUALITY CONTROL DATA

Project: CTS of Asheville

Pace Project No.: 92447960

QC Batch: 501893

Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A

Analysis Description: 6010 MET TCLP

Associated Lab Samples: 92447960001, 92447960002

METHOD BLANK: 2697238

Matrix: Water

Associated Lab Samples: 92447960001, 92447960002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/L	0.0061J	0.050	0.0047	10/06/19 18:26	
Barium	mg/L	0.075J	0.25	0.0010	10/06/19 18:26	
Cadmium	mg/L	ND	0.0050	0.00040	10/06/19 18:26	
Chromium	mg/L	0.0045J	0.050	0.0010	10/06/19 18:26	
Lead	mg/L	ND	0.025	0.0016	10/06/19 18:26	
Selenium	mg/L	ND	0.10	0.0047	10/06/19 18:26	
Silver	mg/L	0.0026J	0.025	0.0025	10/06/19 18:26	

LABORATORY CONTROL SAMPLE: 2698977

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	2.5	2.4	95	80-120	
Barium	mg/L	2.5	2.5	101	80-120	
Cadmium	mg/L	2.5	2.4	96	80-120	
Chromium	mg/L	2.5	2.5	99	80-120	
Lead	mg/L	2.5	2.3	93	80-120	
Selenium	mg/L	2.5	2.4	97	80-120	
Silver	mg/L	1.2	1.2	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2698978 2698979

Parameter	Units	92446678001 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	95	95	75-125	0	20	
Barium	mg/L	0.77	2.5	2.5	3.2	3.2	99	99	75-125	0	20	
Cadmium	mg/L	0.16	2.5	2.5	2.6	2.6	98	98	75-125	0	20	
Chromium	mg/L	ND	2.5	2.5	2.5	2.5	100	100	75-125	0	20	
Lead	mg/L	0.95	2.5	2.5	3.3	3.3	94	93	75-125	0	20	
Selenium	mg/L	ND	2.5	2.5	2.5	2.5	98	98	75-125	1	20	
Silver	mg/L	ND	1.2	1.2	1.3	1.3	100	101	75-125	0	20	

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QUALITY CONTROL DATA

Project: CTS of Asheville

Pace Project No.: 92447960

QC Batch: 501807

Analysis Method: EPA 8260D

QC Batch Method: EPA 5035A

Analysis Description: 8260D MSV 5035A Volatile Organics

Associated Lab Samples: 92447960001

METHOD BLANK: 2698410

Matrix: Solid

Associated Lab Samples: 92447960001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	5.0	1.2	10/07/19 12:47	
1,1,1-Trichloroethane	ug/kg	ND	5.0	0.87	10/07/19 12:47	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.0	1.7	10/07/19 12:47	
1,1,2-Trichloroethane	ug/kg	ND	5.0	1.1	10/07/19 12:47	
1,1-Dichloroethane	ug/kg	ND	5.0	0.74	10/07/19 12:47	
1,1-Dichloroethene	ug/kg	ND	5.0	1.2	10/07/19 12:47	
1,1-Dichloropropene	ug/kg	ND	5.0	2.1	10/07/19 12:47	
1,2,3-Trichlorobenzene	ug/kg	ND	5.0	3.6	10/07/19 12:47	
1,2,3-Trichloropropane	ug/kg	ND	5.0	1.7	10/07/19 12:47	
1,2,4-Trichlorobenzene	ug/kg	ND	5.0	2.6	10/07/19 12:47	
1,2,4-Trimethylbenzene	ug/kg	ND	5.0	2.0	10/07/19 12:47	
1,2-Dibromo-3-chloropropane	ug/kg	ND	5.0	2.5	10/07/19 12:47	v1
1,2-Dibromoethane (EDB)	ug/kg	ND	5.0	1.1	10/07/19 12:47	
1,2-Dichlorobenzene	ug/kg	ND	5.0	1.8	10/07/19 12:47	
1,2-Dichloroethane	ug/kg	ND	5.0	1.0	10/07/19 12:47	
1,2-Dichloropropane	ug/kg	ND	5.0	1.9	10/07/19 12:47	
1,3,5-Trimethylbenzene	ug/kg	ND	5.0	1.7	10/07/19 12:47	
1,3-Dichlorobenzene	ug/kg	ND	5.0	1.8	10/07/19 12:47	
1,3-Dichloropropane	ug/kg	ND	5.0	1.9	10/07/19 12:47	
1,4-Dichlorobenzene	ug/kg	ND	5.0	1.7	10/07/19 12:47	
2,2-Dichloropropane	ug/kg	ND	5.0	0.49	10/07/19 12:47	
2-Butanone (MEK)	ug/kg	ND	100	11.9	10/07/19 12:47	
2-Chlorotoluene	ug/kg	ND	5.0	1.5	10/07/19 12:47	
2-Hexanone	ug/kg	ND	50.0	5.2	10/07/19 12:47	
4-Chlorotoluene	ug/kg	ND	5.0	1.5	10/07/19 12:47	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	50.0	3.7	10/07/19 12:47	
Acetone	ug/kg	ND	100	9.4	10/07/19 12:47	
Benzene	ug/kg	ND	5.0	0.90	10/07/19 12:47	
Bromobenzene	ug/kg	ND	5.0	1.4	10/07/19 12:47	
Bromochloromethane	ug/kg	ND	5.0	1.2	10/07/19 12:47	
Bromodichloromethane	ug/kg	ND	5.0	0.98	10/07/19 12:47	
Bromoform	ug/kg	ND	5.0	2.4	10/07/19 12:47	v1
Bromomethane	ug/kg	ND	10.0	2.4	10/07/19 12:47	
Carbon tetrachloride	ug/kg	ND	5.0	0.96	10/07/19 12:47	
Chlorobenzene	ug/kg	ND	5.0	0.97	10/07/19 12:47	
Chloroethane	ug/kg	ND	10.0	2.1	10/07/19 12:47	v1
Chloroform	ug/kg	ND	5.0	1.1	10/07/19 12:47	
Chloromethane	ug/kg	ND	10.0	3.3	10/07/19 12:47	
cis-1,2-Dichloroethene	ug/kg	ND	5.0	0.87	10/07/19 12:47	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	2.3	10/07/19 12:47	
Dibromochloromethane	ug/kg	ND	5.0	2.5	10/07/19 12:47	

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QUALITY CONTROL DATA

Project: CTS of Asheville

Pace Project No.: 92447960

METHOD BLANK: 2698410

Matrix: Solid

Associated Lab Samples: 92447960001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dibromomethane	ug/kg	ND	5.0	1.5	10/07/19 12:47	
Dichlorodifluoromethane	ug/kg	ND	10.0	4.1	10/07/19 12:47	
Diisopropyl ether	ug/kg	ND	5.0	2.9	10/07/19 12:47	
Ethylbenzene	ug/kg	ND	5.0	1.1	10/07/19 12:47	
Hexachloro-1,3-butadiene	ug/kg	ND	5.0	2.5	10/07/19 12:47	
Isopropylbenzene (Cumene)	ug/kg	ND	5.0	1.4	10/07/19 12:47	
m&p-Xylene	ug/kg	ND	10.0	2.4	10/07/19 12:47	
Methyl-tert-butyl ether	ug/kg	ND	5.0	2.9	10/07/19 12:47	
Methylene Chloride	ug/kg	ND	20.0	5.9	10/07/19 12:47	
n-Butylbenzene	ug/kg	ND	5.0	2.8	10/07/19 12:47	
n-Propylbenzene	ug/kg	ND	5.0	1.7	10/07/19 12:47	
Naphthalene	ug/kg	ND	5.0	4.2	10/07/19 12:47	
o-Xylene	ug/kg	ND	5.0	1.2	10/07/19 12:47	
p-Isopropyltoluene	ug/kg	ND	5.0	2.4	10/07/19 12:47	
sec-Butylbenzene	ug/kg	ND	5.0	2.1	10/07/19 12:47	
Styrene	ug/kg	ND	5.0	1.5	10/07/19 12:47	
tert-Butylbenzene	ug/kg	ND	5.0	1.7	10/07/19 12:47	
Tetrachloroethene	ug/kg	ND	5.0	1.6	10/07/19 12:47	
Toluene	ug/kg	ND	5.0	1.6	10/07/19 12:47	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	0.98	10/07/19 12:47	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	0.88	10/07/19 12:47	
Trichloroethene	ug/kg	ND	5.0	1.3	10/07/19 12:47	
Trichlorofluoromethane	ug/kg	ND	5.0	1.2	10/07/19 12:47	
Vinyl acetate	ug/kg	ND	50.0	16.3	10/07/19 12:47	IK
Vinyl chloride	ug/kg	ND	10.0	1.9	10/07/19 12:47	
Xylene (Total)	ug/kg	ND	10.0	3.5	10/07/19 12:47	
1,2-Dichloroethane-d4 (S)	%	105	70-132		10/07/19 12:47	
4-Bromofluorobenzene (S)	%	102	70-130		10/07/19 12:47	
Toluene-d8 (S)	%	105	70-130		10/07/19 12:47	

LABORATORY CONTROL SAMPLE: 2698411

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	50	53.1	106	70-130	
1,1,1-Trichloroethane	ug/kg	50	49.6	99	70-130	
1,1,2,2-Tetrachloroethane	ug/kg	50	55.6	111	55-130	
1,1,2-Trichloroethane	ug/kg	50	50.8	102	70-130	
1,1-Dichloroethane	ug/kg	50	50.3	101	68-130	
1,1-Dichloroethene	ug/kg	50	51.2	102	70-130	
1,1-Dichloropropene	ug/kg	50	51.7	103	70-130	
1,2,3-Trichlorobenzene	ug/kg	50	53.5	107	70-130	
1,2,3-Trichloropropane	ug/kg	50	57.5	115	70-130	
1,2,4-Trichlorobenzene	ug/kg	50	51.5	103	70-130	
1,2,4-Trimethylbenzene	ug/kg	50	53.7	107	69-130	

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QUALITY CONTROL DATA

Project: CTS of Asheville

Pace Project No.: 92447960

LABORATORY CONTROL SAMPLE: 2698411

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromo-3-chloropropane	ug/kg	50	68.6	137	57-141	v1
1,2-Dibromoethane (EDB)	ug/kg	50	53.6	107	70-130	
1,2-Dichlorobenzene	ug/kg	50	50.9	102	70-130	
1,2-Dichloroethane	ug/kg	50	48.8	98	70-130	
1,2-Dichloropropane	ug/kg	50	50.1	100	70-130	
1,3,5-Trimethylbenzene	ug/kg	50	51.6	103	70-130	
1,3-Dichlorobenzene	ug/kg	50	50.8	102	70-130	
1,3-Dichloropropane	ug/kg	50	56.1	112	70-130	
1,4-Dichlorobenzene	ug/kg	50	49.9	100	70-130	
2,2-Dichloropropane	ug/kg	50	50.5	101	70-130	
2-Butanone (MEK)	ug/kg	100	107	107	60-130	
2-Chlorotoluene	ug/kg	50	50.7	101	70-130	
2-Hexanone	ug/kg	100	118	118	70-132	
4-Chlorotoluene	ug/kg	50	51.4	103	70-130	
4-Methyl-2-pentanone (MIBK)	ug/kg	100	108	108	69-130	
Acetone	ug/kg	100	112	112	49-148	
Benzene	ug/kg	50	50.2	100	70-130	
Bromobenzene	ug/kg	50	52.3	105	70-130	
Bromochloromethane	ug/kg	50	48.6	97	70-130	
Bromodichloromethane	ug/kg	50	52.4	105	70-130	
Bromoform	ug/kg	50	61.5	123	68-136	v1
Bromomethane	ug/kg	50	56.3	113	60-140	
Carbon tetrachloride	ug/kg	50	48.9	98	70-130	
Chlorobenzene	ug/kg	50	50.1	100	70-130	
Chloroethane	ug/kg	50	65.2	130	51-147	v1
Chloroform	ug/kg	50	49.3	99	70-130	
Chloromethane	ug/kg	50	53.2	106	48-130	
cis-1,2-Dichloroethene	ug/kg	50	48.8	98	70-130	
cis-1,3-Dichloropropene	ug/kg	50	53.4	107	70-130	
Dibromochloromethane	ug/kg	50	57.2	114	70-130	
Dibromomethane	ug/kg	50	49.2	98	70-130	
Dichlorodifluoromethane	ug/kg	50	55.9	112	49-130	
Diisopropyl ether	ug/kg	50	49.9	100	66-130	
Ethylbenzene	ug/kg	50	51.2	102	70-130	
Hexachloro-1,3-butadiene	ug/kg	50	53.5	107	70-130	
Isopropylbenzene (Cumene)	ug/kg	50	51.3	103	70-130	
m&p-Xylene	ug/kg	100	102	102	70-130	
Methyl-tert-butyl ether	ug/kg	50	51.7	103	70-130	
Methylene Chloride	ug/kg	50	44.7	89	50-137	
n-Butylbenzene	ug/kg	50	52.4	105	70-130	
n-Propylbenzene	ug/kg	50	53.1	106	70-130	
Naphthalene	ug/kg	50	55.6	111	70-131	
o-Xylene	ug/kg	50	50.9	102	70-130	
p-Isopropyltoluene	ug/kg	50	52.8	106	70-130	
sec-Butylbenzene	ug/kg	50	54.0	108	70-130	
Styrene	ug/kg	50	51.1	102	70-130	
tert-Butylbenzene	ug/kg	50	46.4	93	69-130	

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QUALITY CONTROL DATA

Project: CTS of Asheville

Pace Project No.: 92447960

LABORATORY CONTROL SAMPLE: 2698411

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tetrachloroethene	ug/kg	50	48.4	97	56-130	
Toluene	ug/kg	50	45.6	91	70-130	
trans-1,2-Dichloroethene	ug/kg	50	47.8	96	70-130	
trans-1,3-Dichloropropene	ug/kg	50	52.5	105	70-130	
Trichloroethene	ug/kg	50	49.5	99	70-141	
Trichlorofluoromethane	ug/kg	50	59.4	119	67-130	
Vinyl acetate	ug/kg	100	94.8	95	10-136 IK	
Vinyl chloride	ug/kg	50	53.9	108	67-130	
Xylene (Total)	ug/kg	150	153	102	70-130	
1,2-Dichloroethane-d4 (S)	%			115	70-132	
4-Bromofluorobenzene (S)	%			96	70-130	
Toluene-d8 (S)	%			96	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2698412 2698413

Parameter	Units	92447247035 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/kg	ND	23.7	23.7	24.6	24.2	104	102	52-133	2	30	
1,1,1-Trichloroethane	ug/kg	ND	23.7	23.7	26.7	24.1	113	102	49-137	10	30	
1,1,2,2-Tetrachloroethane	ug/kg	ND	23.7	23.7	24.9	24.1	105	102	39-150	3	30	
1,1,2-Trichloroethane	ug/kg	ND	23.7	23.7	23.6	22.9	100	97	48-140	3	30	
1,1-Dichloroethane	ug/kg	ND	23.7	23.7	27.4	24.8	116	105	46-135	10	30	
1,1-Dichloroethene	ug/kg	ND	23.7	23.7	27.2	26.8	115	113	38-149	1	30	
1,1-Dichloropropene	ug/kg	ND	23.7	23.7	26.1	23.4	110	99	41-140	11	30	
1,2,3-Trichlorobenzene	ug/kg	ND	23.7	23.7	23.0	22.4	97	95	10-158	3	30	
1,2,3-Trichloropropane	ug/kg	ND	23.7	23.7	27.1	25.9	114	109	33-157	5	30	
1,2,4-Trichlorobenzene	ug/kg	ND	23.7	23.7	23.4	23.1	99	98	10-155	1	30	
1,2,4-Trimethylbenzene	ug/kg	ND	23.7	23.7	27.9	26.4	118	111	24-154	6	30	
1,2-Dibromo-3-chloropropane	ug/kg	ND	23.7	23.7	25.3	24.0	107	101	33-158	5	30	v1
1,2-Dibromoethane (EDB)	ug/kg	ND	23.7	23.7	24.4	24.2	103	102	40-136	1	30	
1,2-Dichlorobenzene	ug/kg	ND	23.7	23.7	25.7	25.5	109	108	27-146	1	30	
1,2-Dichloroethane	ug/kg	ND	23.7	23.7	24.7	22.4	104	95	49-140	10	30	
1,2-Dichloropropane	ug/kg	ND	23.7	23.7	24.9	23.2	105	98	44-143	7	30	
1,3,5-Trimethylbenzene	ug/kg	ND	23.7	23.7	27.7	27.0	117	114	40-144	3	30	
1,3-Dichlorobenzene	ug/kg	ND	23.7	23.7	26.7	26.1	113	110	33-140	2	30	
1,3-Dichloropropane	ug/kg	ND	23.7	23.7	26.5	24.7	112	104	47-147	7	30	
1,4-Dichlorobenzene	ug/kg	ND	23.7	23.7	27.1	26.3	115	111	35-139	3	30	
2,2-Dichloropropane	ug/kg	ND	23.7	23.7	26.7	25.4	113	108	41-140	5	30	
2-Butanone (MEK)	ug/kg	ND	47.3	47.3	46.3J	40.2J	98	85	10-181		30	
2-Chlorotoluene	ug/kg	ND	23.7	23.7	28.6	27.0	121	114	38-147	6	30	
2-Hexanone	ug/kg	ND	47.3	47.3	47.2J	45.8J	100	97	18-169		30	
4-Chlorotoluene	ug/kg	ND	23.7	23.7	28.2	27.2	119	115	36-145	4	30	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	47.3	47.3	44.2J	45.2J	93	96	16-175		30	
Acetone	ug/kg	ND	47.3	47.3	51.2J	48.0J	108	101	10-200		30	

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QUALITY CONTROL DATA

Project: CTS of Asheville

Pace Project No.: 92447960

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2698412 2698413											
Parameter	Units	92447247035 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Benzene	ug/kg	ND	23.7	23.7	26.0	24.7	110	104	46-136	5	30
Bromobenzene	ug/kg	ND	23.7	23.7	27.8	26.8	117	113	38-149	3	30
Bromochloromethane	ug/kg	ND	23.7	23.7	25.4	24.2	107	102	44-142	5	30
Bromodichloromethane	ug/kg	ND	23.7	23.7	24.4	24.0	103	101	41-140	2	30
Bromoform	ug/kg	ND	23.7	23.7	23.9	23.1	101	97	34-145	3	30 v1
Bromomethane	ug/kg	ND	23.7	23.7	30.7	28.6	130	121	14-162	7	30
Carbon tetrachloride	ug/kg	ND	23.7	23.7	25.2	24.7	106	104	44-141	2	30
Chlorobenzene	ug/kg	ND	23.7	23.7	26.1	25.1	110	106	39-141	4	30
Chloroethane	ug/kg	ND	23.7	23.7	35.6	33.6	150	142	10-182	6	30 v1
Chloroform	ug/kg	ND	23.7	23.7	24.9	22.9	105	97	45-140	8	30
Chloromethane	ug/kg	ND	23.7	23.7	29.8	27.9	126	118	19-149	7	30 v1
cis-1,2-Dichloroethene	ug/kg	ND	23.7	23.7	26.2	24.5	111	104	38-150	7	30
cis-1,3-Dichloropropene	ug/kg	ND	23.7	23.7	24.7	23.5	104	99	30-144	5	30
Dibromochloromethane	ug/kg	ND	23.7	23.7	25.0	22.5	106	95	36-145	10	30
Dibromomethane	ug/kg	ND	23.7	23.7	24.1	23.2	102	98	41-145	4	30
Dichlorodifluoromethane	ug/kg	ND	23.7	23.7	32.4	29.8	137	126	16-146	9	30
Diisopropyl ether	ug/kg	ND	23.7	23.7	23.8	23.6	101	100	41-143	1	30
Ethylbenzene	ug/kg	ND	23.7	23.7	29.1	26.2	123	111	35-144	10	30
Hexachloro-1,3-butadiene	ug/kg	ND	23.7	23.7	24.8	25.0	105	106	10-160	1	30
Isopropylbenzene (Cumene)	ug/kg	ND	23.7	23.7	29.7	26.6	125	113	30-152	11	30
m&p-Xylene	ug/kg	ND	47.3	47.3	60.3	53.4	127	113	33-145	12	30
Methyl-tert-butyl ether	ug/kg	ND	23.7	23.7	22.7	21.7	96	92	49-140	4	30
Methylene Chloride	ug/kg	ND	23.7	23.7	25.6	23.3J	108	98	10-174		30
n-Butylbenzene	ug/kg	ND	23.7	23.7	27.8	27.7	118	117	10-160	1	30
n-Propylbenzene	ug/kg	ND	23.7	23.7	30.5	28.8	129	122	24-159	6	30
Naphthalene	ug/kg	ND	23.7	23.7	23.5	22.8	99	96	10-171	3	30
o-Xylene	ug/kg	ND	23.7	23.7	28.3	26.5	120	112	31-150	7	30
p-Isopropyltoluene	ug/kg	ND	23.7	23.7	28.7	27.6	121	117	21-154	4	30
sec-Butylbenzene	ug/kg	ND	23.7	23.7	29.8	28.9	126	122	19-159	3	30
Styrene	ug/kg	ND	23.7	23.7	27.6	25.2	117	106	15-152	9	30
tert-Butylbenzene	ug/kg	ND	23.7	23.7	26.1	25.4	110	107	31-141	3	30
Tetrachloroethene	ug/kg	ND	23.7	23.7	25.8	24.5	109	104	19-141	5	30
Toluene	ug/kg	ND	23.7	23.7	24.4	24.5	103	104	31-146	1	30
trans-1,2-Dichloroethene	ug/kg	ND	23.7	23.7	28.2	24.8	119	105	28-157	13	30
trans-1,3-Dichloropropene	ug/kg	ND	23.7	23.7	23.5	22.6	99	96	25-146	4	30
Trichloroethene	ug/kg	ND	23.7	23.7	24.9	23.8	105	101	34-149	5	30
Trichlorofluoromethane	ug/kg	ND	23.7	23.7	33.5	30.8	142	130	10-167	8	30
Vinyl acetate	ug/kg	ND	47.3	47.3	35.6J	33.7J	75	71	10-200		30 IK
Vinyl chloride	ug/kg	ND	23.7	23.7	30.2	28.4	127	120	36-155	6	30
Xylene (Total)	ug/kg	ND	71	71	88.6	80.0	125	113	29-148	10	30
1,2-Dichloroethane-d4 (S)	%						108	103	70-132		
4-Bromofluorobenzene (S)	%						103	96	70-130		
Toluene-d8 (S)	%						97	103	70-130		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CTS of Asheville

Pace Project No.: 92447960

QC Batch: 502304

Analysis Method: EPA 8260D

QC Batch Method: EPA 5035A

Analysis Description: 8260D MSV 5035A Volatile Organics

Associated Lab Samples: 92447960002

METHOD BLANK: 2700586

Matrix: Solid

Associated Lab Samples: 92447960002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	5.0	1.2	10/08/19 13:04	
1,1,1-Trichloroethane	ug/kg	ND	5.0	0.87	10/08/19 13:04	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.0	1.7	10/08/19 13:04	
1,1,2-Trichloroethane	ug/kg	ND	5.0	1.1	10/08/19 13:04	
1,1-Dichloroethane	ug/kg	ND	5.0	0.74	10/08/19 13:04	
1,1-Dichloroethene	ug/kg	ND	5.0	1.2	10/08/19 13:04	
1,1-Dichloropropene	ug/kg	ND	5.0	2.1	10/08/19 13:04	
1,2,3-Trichlorobenzene	ug/kg	ND	5.0	3.6	10/08/19 13:04	
1,2,3-Trichloropropane	ug/kg	ND	5.0	1.7	10/08/19 13:04	
1,2,4-Trichlorobenzene	ug/kg	ND	5.0	2.6	10/08/19 13:04	
1,2,4-Trimethylbenzene	ug/kg	3.1J	5.0	2.0	10/08/19 13:04	v1
1,2-Dibromo-3-chloropropane	ug/kg	ND	5.0	2.5	10/08/19 13:04	
1,2-Dibromoethane (EDB)	ug/kg	ND	5.0	1.1	10/08/19 13:04	
1,2-Dichlorobenzene	ug/kg	ND	5.0	1.8	10/08/19 13:04	
1,2-Dichloroethane	ug/kg	ND	5.0	1.0	10/08/19 13:04	
1,2-Dichloropropane	ug/kg	ND	5.0	1.9	10/08/19 13:04	
1,3,5-Trimethylbenzene	ug/kg	ND	5.0	1.7	10/08/19 13:04	
1,3-Dichlorobenzene	ug/kg	ND	5.0	1.8	10/08/19 13:04	
1,3-Dichloropropane	ug/kg	ND	5.0	1.9	10/08/19 13:04	
1,4-Dichlorobenzene	ug/kg	ND	5.0	1.7	10/08/19 13:04	
2,2-Dichloropropane	ug/kg	ND	5.0	0.49	10/08/19 13:04	
2-Butanone (MEK)	ug/kg	ND	100	11.9	10/08/19 13:04	
2-Chlorotoluene	ug/kg	ND	5.0	1.5	10/08/19 13:04	
2-Hexanone	ug/kg	ND	50.0	5.2	10/08/19 13:04	
4-Chlorotoluene	ug/kg	ND	5.0	1.5	10/08/19 13:04	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	50.0	3.7	10/08/19 13:04	
Acetone	ug/kg	ND	100	9.4	10/08/19 13:04	
Benzene	ug/kg	ND	5.0	0.90	10/08/19 13:04	
Bromobenzene	ug/kg	ND	5.0	1.4	10/08/19 13:04	
Bromochloromethane	ug/kg	ND	5.0	1.2	10/08/19 13:04	
Bromodichloromethane	ug/kg	ND	5.0	0.98	10/08/19 13:04	
Bromoform	ug/kg	ND	5.0	2.4	10/08/19 13:04	
Bromomethane	ug/kg	ND	10.0	2.4	10/08/19 13:04	
Carbon tetrachloride	ug/kg	ND	5.0	0.96	10/08/19 13:04	
Chlorobenzene	ug/kg	ND	5.0	0.97	10/08/19 13:04	
Chloroethane	ug/kg	ND	10.0	2.1	10/08/19 13:04	v1
Chloroform	ug/kg	ND	5.0	1.1	10/08/19 13:04	
Chloromethane	ug/kg	ND	10.0	3.3	10/08/19 13:04	
cis-1,2-Dichloroethene	ug/kg	ND	5.0	0.87	10/08/19 13:04	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	2.3	10/08/19 13:04	
Dibromochloromethane	ug/kg	ND	5.0	2.5	10/08/19 13:04	

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QUALITY CONTROL DATA

Project: CTS of Asheville

Pace Project No.: 92447960

METHOD BLANK: 2700586

Matrix: Solid

Associated Lab Samples: 92447960002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dibromomethane	ug/kg	ND	5.0	1.5	10/08/19 13:04	
Dichlorodifluoromethane	ug/kg	ND	10.0	4.1	10/08/19 13:04	
Diisopropyl ether	ug/kg	ND	5.0	2.9	10/08/19 13:04	
Ethylbenzene	ug/kg	ND	5.0	1.1	10/08/19 13:04	
Hexachloro-1,3-butadiene	ug/kg	ND	5.0	2.5	10/08/19 13:04	
Isopropylbenzene (Cumene)	ug/kg	ND	5.0	1.4	10/08/19 13:04	
m&p-Xylene	ug/kg	ND	10.0	2.4	10/08/19 13:04	
Methyl-tert-butyl ether	ug/kg	ND	5.0	2.9	10/08/19 13:04	
Methylene Chloride	ug/kg	ND	20.0	5.9	10/08/19 13:04	
n-Butylbenzene	ug/kg	ND	5.0	2.8	10/08/19 13:04	
n-Propylbenzene	ug/kg	ND	5.0	1.7	10/08/19 13:04	
Naphthalene	ug/kg	ND	5.0	4.2	10/08/19 13:04	
o-Xylene	ug/kg	ND	5.0	1.2	10/08/19 13:04	
p-Isopropyltoluene	ug/kg	ND	5.0	2.4	10/08/19 13:04	
sec-Butylbenzene	ug/kg	ND	5.0	2.1	10/08/19 13:04	
Styrene	ug/kg	ND	5.0	1.5	10/08/19 13:04	
tert-Butylbenzene	ug/kg	ND	5.0	1.7	10/08/19 13:04	
Tetrachloroethene	ug/kg	ND	5.0	1.6	10/08/19 13:04	
Toluene	ug/kg	ND	5.0	1.6	10/08/19 13:04	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	0.98	10/08/19 13:04	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	0.88	10/08/19 13:04	
Trichloroethene	ug/kg	ND	5.0	1.3	10/08/19 13:04	
Trichlorofluoromethane	ug/kg	ND	5.0	1.2	10/08/19 13:04	
Vinyl acetate	ug/kg	ND	50.0	16.3	10/08/19 13:04	IK
Vinyl chloride	ug/kg	ND	10.0	1.9	10/08/19 13:04	
Xylene (Total)	ug/kg	ND	10.0	3.5	10/08/19 13:04	
1,2-Dichloroethane-d4 (S)	%	95	70-132		10/08/19 13:04	
4-Bromofluorobenzene (S)	%	103	70-130		10/08/19 13:04	
Toluene-d8 (S)	%	106	70-130		10/08/19 13:04	

LABORATORY CONTROL SAMPLE: 2700587

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	50	52.8	106	70-130	
1,1,1-Trichloroethane	ug/kg	50	47.9	96	70-130	
1,1,2,2-Tetrachloroethane	ug/kg	50	54.7	109	55-130	
1,1,2-Trichloroethane	ug/kg	50	52.1	104	70-130	
1,1-Dichloroethane	ug/kg	50	49.9	100	68-130	
1,1-Dichloroethene	ug/kg	50	51.4	103	70-130	
1,1-Dichloropropene	ug/kg	50	51.7	103	70-130	
1,2,3-Trichlorobenzene	ug/kg	50	55.9	112	70-130	
1,2,3-Trichloropropane	ug/kg	50	57.8	116	70-130	
1,2,4-Trichlorobenzene	ug/kg	50	53.2	106	70-130	
1,2,4-Trimethylbenzene	ug/kg	50	58.2	116	69-130 v1	

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QUALITY CONTROL DATA

Project: CTS of Asheville

Pace Project No.: 92447960

LABORATORY CONTROL SAMPLE: 2700587

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromo-3-chloropropane	ug/kg	50	64.5	129	57-141	
1,2-Dibromoethane (EDB)	ug/kg	50	55.8	112	70-130	
1,2-Dichlorobenzene	ug/kg	50	53.1	106	70-130	
1,2-Dichloroethane	ug/kg	50	47.1	94	70-130	
1,2-Dichloropropane	ug/kg	50	51.6	103	70-130	
1,3,5-Trimethylbenzene	ug/kg	50	54.1	108	70-130	
1,3-Dichlorobenzene	ug/kg	50	52.3	105	70-130	
1,3-Dichloropropane	ug/kg	50	58.0	116	70-130	
1,4-Dichlorobenzene	ug/kg	50	52.6	105	70-130	
2,2-Dichloropropane	ug/kg	50	48.7	97	70-130	
2-Butanone (MEK)	ug/kg	100	115	115	60-130	
2-Chlorotoluene	ug/kg	50	51.7	103	70-130	
2-Hexanone	ug/kg	100	121	121	70-132	
4-Chlorotoluene	ug/kg	50	52.9	106	70-130	
4-Methyl-2-pentanone (MIBK)	ug/kg	100	110	110	69-130	
Acetone	ug/kg	100	115	115	49-148	
Benzene	ug/kg	50	51.4	103	70-130	
Bromobenzene	ug/kg	50	53.6	107	70-130	
Bromochloromethane	ug/kg	50	50.7	101	70-130	
Bromodichloromethane	ug/kg	50	49.8	100	70-130	
Bromoform	ug/kg	50	54.4	109	68-136	
Bromomethane	ug/kg	50	50.7	101	60-140	
Carbon tetrachloride	ug/kg	50	46.1	92	70-130	
Chlorobenzene	ug/kg	50	50.5	101	70-130	
Chloroethane	ug/kg	50	58.8	118	51-147 v1	
Chloroform	ug/kg	50	47.7	95	70-130	
Chloromethane	ug/kg	50	51.7	103	48-130	
cis-1,2-Dichloroethene	ug/kg	50	48.6	97	70-130	
cis-1,3-Dichloropropene	ug/kg	50	53.9	108	70-130	
Dibromochloromethane	ug/kg	50	54.5	109	70-130	
Dibromomethane	ug/kg	50	50.2	100	70-130	
Dichlorodifluoromethane	ug/kg	50	49.7	99	49-130	
Diisopropyl ether	ug/kg	50	52.8	106	66-130	
Ethylbenzene	ug/kg	50	52.3	105	70-130	
Hexachloro-1,3-butadiene	ug/kg	50	54.2	108	70-130	
Isopropylbenzene (Cumene)	ug/kg	50	52.9	106	70-130	
m&p-Xylene	ug/kg	100	106	106	70-130	
Methyl-tert-butyl ether	ug/kg	50	53.8	108	70-130	
Methylene Chloride	ug/kg	50	44.4	89	50-137	
n-Butylbenzene	ug/kg	50	55.5	111	70-130	
n-Propylbenzene	ug/kg	50	55.2	110	70-130	
Naphthalene	ug/kg	50	60.9	122	70-131	
o-Xylene	ug/kg	50	53.2	106	70-130	
p-Isopropyltoluene	ug/kg	50	55.3	111	70-130	
sec-Butylbenzene	ug/kg	50	56.1	112	70-130	
Styrene	ug/kg	50	52.6	105	70-130	
tert-Butylbenzene	ug/kg	50	48.3	97	69-130	

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QUALITY CONTROL DATA

Project: CTS of Asheville

Pace Project No.: 92447960

LABORATORY CONTROL SAMPLE: 2700587

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tetrachloroethene	ug/kg	50	50.1	100	56-130	
Toluene	ug/kg	50	46.8	94	70-130	
trans-1,2-Dichloroethene	ug/kg	50	49.0	98	70-130	
trans-1,3-Dichloropropene	ug/kg	50	52.2	104	70-130	
Trichloroethene	ug/kg	50	51.7	103	70-141	
Trichlorofluoromethane	ug/kg	50	52.1	104	67-130	
Vinyl acetate	ug/kg	100	91.4	91	10-136 IK	
Vinyl chloride	ug/kg	50	52.6	105	67-130	
Xylene (Total)	ug/kg	150	160	106	70-130	
1,2-Dichloroethane-d4 (S)	%			107	70-132	
4-Bromofluorobenzene (S)	%			98	70-130	
Toluene-d8 (S)	%			95	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2700588 2700589

Parameter	Units	92447960002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/kg	ND	811	811	748	757	92	93	52-133	1	30	
1,1,1-Trichloroethane	ug/kg	ND	811	811	830	829	102	102	49-137	0	30	
1,1,2,2-Tetrachloroethane	ug/kg	ND	811	811	872	898	108	111	39-150	3	30	
1,1,2-Trichloroethane	ug/kg	ND	811	811	846	867	104	107	48-140	2	30	
1,1-Dichloroethane	ug/kg	ND	811	811	854	886	105	109	46-135	4	30	
1,1-Dichloropropene	ug/kg	ND	811	811	418	453	52	56	38-149	8	30	
1,2,3-Trichlorobenzene	ug/kg	ND	811	811	875	904	108	112	10-158	3	30	
1,2,3-Trichloropropane	ug/kg	ND	811	811	896	909	110	112	33-157	1	30	
1,2,4-Trichlorobenzene	ug/kg	ND	811	811	918	911	113	112	10-155	1	30	
1,2,4-Trimethylbenzene	ug/kg	ND	811	811	930	929	106	106	24-154	0	30	v1
1,2-Dibromo-3-chloropropane	ug/kg	ND	811	811	806	824	99	102	33-158	2	30	
1,2-Dibromoethane (EDB)	ug/kg	ND	811	811	822	867	101	107	40-136	5	30	
1,2-Dichlorobenzene	ug/kg	ND	811	811	873	892	108	110	27-146	2	30	
1,2-Dichloroethane	ug/kg	ND	811	811	838	864	103	107	49-140	3	30	
1,2-Dichloropropane	ug/kg	ND	811	811	853	895	105	110	44-143	5	30	
1,3,5-Trimethylbenzene	ug/kg	ND	811	811	841	867	104	107	40-144	3	30	
1,3-Dichlorobenzene	ug/kg	ND	811	811	844	861	104	106	33-140	2	30	
1,3-Dichloropropane	ug/kg	ND	811	811	908	907	112	112	47-147	0	30	
1,4-Dichlorobenzene	ug/kg	ND	811	811	844	891	104	110	35-139	5	30	
2,2-Dichloropropane	ug/kg	ND	811	811	838	856	103	106	41-140	2	30	
2-Butanone (MEK)	ug/kg	ND	1620	1620	1740J	1790J	107	111	10-181		30	
2-Chlorotoluene	ug/kg	ND	811	811	834	878	103	108	38-147	5	30	
2-Hexanone	ug/kg	ND	1620	1620	1470J	1520J	91	93	18-169		30	
4-Chlorotoluene	ug/kg	ND	811	811	852	885	105	109	36-145	4	30	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	1620	1620	1700J	1690J	105	104	16-175		30	
Acetone	ug/kg	ND	1620	1620	1190J	1420J	73	88	10-200		30	

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QUALITY CONTROL DATA

Project: CTS of Asheville

Pace Project No.: 92447960

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2700588 2700589											
Parameter	Units	92447960002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Benzene	ug/kg	ND	811	811	869	900	107	111	46-136	3	30
Bromobenzene	ug/kg	ND	811	811	851	899	105	111	38-149	5	30
Bromochloromethane	ug/kg	ND	811	811	869	881	107	109	44-142	1	30
Bromodichloromethane	ug/kg	ND	811	811	768	787	95	97	41-140	2	30
Bromoform	ug/kg	ND	811	811	672	667	83	82	34-145	1	30
Bromomethane	ug/kg	ND	811	811	842	870	104	107	14-162	3	30
Carbon tetrachloride	ug/kg	ND	811	811	715	732	88	90	44-141	2	30
Chlorobenzene	ug/kg	ND	811	811	814	854	100	105	39-141	5	30
Chloroethane	ug/kg	ND	811	811	523	554	64	68	10-182	6	30 v1
Chloroform	ug/kg	ND	811	811	842	867	104	107	45-140	3	30
Chloromethane	ug/kg	ND	811	811	952	934	117	115	19-149	2	30
cis-1,2-Dichloroethene	ug/kg	ND	811	811	885	879	109	108	38-150	1	30
cis-1,3-Dichloropropene	ug/kg	ND	811	811	840	857	104	106	30-144	2	30
Dibromochloromethane	ug/kg	ND	811	811	720	721	89	89	36-145	0	30
Dibromomethane	ug/kg	ND	811	811	820	842	101	104	41-145	3	30
Dichlorodifluoromethane	ug/kg	ND	811	811	863	896	106	110	16-146	4	30
Diisopropyl ether	ug/kg	ND	811	811	789	811	97	100	41-143	3	30
Ethylbenzene	ug/kg	ND	811	811	861	886	106	109	35-144	3	30
Hexachloro-1,3-butadiene	ug/kg	ND	811	811	840	897	104	111	10-160	7	30
Isopropylbenzene (Cumene)	ug/kg	ND	811	811	850	889	105	110	30-152	4	30
m&p-Xylene	ug/kg	ND	1620	1620	1770	1830	104	109	33-145	4	30
Methyl-tert-butyl ether	ug/kg	ND	811	811	852	786	105	97	49-140	8	30
Methylene Chloride	ug/kg	ND	811	811	847	856	105	106	10-174	1	30
n-Butylbenzene	ug/kg	ND	811	811	880	911	109	112	10-160	3	30
n-Propylbenzene	ug/kg	ND	811	811	868	903	107	111	24-159	4	30
Naphthalene	ug/kg	ND	811	811	948	990	107	112	10-171	4	30
o-Xylene	ug/kg	48.5J	811	811	895	927	104	108	31-150	3	30
p-Isopropyltoluene	ug/kg	ND	811	811	876	916	108	113	21-154	5	30
sec-Butylbenzene	ug/kg	ND	811	811	889	929	110	115	19-159	4	30
Styrene	ug/kg	ND	811	811	855	874	105	108	15-152	2	30
tert-Butylbenzene	ug/kg	ND	811	811	760	793	94	98	31-141	4	30
Tetrachloroethene	ug/kg	ND	811	811	778	792	96	98	19-141	2	30
Toluene	ug/kg	ND	811	811	804	849	93	98	31-146	5	30
trans-1,2-Dichloroethene	ug/kg	ND	811	811	830	912	102	112	28-157	9	30
trans-1,3-Dichloropropene	ug/kg	ND	811	811	803	813	99	100	25-146	1	30
Trichloroethene	ug/kg	1700	811	811	2820	2620	138	113	34-149	7	30
Trichlorofluoromethane	ug/kg	ND	811	811	392	391	48	48	10-167	0	30
Vinyl acetate	ug/kg	ND	1620	1620	1900J	1890J	117	116	10-200		30 IK
Vinyl chloride	ug/kg	ND	811	811	898	932	111	115	36-155	4	30
Xylene (Total)	ug/kg	ND	2430	2430	2660	2760	109	113	29-148	4	30
1,2-Dichloroethane-d4 (S)	%						115	113	70-132		
4-Bromofluorobenzene (S)	%						99	100	70-130		
Toluene-d8 (S)	%						100	99	70-130		

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QUALITY CONTROL DATA

Project: CTS of Asheville

Pace Project No.: 92447960

QC Batch: 501719

Analysis Method: EPA 8270E

QC Batch Method: EPA 3546

Analysis Description: 8270E Solid MSSV Microwave

Associated Lab Samples: 92447960001, 92447960002

METHOD BLANK: 2698025

Matrix: Solid

Associated Lab Samples: 92447960001, 92447960002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	ND	326	74.6	10/07/19 11:07	
1,2-Dichlorobenzene	ug/kg	ND	326	70.5	10/07/19 11:07	
1,3-Dichlorobenzene	ug/kg	ND	326	73.3	10/07/19 11:07	
1,4-Dichlorobenzene	ug/kg	ND	326	71.6	10/07/19 11:07	
1-Methylnaphthalene	ug/kg	ND	326	86.7	10/07/19 11:07	
2,2'-Oxybis(1-chloropropane)	ug/kg	ND	326	90.5	10/07/19 11:07	
2,4,5-Trichlorophenol	ug/kg	ND	326	84.6	10/07/19 11:07	
2,4,6-Trichlorophenol	ug/kg	ND	326	81.8	10/07/19 11:07	
2,4-Dichlorophenol	ug/kg	ND	326	108	10/07/19 11:07	
2,4-Dimethylphenol	ug/kg	ND	326	81.1	10/07/19 11:07	
2,4-Dinitrophenol	ug/kg	ND	1630	1040	10/07/19 11:07	
2,4-Dinitrotoluene	ug/kg	ND	326	86.2	10/07/19 11:07	
2,6-Dinitrotoluene	ug/kg	ND	326	85.2	10/07/19 11:07	
2-Chloronaphthalene	ug/kg	ND	326	72.5	10/07/19 11:07	
2-Chlorophenol	ug/kg	ND	326	75.8	10/07/19 11:07	
2-Methylnaphthalene	ug/kg	ND	326	82.9	10/07/19 11:07	
2-Methylphenol(o-Cresol)	ug/kg	ND	326	72.1	10/07/19 11:07	
2-Nitroaniline	ug/kg	ND	1630	164	10/07/19 11:07	
2-Nitrophenol	ug/kg	ND	326	101	10/07/19 11:07	
3&4-Methylphenol(m&p Cresol)	ug/kg	ND	326	81.9	10/07/19 11:07	
3,3'-Dichlorobenzidine	ug/kg	ND	1630	227	10/07/19 11:07	
3-Nitroaniline	ug/kg	ND	1630	173	10/07/19 11:07	
4,6-Dinitro-2-methylphenol	ug/kg	ND	651	525	10/07/19 11:07	
4-Bromophenylphenyl ether	ug/kg	ND	326	85.5	10/07/19 11:07	
4-Chloro-3-methylphenol	ug/kg	ND	651	198	10/07/19 11:07	
4-Chloroaniline	ug/kg	ND	1630	199	10/07/19 11:07	
4-Chlorophenylphenyl ether	ug/kg	ND	326	84.6	10/07/19 11:07	
4-Nitroaniline	ug/kg	ND	651	161	10/07/19 11:07	
4-Nitrophenol	ug/kg	ND	1630	519	10/07/19 11:07	
Acenaphthene	ug/kg	ND	326	83.8	10/07/19 11:07	
Acenaphthylene	ug/kg	ND	326	77.1	10/07/19 11:07	
Aniline	ug/kg	ND	326	73.1	10/07/19 11:07	
Anthracene	ug/kg	ND	326	84.5	10/07/19 11:07	
Benzo(a)anthracene	ug/kg	ND	326	104	10/07/19 11:07	
Benzo(a)pyrene	ug/kg	ND	326	141	10/07/19 11:07	
Benzo(b)fluoranthene	ug/kg	ND	326	131	10/07/19 11:07	
Benzo(g,h,i)perylene	ug/kg	ND	326	127	10/07/19 11:07	
Benzo(k)fluoranthene	ug/kg	ND	326	137	10/07/19 11:07	
Benzoic Acid	ug/kg	ND	1630	351	10/07/19 11:07	v2
Benzyl alcohol	ug/kg	ND	651	173	10/07/19 11:07	
bis(2-Chloroethoxy)methane	ug/kg	ND	326	86.9	10/07/19 11:07	

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QUALITY CONTROL DATA

Project: CTS of Asheville

Pace Project No.: 92447960

METHOD BLANK: 2698025

Matrix: Solid

Associated Lab Samples: 92447960001, 92447960002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
bis(2-Chloroethyl) ether	ug/kg	ND	326	69.2	10/07/19 11:07	
bis(2-Ethylhexyl)phthalate	ug/kg	ND	326	107	10/07/19 11:07	
Butylbenzylphthalate	ug/kg	ND	326	86.7	10/07/19 11:07	
Chrysene	ug/kg	ND	326	94.5	10/07/19 11:07	
Di-n-butylphthalate	ug/kg	ND	326	80.3	10/07/19 11:07	
Di-n-octylphthalate	ug/kg	ND	326	186	10/07/19 11:07	
Dibenz(a,h)anthracene	ug/kg	ND	326	130	10/07/19 11:07	
Dibenzofuran	ug/kg	ND	326	81.4	10/07/19 11:07	
Diethylphthalate	ug/kg	ND	326	70.7	10/07/19 11:07	
Dimethylphthalate	ug/kg	ND	326	73.6	10/07/19 11:07	
Fluoranthene	ug/kg	ND	326	98.4	10/07/19 11:07	
Fluorene	ug/kg	ND	326	87.1	10/07/19 11:07	
Hexachloro-1,3-butadiene	ug/kg	ND	326	79.1	10/07/19 11:07	
Hexachlorobenzene	ug/kg	ND	326	82.7	10/07/19 11:07	
Hexachlorocyclopentadiene	ug/kg	ND	326	130	10/07/19 11:07	
Hexachloroethane	ug/kg	ND	326	74.2	10/07/19 11:07	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	326	149	10/07/19 11:07	
Isophorone	ug/kg	ND	326	70.8	10/07/19 11:07	
N-Nitroso-di-n-propylamine	ug/kg	ND	326	91.2	10/07/19 11:07	v2
N-Nitrosodimethylamine	ug/kg	ND	326	91.6	10/07/19 11:07	
N-Nitrosodiphenylamine	ug/kg	ND	326	83.1	10/07/19 11:07	
Naphthalene	ug/kg	ND	326	78.0	10/07/19 11:07	
Nitrobenzene	ug/kg	ND	326	77.8	10/07/19 11:07	
Pentachlorophenol	ug/kg	ND	1630	149	10/07/19 11:07	
Phenanthrene	ug/kg	ND	326	82.0	10/07/19 11:07	
Phenol	ug/kg	ND	326	77.8	10/07/19 11:07	
Pyrene	ug/kg	ND	326	89.6	10/07/19 11:07	
Pyridine	ug/kg	ND	326	82.4	10/07/19 11:07	
2,4,6-Tribromophenol (S)	%	52	27-110		10/07/19 11:07	
2-Fluorobiphenyl (S)	%	53	30-110		10/07/19 11:07	
2-Fluorophenol (S)	%	51	13-110		10/07/19 11:07	
Nitrobenzene-d5 (S)	%	45	23-110		10/07/19 11:07	
Phenol-d6 (S)	%	51	22-110		10/07/19 11:07	
Terphenyl-d14 (S)	%	64	28-110		10/07/19 11:07	

LABORATORY CONTROL SAMPLE: 2698026

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/kg	1640	1100	67	52-130	
1,2-Dichlorobenzene	ug/kg	1640	1130	69	51-130	
1,3-Dichlorobenzene	ug/kg	1640	1110	68	50-130	
1,4-Dichlorobenzene	ug/kg	1640	1100	67	49-130	
1-Methylnaphthalene	ug/kg	1640	1200	73	55-130	
2,2'-Oxybis(1-chloropropane)	ug/kg	1640	1210	74	30-130	

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QUALITY CONTROL DATA

Project: CTS of Asheville

Pace Project No.: 92447960

LABORATORY CONTROL SAMPLE: 2698026

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4,5-Trichlorophenol	ug/kg	1640	1120	68	55-130	
2,4,6-Trichlorophenol	ug/kg	1640	1170	71	57-130	
2,4-Dichlorophenol	ug/kg	1640	1120	69	56-130	
2,4-Dimethylphenol	ug/kg	1640	1130	69	51-130	
2,4-Dinitrophenol	ug/kg	8200	5800	71	27-133	
2,4-Dinitrotoluene	ug/kg	1640	1030	63	61-130	
2,6-Dinitrotoluene	ug/kg	1640	1130	69	60-130	
2-Chloronaphthalene	ug/kg	1640	1140	69	52-130	
2-Chlorophenol	ug/kg	1640	1190	73	54-130	
2-Methylnaphthalene	ug/kg	1640	1250	76	54-130	
2-Methylphenol(o-Cresol)	ug/kg	1640	1170	71	51-130	
2-Nitroaniline	ug/kg	3280	2160	66	51-130	
2-Nitrophenol	ug/kg	1640	1240	76	49-130	
3&4-Methylphenol(m&p Cresol)	ug/kg	1640	1180	72	11-163	
3,3'-Dichlorobenzidine	ug/kg	3280	2210	68	10-132	
3-Nitroaniline	ug/kg	3280	2250	69	55-130	
4,6-Dinitro-2-methylphenol	ug/kg	3280	2800	85	47-142	
4-Bromophenylphenyl ether	ug/kg	1640	1350	82	59-130	
4-Chloro-3-methylphenol	ug/kg	3280	2100	64	55-130	
4-Chloroaniline	ug/kg	3280	2450	75	54-130	
4-Chlorophenylphenyl ether	ug/kg	1640	1110	68	58-130	
4-Nitroaniline	ug/kg	3280	2230	68	54-130	
4-Nitrophenol	ug/kg	8200	3770	46	48-130	L2
Acenaphthene	ug/kg	1640	1220	74	60-130	
Acenaphthylene	ug/kg	1640	1260	77	60-130	
Aniline	ug/kg	1640	1080	66	43-130	
Anthracene	ug/kg	1640	1380	84	63-130	
Benzo(a)anthracene	ug/kg	1640	1400	85	59-130	
Benzo(a)pyrene	ug/kg	1640	1340	82	57-130	
Benzo(b)fluoranthene	ug/kg	1640	1290	79	54-130	
Benzo(g,h,i)perylene	ug/kg	1640	1300	80	59-130	
Benzo(k)fluoranthene	ug/kg	1640	1380	84	54-130	
Benzoic Acid	ug/kg	8200	4280	52	19-130	v2
Benzyl alcohol	ug/kg	3280	2160	66	50-130	
bis(2-Chloroethoxy)methane	ug/kg	1640	1250	76	54-130	
bis(2-Chloroethyl) ether	ug/kg	1640	1270	77	48-130	
bis(2-Ethylhexyl)phthalate	ug/kg	1640	1460	89	45-134	
Butylbenzylphthalate	ug/kg	1640	1450	89	46-138	
Chrysene	ug/kg	1640	1450	89	58-130	
Di-n-butylphthalate	ug/kg	1640	1270	78	60-130	
Di-n-octylphthalate	ug/kg	1640	1420	87	53-130	
Dibenz(a,h)anthracene	ug/kg	1640	1310	80	59-130	
Dibenzofuran	ug/kg	1640	1130	69	60-130	
Diethylphthalate	ug/kg	1640	1060	64	60-130	
Dimethylphthalate	ug/kg	1640	1170	72	60-130	
Fluoranthene	ug/kg	1640	1260	77	65-130	
Fluorene	ug/kg	1640	1110	68	63-130	

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QUALITY CONTROL DATA

Project: CTS of Asheville

Pace Project No.: 92447960

LABORATORY CONTROL SAMPLE: 2698026

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Hexachloro-1,3-butadiene	ug/kg	1640	993	61	46-130	
Hexachlorobenzene	ug/kg	1640	1200	73	58-130	
Hexachlorocyclopentadiene	ug/kg	1640	1050	64	23-130	
Hexachloroethane	ug/kg	1640	1040	63	47-130	
Indeno(1,2,3-cd)pyrene	ug/kg	1640	1250	76	60-130	
Isophorone	ug/kg	1640	1010	61	49-130	
N-Nitroso-di-n-propylamine	ug/kg	1640	1120	68	47-130 v2	
N-Nitrosodimethylamine	ug/kg	1640	1240	76	45-130	
N-Nitrosodiphenylamine	ug/kg	1640	1460	89	59-130	
Naphthalene	ug/kg	1640	1270	78	55-130	
Nitrobenzene	ug/kg	1640	1010	62	49-130	
Pentachlorophenol	ug/kg	3280	2320	71	10-132	
Phenanthrene	ug/kg	1640	1370	84	62-130	
Phenol	ug/kg	1640	1190	73	46-130	
Pyrene	ug/kg	1640	1530	94	53-130	
Pyridine	ug/kg	1640	1110	68	37-130	
2,4,6-Tribromophenol (S)	%			81	27-110	
2-Fluorobiphenyl (S)	%			71	30-110	
2-Fluorophenol (S)	%			72	13-110	
Nitrobenzene-d5 (S)	%			64	23-110	
Phenol-d6 (S)	%			69	22-110	
Terphenyl-d14 (S)	%			88	28-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2698027 2698028

Parameter	Units	92447960001 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	1970	1870	1000	890	51	48	18-130	12	30	
1,2-Dichlorobenzene	ug/kg	ND	1970	1870	1030	928	52	50	14-130	10	30	
1,3-Dichlorobenzene	ug/kg	ND	1970	1870	1020	923	52	49	12-130	10	30	
1,4-Dichlorobenzene	ug/kg	ND	1970	1870	1010	910	51	49	10-130	10	30	
1-Methylnaphthalene	ug/kg	ND	1970	1870	1090	960	56	51	12-130	13	30	
2,2'-Oxybis(1-chloropropane)	ug/kg	ND	1970	1870	1120	996	57	53	10-130	11	30	
2,4,5-Trichlorophenol	ug/kg	ND	1970	1870	983	878	50	47	13-130	11	30	
2,4,6-Trichlorophenol	ug/kg	ND	1970	1870	1050	954	54	51	17-130	10	30	
2,4-Dichlorophenol	ug/kg	ND	1970	1870	1060	927	54	50	10-130	13	30	
2,4-Dimethylphenol	ug/kg	ND	1970	1870	994	868	50	47	10-130	14	30	
2,4-Dinitrophenol	ug/kg	ND	9840	9330	5250	4690	53	50	10-130	11	30	
2,4-Dinitrotoluene	ug/kg	ND	1970	1870	954	835	48	45	24-130	13	30	
2,6-Dinitrotoluene	ug/kg	ND	1970	1870	1020	917	52	49	23-130	11	30	
2-Chloronaphthalene	ug/kg	ND	1970	1870	1020	914	52	49	19-130	11	30	
2-Chlorophenol	ug/kg	ND	1970	1870	1080	968	55	52	10-130	11	30	
2-Methylnaphthalene	ug/kg	ND	1970	1870	1140	1000	58	54	18-130	13	30	
2-Methylphenol(o-Cresol)	ug/kg	ND	1970	1870	1030	888	52	48	10-130	15	30	

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QUALITY CONTROL DATA

Project: CTS of Asheville

Pace Project No.: 92447960

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:			2698027	2698028									
Parameter	Units	92447960001	MS	MSD	MS	MSD	MS	MSD	% Rec	Limits	RPD	Max	Qual
		Result	Spike	Spike									
2-Nitroaniline	ug/kg	ND	3940	3740	1940J	1730J	49	46	17-130			30	
2-Nitrophenol	ug/kg	ND	1970	1870	1140	1000	58	54	10-130	12		30	
3&4-Methylphenol(m&p Cresol)	ug/kg	ND	1970	1870	1060	924	54	50	10-130	13		30	
3,3'-Dichlorobenzidine	ug/kg	ND	3940	3740	1950	1780J	50	48	10-130			30	
3-Nitroaniline	ug/kg	ND	3940	3740	2110	1860	53	50	24-130	12		30	
4,6-Dinitro-2-methylphenol	ug/kg	ND	3940	3740	2550	2250	65	60	10-152	12		30	
4-Bromophenylphenyl ether	ug/kg	ND	1970	1870	1200	1070	61	58	29-130	11		30	
4-Chloro-3-methylphenol	ug/kg	ND	3940	3740	1920	1680	49	45	17-130	13		30	
4-Chloroaniline	ug/kg	ND	3940	3740	2230	1970	57	53	14-130	13		30	
4-Chlorophenylphenyl ether	ug/kg	ND	1970	1870	990	906	50	49	25-130	9		30	
4-Nitroaniline	ug/kg	ND	3940	3740	2020	1810	51	49	22-130	11		30	
4-Nitrophenol	ug/kg	ND	9840	9330	3350	3000	34	32	10-130	11		30	
Acenaphthene	ug/kg	ND	1970	1870	1080	982	55	53	20-130	10		30	
Acenaphthylene	ug/kg	ND	1970	1870	1120	999	57	54	25-130	12		30	
Aniline	ug/kg	ND	1970	1870	402	310J	20	17	10-130			30	
Anthracene	ug/kg	ND	1970	1870	1240	1120	63	60	29-130	11		30	
Benzo(a)anthracene	ug/kg	ND	1970	1870	1240	1110	63	59	19-130	11		30	
Benzo(a)pyrene	ug/kg	ND	1970	1870	1190	1060	61	57	12-130	12		30	
Benzo(b)fluoranthene	ug/kg	ND	1970	1870	1170	1020	59	55	14-130	13		30	
Benzo(g,h,i)perylene	ug/kg	ND	1970	1870	1180	1100	60	59	10-130	7		30	
Benzo(k)fluoranthene	ug/kg	ND	1970	1870	1260	1120	64	60	14-130	12		30	
Benzoic Acid	ug/kg	ND	9840	9330	2090	1620J	21	17	10-130			30	v2
Benzyl alcohol	ug/kg	ND	3940	3740	1940	1690	49	45	13-130	14		30	
bis(2-Chloroethoxy)methane	ug/kg	ND	1970	1870	1130	993	57	53	16-130	13		30	
bis(2-Chloroethyl) ether	ug/kg	ND	1970	1870	1160	1010	59	54	11-130	14		30	
bis(2-Ethylhexyl)phthalate	ug/kg	ND	1970	1870	1260	1120	64	60	21-130	12		30	
Butylbenzylphthalate	ug/kg	ND	1970	1870	1290	1110	65	60	23-130	15		30	
Chrysene	ug/kg	ND	1970	1870	1280	1160	65	62	22-130	10		30	
Di-n-butylphthalate	ug/kg	ND	1970	1870	1160	1010	59	54	30-130	13		30	
Di-n-octylphthalate	ug/kg	ND	1970	1870	1200	1080	61	58	23-142	10		30	
Dibenz(a,h)anthracene	ug/kg	ND	1970	1870	1180	1070	60	57	10-130	10		30	
Dibenzofuran	ug/kg	ND	1970	1870	1020	923	52	49	24-130	10		30	
Diethylphthalate	ug/kg	ND	1970	1870	958	846	49	45	26-130	12		30	
Dimethylphthalate	ug/kg	ND	1970	1870	1060	935	54	50	22-130	12		30	
Fluoranthene	ug/kg	ND	1970	1870	1140	1020	58	55	33-130	11		30	
Fluorene	ug/kg	ND	1970	1870	999	911	51	49	22-130	9		30	
Hexachloro-1,3-butadiene	ug/kg	ND	1970	1870	911	816	46	44	13-130	11		30	
Hexachlorobenzene	ug/kg	ND	1970	1870	1060	957	54	51	29-130	10		30	
Hexachlorocyclopentadiene	ug/kg	ND	1970	1870	944	851	48	46	10-130	10		30	
Hexachloroethane	ug/kg	ND	1970	1870	954	862	48	46	10-130	10		30	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	1970	1870	1140	1060	58	57	10-130	7		30	
Isophorone	ug/kg	ND	1970	1870	919	799	47	43	13-130	14		30	
N-Nitroso-di-n-propylamine	ug/kg	ND	1970	1870	1020	893	52	48	12-130	14		30	v2
N-Nitrosodimethylamine	ug/kg	ND	1970	1870	1080	959	55	51	11-130	12		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

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QUALITY CONTROL DATA

Project: CTS of Asheville

Pace Project No.: 92447960

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:			2698027	2698028								
Parameter	Units	92447960001	MS	MSD	MS	MSD	MS	MSD	% Rec	RPD	Max	Qual
		Result	Spike	Spike								
N-Nitrosodiphenylamine	ug/kg	ND	1970	1870	1310	1170	66	63	15-130	11	30	
Naphthalene	ug/kg	ND	1970	1870	1170	1040	59	56	15-130	11	30	
Nitrobenzene	ug/kg	ND	1970	1870	911	821	46	44	12-130	10	30	
Pentachlorophenol	ug/kg	ND	3940	3740	2050	1810J	52	48	10-130		30	
Phenanthrene	ug/kg	ND	1970	1870	1230	1100	62	59	27-130	11	30	
Phenol	ug/kg	ND	1970	1870	1040	910	53	49	10-130	14	30	
Pyrene	ug/kg	ND	1970	1870	1380	1200	70	64	19-130	14	30	
Pyridine	ug/kg	ND	1970	1870	638	528	32	28	10-130	19	30	
2,4,6-Tribromophenol (S)	%						60	58	27-110			
2-Fluorobiphenyl (S)	%						53	51	30-110			
2-Fluorophenol (S)	%						54	52	13-110			
Nitrobenzene-d5 (S)	%						47	45	23-110			
Phenol-d6 (S)	%						51	48	22-110			
Terphenyl-d14 (S)	%						57	53	28-110			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CTS of Asheville

Pace Project No.: 92447960

QC Batch: 501495

Analysis Method: ASTM D2974-87

QC Batch Method: ASTM D2974-87

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 92447960001, 92447960002

SAMPLE DUPLICATE: 2697123

Parameter	Units	92447896010 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	15.0	16.0	6	25	

SAMPLE DUPLICATE: 2697131

Parameter	Units	92447887001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	17.0	14.8	14	25	

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QUALIFIERS

Project: CTS of Asheville
Pace Project No.: 92447960

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 - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.
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

B Analyte was detected in the associated method blank.
IK The recalculated concentration of the calibration standard(s) did not meet method acceptance criteria; this result should be considered an estimated value.
L2 Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
√1 The continuing calibration verification was above the method acceptance limit. Any detection for the analyte in the associated samples may have a high bias.
√2 The continuing calibration verification was below the method acceptance limit. The analyte was not detected in the associated samples and the sensitivity of the instrument was verified with a reporting limit check standard.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CTS of Asheville

Pace Project No.: 92447960

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92447960001	IDW-ISCO-3	EPA 3050B	501866	EPA 6010D	501912
92447960002	IDW-ISCO-4	EPA 3050B	501866	EPA 6010D	501912
92447960001	IDW-ISCO-3	EPA 3010A	501893	EPA 6010D	501896
92447960002	IDW-ISCO-4	EPA 3010A	501893	EPA 6010D	501896
92447960001	IDW-ISCO-3	EPA 7470A	501895	EPA 7470A	502035
92447960002	IDW-ISCO-4	EPA 7470A	501895	EPA 7470A	502035
92447960001	IDW-ISCO-3	EPA 7471B	501337	EPA 7471B	501740
92447960002	IDW-ISCO-4	EPA 7471B	501337	EPA 7471B	501740
92447960001	IDW-ISCO-3	EPA 3546	501719	EPA 8270E	502068
92447960002	IDW-ISCO-4	EPA 3546	501719	EPA 8270E	502068
92447960001	IDW-ISCO-3	EPA 5035A	501807	EPA 8260D	501826
92447960002	IDW-ISCO-4	EPA 5035A	502304	EPA 8260D	502318
92447960001	IDW-ISCO-3	ASTM D2974-87	501495		
92447960002	IDW-ISCO-4	ASTM D2974-87	501495		

REPORT OF LABORATORY ANALYSIS

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Document Name: Sample Condition Upon Receipt (SCUR)	Document No.: F-CAR-CS-033-Rev.06	Issuing Authority: Pace Carolinas Quality Office
Page 1 of 2 Document Revised: February 7, 2018		

Laboratory receiving samples: ☒ Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicville

Client Name: Wood EFT Asheville Project #: _____

Sample Condition Upon Receipt: ☐ Commercial ☐ Client

Courier: ☐ Fed Ex ☐ UPS ☐ Other: _____

Custody Seal Present? ☒ Yes ☐ No

Seals Intact? ☒ Yes ☐ No

Date/Initials Person Examining Contents: MPF 10/2/19

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

Thermometer: ☒ Air Gun ID: 937041

Cooler Temp (°C): 5.8 Correction Factor: Add/Subtract (°C) f.2

Cooler Temp Corrected (°C): 5.8

Temp should be above freezing to 6°C

☐ Samples out of temp criteria. Samples on ice, cooling process has begun

Biological Tissue Frozen? ☐ Yes ☒ No ☐ N/A

Type of Ice: ☒ Wet ☐ Blue ☐ None

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

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A									
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A									
Short Hold Time Analysis (<72 hr.)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A									
Rush Turn Around Time Requested?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A									
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A									
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A									
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A									
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A									
Dissolved analysis: Samples Field Filtered?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A									
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A									
-Includes Date/Time/ID/Analysis Matrix	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A									
Headspace in VOA Vials (>5-6mm)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A									
Tripp Blank Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A									
Tripp Blank Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A									

Field Data Required? ☐ Yes ☒ No

COMMENTS/SAMPLE DISCREPANCY

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted:

Project Manager SCURF Review:

Project Manager SRF Review:

Date:

10/3

Date:

10/3

Date/Time:

MO#: 92447960
PM: PTE
Due Date: 10/09/19
CLIENT: 92-AMEC A

[illegible]

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 #

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

CHAIN-OF-CUSTODY / Analytical Request Document

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



Section A		Section B		Section C	
Required Client Information:		Required Project Information:		Invoice Information:	
Company:	Wood EM - Asheville	Report To:	Susan Avritt	Attention:	Susan Avritt
Address:	1308 Patton Avenue	Copy To:		Company Name:	
Asheville, NC 28803		Purchase Order #:		Address:	
Email:	susan.avritt@woodpic.com	Project Name:	GTS of Asheville	Price Quote:	
Phone:	NONE	Price Project Manager:	taylor.azell@woodpic.com	Price Profile #:	3000-7, -8
Requested Due Date:	5-day FAX	Project #:	4252162012.06		

SAMPLE ID		ITEM #	
One Character per box. (A-Z, 0-9, /, -)			
Sample IDs must be unique			
MATRIX		CODE	
Dairy	OW		
Meat	WY		
Produce	SL		
Oil	OL		
Alcohol	WP		
Other	AR		
Therm	OT		

ITEM #	MATRIX	CODE	COLLECTED		SAMPLE TYPE (G-GRAB D-COMP)	SAMPLE TEMP AT COLLECTION		PRESERVATIVES		# OF CONTAINERS	TCLP RCRA		TCLP VOC, SVOC		Residual Chlorine (Y/N)		Received on	Custody	Sealed	Cooler	Sample	Intact
			START	END		DATE	TIME	DATE	TIME		DATE	TIME	DATE	TIME								
1	1DW-1560-3		10/24/19	12:20	G	10/24/19	12:20			9												
2	1DW-1560-4		10/24/19	13:30	G	10/24/19	13:30			9												
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS:		DATE		TIME		DATE		TIME	
Iman Avritt Inland 10/24/19 16:16		10/24/19		16:16		10/24/19		16:16	
SAMPLER NAME AND SIGNATURE:		DATE SIGNED:		TIME		DATE		TIME	
PRINT Name of SAMPLER: Rodney M. Clark		10/22/19							
SIGNATURE of SAMPLER:									

November 07, 2019

Susan Avritt
Wood E&S
1308 Patton Avenue
Asheville, NC 28806

RE: Project: CTS of Asheville
Pace Project No.: 92452366

Dear Susan Avritt:

Enclosed are the analytical results for sample(s) received by the laboratory on November 05, 2019. 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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: CTS of Asheville

Pace Project No.: 92452366

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

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SAMPLE SUMMARY

Project: CTS of Asheville

Pace Project No.: 92452366

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92452366001	IDW-ISCO-5	Water	11/05/19 13:45	11/05/19 15:40

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: CTS of Asheville

Pace Project No.: 92452366

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92452366001	IDW-ISCO-5	EPA 8260D	GAW	62	PASI-C

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: CTS of Asheville

Pace Project No.: 92452366

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92452366001	IDW-ISCO-5					
EPA 8260D	Acetone	10.3J	ug/L	25.0	11/07/19 02:10	
EPA 8260D	Chloroform	3.3J	ug/L	5.0	11/07/19 02:10	
EPA 8260D	cis-1,2-Dichloroethene	0.35J	ug/L	1.0	11/07/19 02:10	
EPA 8260D	Trichloroethene	48.5	ug/L	1.0	11/07/19 02:10	

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: CTS of Asheville

Pace Project No.: 92452366

Method: EPA 8260D

Description: 8260D MSV Low Level

Client: Wood E&I - Asheville

Date: November 07, 2019

General Information:

1 sample was analyzed for EPA 8260D. 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.

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:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CTS of Asheville
Pace Project No.: 92452366

Sample: IDW-ISCO-5		Lab ID: 92452366001		Collected: 11/05/19 13:45		Received: 11/05/19 15:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260D MSV Low Level		Analytical Method: EPA 8260D							
Acetone	10.3J	ug/L	25.0	6.2	1		11/07/19 02:10	67-64-1	
Benzene	ND	ug/L	1.0	0.15	1		11/07/19 02:10	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.22	1		11/07/19 02:10	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.34	1		11/07/19 02:10	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.26	1		11/07/19 02:10	75-27-4	
Bromoform	ND	ug/L	1.0	0.62	1		11/07/19 02:10	75-25-2	
Bromomethane	ND	ug/L	2.0	0.62	1		11/07/19 02:10	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	3.3	1		11/07/19 02:10	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	0.22	1		11/07/19 02:10	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		11/07/19 02:10	108-90-7	
Chloroethane	ND	ug/L	1.0	0.49	1		11/07/19 02:10	75-00-3	
Chloroform	3.3J	ug/L	5.0	2.3	1		11/07/19 02:10	67-66-3	
Chloromethane	ND	ug/L	1.0	0.39	1		11/07/19 02:10	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.20	1		11/07/19 02:10	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.20	1		11/07/19 02:10	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	0.26	1		11/07/19 02:10	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.41	1		11/07/19 02:10	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.26	1		11/07/19 02:10	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.46	1		11/07/19 02:10	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.29	1		11/07/19 02:10	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.22	1		11/07/19 02:10	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.26	1		11/07/19 02:10	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.23	1		11/07/19 02:10	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.27	1		11/07/19 02:10	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.34	1		11/07/19 02:10	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.24	1		11/07/19 02:10	75-35-4	
cis-1,2-Dichloroethene	0.35J	ug/L	1.0	0.29	1		11/07/19 02:10	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.25	1		11/07/19 02:10	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.19	1		11/07/19 02:10	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.16	1		11/07/19 02:10	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.27	1		11/07/19 02:10	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.21	1		11/07/19 02:10	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.30	1		11/07/19 02:10	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.31	1		11/07/19 02:10	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	0.22	1		11/07/19 02:10	108-20-3	
Ethylbenzene	ND	ug/L	1.0	0.26	1		11/07/19 02:10	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.44	1		11/07/19 02:10	87-68-3	
2-Hexanone	ND	ug/L	5.0	0.57	1		11/07/19 02:10	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	0.21	1		11/07/19 02:10	99-87-6	
Methylene Chloride	ND	ug/L	5.0	3.7	1		11/07/19 02:10	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	4.5	1		11/07/19 02:10	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.28	1		11/07/19 02:10	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.35	1		11/07/19 02:10	91-20-3	
Styrene	ND	ug/L	1.0	0.27	1		11/07/19 02:10	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.34	1		11/07/19 02:10	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.22	1		11/07/19 02:10	79-34-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CTS of Asheville

Pace Project No.: 92452366

Sample: IDW-ISCO-5		Lab ID: 92452366001		Collected: 11/05/19 13:45		Received: 11/05/19 15:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260D MSV Low Level		Analytical Method: EPA 8260D							
Tetrachloroethene	ND	ug/L	1.0	0.16	1		11/07/19 02:10	127-18-4	
Toluene	ND	ug/L	1.0	0.24	1		11/07/19 02:10	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.34	1		11/07/19 02:10	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.22	1		11/07/19 02:10	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.18	1		11/07/19 02:10	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.24	1		11/07/19 02:10	79-00-5	
Trichloroethene	48.5	ug/L	1.0	0.22	1		11/07/19 02:10	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.31	1		11/07/19 02:10	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.35	1		11/07/19 02:10	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1.4	1		11/07/19 02:10	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.24	1		11/07/19 02:10	75-01-4	
m&p-Xylene	ND	ug/L	2.0	0.41	1		11/07/19 02:10	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.22	1		11/07/19 02:10	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		11/07/19 02:10	460-00-4	
1,2-Dichloroethane-d4 (S)	114	%	70-130		1		11/07/19 02:10	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		11/07/19 02:10	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: CTS of Asheville

Pace Project No.: 92452366

QC Batch: 507978

Analysis Method: EPA 8260D

QC Batch Method: EPA 8260D

Analysis Description: 8260D MSV Low Level

Associated Lab Samples: 92452366001

METHOD BLANK: 2726899

Matrix: Water

Associated Lab Samples: 92452366001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	0.34	11/06/19 23:34	
1,1,1-Trichloroethane	ug/L	ND	1.0	0.18	11/06/19 23:34	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.22	11/06/19 23:34	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.24	11/06/19 23:34	
1,1-Dichloroethane	ug/L	ND	1.0	0.27	11/06/19 23:34	
1,1-Dichloroethene	ug/L	ND	1.0	0.24	11/06/19 23:34	
1,1-Dichloropropene	ug/L	ND	1.0	0.21	11/06/19 23:34	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	0.34	11/06/19 23:34	
1,2,3-Trichloropropane	ug/L	ND	1.0	0.35	11/06/19 23:34	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	0.22	11/06/19 23:34	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	0.26	11/06/19 23:34	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	0.26	11/06/19 23:34	
1,2-Dichlorobenzene	ug/L	ND	1.0	0.29	11/06/19 23:34	
1,2-Dichloroethane	ug/L	ND	1.0	0.34	11/06/19 23:34	
1,2-Dichloropropane	ug/L	ND	1.0	0.19	11/06/19 23:34	
1,3-Dichlorobenzene	ug/L	ND	1.0	0.22	11/06/19 23:34	
1,3-Dichloropropane	ug/L	ND	1.0	0.16	11/06/19 23:34	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.26	11/06/19 23:34	
2,2-Dichloropropane	ug/L	ND	1.0	0.27	11/06/19 23:34	
2-Butanone (MEK)	ug/L	ND	5.0	3.3	11/06/19 23:34	
2-Chlorotoluene	ug/L	ND	1.0	0.20	11/06/19 23:34	
2-Hexanone	ug/L	ND	5.0	0.57	11/06/19 23:34	
4-Chlorotoluene	ug/L	ND	1.0	0.20	11/06/19 23:34	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	4.5	11/06/19 23:34	
Acetone	ug/L	ND	25.0	6.2	11/06/19 23:34	
Benzene	ug/L	ND	1.0	0.15	11/06/19 23:34	
Bromobenzene	ug/L	ND	1.0	0.22	11/06/19 23:34	
Bromochloromethane	ug/L	ND	1.0	0.34	11/06/19 23:34	
Bromodichloromethane	ug/L	ND	1.0	0.26	11/06/19 23:34	
Bromoform	ug/L	ND	1.0	0.62	11/06/19 23:34	
Bromomethane	ug/L	ND	2.0	0.62	11/06/19 23:34	
Carbon tetrachloride	ug/L	ND	1.0	0.22	11/06/19 23:34	
Chlorobenzene	ug/L	ND	1.0	0.23	11/06/19 23:34	
Chloroethane	ug/L	ND	1.0	0.49	11/06/19 23:34	
Chloroform	ug/L	ND	5.0	2.3	11/06/19 23:34	
Chloromethane	ug/L	ND	1.0	0.39	11/06/19 23:34	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.29	11/06/19 23:34	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.30	11/06/19 23:34	
Dibromochloromethane	ug/L	ND	1.0	0.41	11/06/19 23:34	
Dibromomethane	ug/L	ND	1.0	0.46	11/06/19 23:34	
Dichlorodifluoromethane	ug/L	ND	1.0	0.23	11/06/19 23:34	

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QUALITY CONTROL DATA

Project: CTS of Asheville

Pace Project No.: 92452366

METHOD BLANK: 2726899

Matrix: Water

Associated Lab Samples: 92452366001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Diisopropyl ether	ug/L	ND	1.0	0.22	11/06/19 23:34	
Ethylbenzene	ug/L	ND	1.0	0.26	11/06/19 23:34	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	0.44	11/06/19 23:34	
m&p-Xylene	ug/L	ND	2.0	0.41	11/06/19 23:34	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.28	11/06/19 23:34	
Methylene Chloride	ug/L	ND	5.0	3.7	11/06/19 23:34	
Naphthalene	ug/L	ND	1.0	0.35	11/06/19 23:34	
o-Xylene	ug/L	ND	1.0	0.22	11/06/19 23:34	
p-Isopropyltoluene	ug/L	ND	1.0	0.21	11/06/19 23:34	
Styrene	ug/L	ND	1.0	0.27	11/06/19 23:34	
Tetrachloroethene	ug/L	ND	1.0	0.16	11/06/19 23:34	
Toluene	ug/L	ND	1.0	0.24	11/06/19 23:34	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.25	11/06/19 23:34	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.31	11/06/19 23:34	
Trichloroethene	ug/L	ND	1.0	0.22	11/06/19 23:34	
Trichlorofluoromethane	ug/L	ND	1.0	0.31	11/06/19 23:34	
Vinyl acetate	ug/L	ND	2.0	1.4	11/06/19 23:34	
Vinyl chloride	ug/L	ND	1.0	0.24	11/06/19 23:34	
1,2-Dichloroethane-d4 (S)	%	111	70-130		11/06/19 23:34	
4-Bromofluorobenzene (S)	%	102	70-130		11/06/19 23:34	
Toluene-d8 (S)	%	101	70-130		11/06/19 23:34	

LABORATORY CONTROL SAMPLE: 2726901

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	52.7	105	70-130	
1,1,1-Trichloroethane	ug/L	50	55.9	112	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	49.1	98	70-130	
1,1,2-Trichloroethane	ug/L	50	51.2	102	70-130	
1,1-Dichloroethane	ug/L	50	58.2	116	70-130	
1,1-Dichloroethene	ug/L	50	60.9	122	70-130	
1,1-Dichloropropene	ug/L	50	54.9	110	70-130	
1,2,3-Trichlorobenzene	ug/L	50	51.8	104	70-130	
1,2,3-Trichloropropane	ug/L	50	51.7	103	70-130	
1,2,4-Trichlorobenzene	ug/L	50	52.0	104	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	48.1	96	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	54.3	109	70-130	
1,2-Dichlorobenzene	ug/L	50	49.0	98	70-130	
1,2-Dichloroethane	ug/L	50	53.8	108	70-130	
1,2-Dichloropropane	ug/L	50	54.1	108	70-130	
1,3-Dichlorobenzene	ug/L	50	48.2	96	70-130	
1,3-Dichloropropane	ug/L	50	55.0	110	70-131	
1,4-Dichlorobenzene	ug/L	50	48.3	97	70-130	
2,2-Dichloropropane	ug/L	50	54.5	109	69-130	

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QUALITY CONTROL DATA

Project: CTS of Asheville

Pace Project No.: 92452366

LABORATORY CONTROL SAMPLE: 2726901

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Butanone (MEK)	ug/L	100	103	103	64-135	
2-Chlorotoluene	ug/L	50	49.0	98	70-130	
2-Hexanone	ug/L	100	95.3	95	66-135	
4-Chlorotoluene	ug/L	50	49.2	98	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	97.2	97	70-130	
Acetone	ug/L	100	107	107	61-157	
Benzene	ug/L	50	53.7	107	70-130	
Bromobenzene	ug/L	50	49.7	99	70-130	
Bromochloromethane	ug/L	50	50.1	100	70-130	
Bromodichloromethane	ug/L	50	54.1	108	70-130	
Bromoform	ug/L	50	49.6	99	70-130	
Bromomethane	ug/L	50	45.5	91	38-130	
Carbon tetrachloride	ug/L	50	54.0	108	70-130	
Chlorobenzene	ug/L	50	49.3	99	70-130	
Chloroethane	ug/L	50	53.9	108	37-142	
Chloroform	ug/L	50	55.7	111	70-130	
Chloromethane	ug/L	50	51.6	103	48-130	
cis-1,2-Dichloroethene	ug/L	50	56.6	113	70-130	
cis-1,3-Dichloropropene	ug/L	50	57.6	115	70-130	
Dibromochloromethane	ug/L	50	52.6	105	70-130	
Dibromomethane	ug/L	50	52.2	104	70-130	
Dichlorodifluoromethane	ug/L	50	45.1	90	53-134	
Diisopropyl ether	ug/L	50	58.3	117	70-135	
Ethylbenzene	ug/L	50	51.1	102	70-130	
Hexachloro-1,3-butadiene	ug/L	50	52.8	106	68-132	
m&p-Xylene	ug/L	100	102	102	70-130	
Methyl-tert-butyl ether	ug/L	50	55.6	111	70-130	
Methylene Chloride	ug/L	50	55.5	111	67-132	
Naphthalene	ug/L	50	50.6	101	70-130	
o-Xylene	ug/L	50	52.8	106	70-131	
p-Isopropyltoluene	ug/L	50	52.2	104	70-130	
Styrene	ug/L	50	51.9	104	70-130	
Tetrachloroethene	ug/L	50	52.0	104	69-130	
Toluene	ug/L	50	49.6	99	70-130	
trans-1,2-Dichloroethene	ug/L	50	58.3	117	70-130	
trans-1,3-Dichloropropene	ug/L	50	55.1	110	70-130	
Trichloroethene	ug/L	50	51.8	104	70-130	
Trichlorofluoromethane	ug/L	50	51.3	103	63-130	
Vinyl acetate	ug/L	100	112	112	55-143	
Vinyl chloride	ug/L	50	50.5	101	70-131	
1,2-Dichloroethane-d4 (S)	%			105	70-130	
4-Bromofluorobenzene (S)	%			101	70-130	
Toluene-d8 (S)	%			97	70-130	

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QUALITY CONTROL DATA

Project: CTS of Asheville

Pace Project No.: 92452366

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2726903											
2726905											
Parameter	Units	92452411003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20	21.6	22.4	108	112	73-134	4	30
1,1,1-Trichloroethane	ug/L	ND	20	20	24.8	24.5	124	122	82-143	1	30
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	20.6	21.9	103	109	70-136	6	30
1,1,2-Trichloroethane	ug/L	ND	20	20	21.8	22.6	109	113	70-135	4	30
1,1-Dichloroethane	ug/L	ND	20	20	25.8	26.1	129	131	70-139	1	30
1,1-Dichloroethene	ug/L	ND	20	20	26.4	26.3	132	132	70-154	0	30
1,1-Dichloropropene	ug/L	ND	20	20	24.6	24.6	123	123	70-149	0	30
1,2,3-Trichlorobenzene	ug/L	ND	20	20	24.6	23.4	123	117	70-135	5	30
1,2,3-Trichloropropane	ug/L	ND	20	20	22.0	23.0	110	115	71-137	4	30
1,2,4-Trichlorobenzene	ug/L	ND	20	20	24.1	23.2	121	116	73-140	4	30
1,2-Dibromo-3-chloropropane	ug/L	ND	20	20	19.8	19.9	99	100	65-134	1	30
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	22.3	23.3	112	117	70-137	5	30
1,2-Dichlorobenzene	ug/L	ND	20	20	21.1	21.5	106	108	70-133	2	30
1,2-Dichloroethane	ug/L	ND	20	20	23.3	24.5	116	122	70-137	5	30
1,2-Dichloropropane	ug/L	ND	20	20	23.3	24.2	116	121	70-140	4	30
1,3-Dichlorobenzene	ug/L	ND	20	20	21.0	21.3	105	106	70-135	1	30
1,3-Dichloropropane	ug/L	ND	20	20	23.2	24.2	116	121	70-143	4	30
1,4-Dichlorobenzene	ug/L	ND	20	20	21.0	21.3	105	106	70-133	2	30
2,2-Dichloropropane	ug/L	ND	20	20	25.8	26.0	129	130	61-148	0	30
2-Butanone (MEK)	ug/L	ND	40	40	44.0	45.6	110	114	60-139	3	30
2-Chlorotoluene	ug/L	ND	20	20	21.6	21.8	108	109	70-144	1	30
2-Hexanone	ug/L	ND	40	40	40.4	42.0	101	105	65-138	4	30
4-Chlorotoluene	ug/L	ND	20	20	21.4	21.8	107	109	70-137	2	30
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	40	39.0	40.9	98	102	65-135	5	30
Acetone	ug/L	ND	40	40	44.6	49.9	112	125	60-148	11	30
Benzene	ug/L	ND	20	20	23.6	24.0	118	120	70-151	2	30
Bromobenzene	ug/L	ND	20	20	21.6	21.9	108	109	70-136	1	30
Bromochloromethane	ug/L	ND	20	20	23.4	28.3	117	141	70-141	19	30
Bromodichloromethane	ug/L	ND	20	20	23.0	23.8	115	119	70-138	4	30
Bromoform	ug/L	ND	20	20	20.1	20.5	100	103	63-130	2	30
Bromomethane	ug/L	ND	20	20	25.1	23.9	125	120	15-152	5	30 v3
Carbon tetrachloride	ug/L	5.8	20	20	29.9	30.2	120	122	70-143	1	30
Chlorobenzene	ug/L	ND	20	20	21.2	21.9	106	110	70-138	3	30
Chloroethane	ug/L	ND	20	20	22.9	22.6	115	113	52-163	2	30
Chloroform	ug/L	2.7J	20	20	25.4	27.4	114	124	70-139	7	30
Chloromethane	ug/L	ND	20	20	22.6	22.1	113	110	41-139	2	30
cis-1,2-Dichloroethene	ug/L	ND	20	20	25.3	25.4	126	127	70-141	1	30
cis-1,3-Dichloropropene	ug/L	ND	20	20	23.7	24.5	119	123	70-137	3	30
Dibromochloromethane	ug/L	ND	20	20	21.4	22.3	107	111	70-134	4	30
Dibromomethane	ug/L	ND	20	20	22.0	22.9	110	115	70-138	4	30
Dichlorodifluoromethane	ug/L	ND	20	20	17.8	17.2	89	86	47-155	4	30
Diisopropyl ether	ug/L	ND	20	20	24.9	25.7	124	129	63-144	3	30
Ethylbenzene	ug/L	ND	20	20	22.0	22.9	110	114	66-153	4	30
Hexachloro-1,3-butadiene	ug/L	ND	20	20	27.4	25.0	137	125	65-149	9	30

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QUALITY CONTROL DATA

Project: CTS of Asheville

Pace Project No.: 92452366

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2726903 2726905											
Parameter	Units	92452411003		MS		MSD		MS		MSD	
		Result	Conc.	Spike	Conc.	Result	Conc.	% Rec	% Rec	% Rec	Max
								Limits	RPD	RPD	Qual
m&p-Xylene	ug/L	ND	40	40	44.6	45.8	112	114	69-152	2	30
Methyl-tert-butyl ether	ug/L	ND	20	20	24.0	24.4	120	122	54-156	1	30
Methylene Chloride	ug/L	ND	20	20	24.9	26.1	124	130	42-159	5	30
Naphthalene	ug/L	ND	20	20	23.2	21.9	116	110	61-148	6	30
o-Xylene	ug/L	ND	20	20	22.1	23.3	111	116	70-148	5	30
p-Isopropyltoluene	ug/L	ND	20	20	23.0	23.1	115	115	70-146	1	30
Styrene	ug/L	ND	20	20	21.5	22.2	108	111	70-135	3	30
Tetrachloroethene	ug/L	ND	20	20	22.5	23.0	112	115	59-143	2	30
Toluene	ug/L	ND	20	20	21.7	22.1	108	111	59-148	2	30
trans-1,2-Dichloroethene	ug/L	ND	20	20	26.4	26.0	132	130	70-146	1	30
trans-1,3-Dichloropropene	ug/L	ND	20	20	22.9	23.3	114	117	70-135	2	30
Trichloroethene	ug/L	ND	20	20	22.6	23.1	113	116	70-147	2	30
Trichlorofluoromethane	ug/L	ND	20	20	22.5	22.3	112	111	70-148	1	30
Vinyl acetate	ug/L	ND	40	40	47.1	49.4	118	124	49-151	5	30
Vinyl chloride	ug/L	ND	20	20	22.0	21.3	110	107	70-156	3	30
1,2-Dichloroethane-d4 (S)	%						106	107	70-130		
4-Bromofluorobenzene (S)	%						99	101	70-130		
Toluene-d8 (S)	%						96	97	70-130		

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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALIFIERS

Project: CTS of Asheville
Pace Project No.: 92452366

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 - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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

v3 The continuing calibration verification was below the method acceptance limit. Any detection for the analyte in the associated samples may have low bias.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CTS of Asheville

Pace Project No.: 92452366

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92452366001	IDW-ISCO-5	EPA 8260D	507978		

REPORT OF LABORATORY ANALYSIS

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Project #

[illegible][illegible]

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina Department of Health and Human Services (NCDHHS). Out of hold, incorrect preservative, out of tamper, incorrect containers.

APPENDIX E

WASTE MANIFESTS

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			
		NC0003149556	1	800-255-3924	008161085 JJK			
5. Generator's Name and Mailing Address		Generator's Site Address (if different than mailing address)						
CTS Corporation 4925 Indiana Ave. Lisle, IL 60532		235 Mills Gap Rd Asheville, NC 28803						
Generator's Phone: 626-252-0150								
6. Transporter 1 Company Name		U.S. EPA ID Number						
A+D Environmental Services (SC), LLC		SC0987598331						
7. Transporter 2 Company Name		U.S. EPA ID Number						
8. Designated Facility Name and Site Address		U.S. EPA ID Number						
Chemical Waste Management Inc. 36964 Alabama Hwy 17 Emelle, AL 35459		ALQ000622464						
Facility's Phone: 205-652-9721								
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt/Vol.	13. Waste Codes	
			No.	Type				
		1. NA3077, Hazardous Waste Solid, n.o.s. (Trichloroethylene), 9, PG II, ERG#171	1	CM	18 15	ton	Foot	
		2.						
		3.						
	4.							
14. Special Handling Instructions and Additional Information								
9b.1) Profile Number NC44289 "CERCLA Waste" AD Job# 1909-0295 PO# 1003431 Emergency Response Number 800-255-3924 Contract Number MIS 0007951								
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/Officer's Printed/Typed Name		Signature		Month		Day Year		
Rodney Clark, as agent for CTS Corporation		[Signature]		10		28 19		
INTL	16. International Shipments		Port of entry/exit:					
	<input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.		Date leaving U.S.:					
TRANSPORTER	17. Transporter Acknowledgment of Receipt of Materials							
	Transporter 1 Printed/Typed Name		Signature		Month		Day Year	
	Alan Gilstrap		[Signature]		10		28 19	
Transporter 2 Printed/Typed Name		Signature		Month		Day Year		
DESIGNATED FACILITY	18. Discrepancy							
	18a. Discrepancy Indication Space <input checked="" type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection							
	Corrected to rec'd wt. Per [Signature] Mike Griffin 11/13/19BW							
	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. H132 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		Day Year		
Tammy Thrash		[Signature]		10		29 19		

Please print or type.

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	4. Manifest Tracking Number 013308085 FLE	
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				
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 Chemical Waste Management, Inc. 36964 Alabama Hwy 17 Emelle, AL 35459		U.S. EPA ID Number ALD000622464				
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))		10. Containers		11. Total Quantity
				No.	Type	12. Unit Wt./Vol.
	X	1. NA3077, Hazardous waste solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171		1	CM	15 T
		2.				
		3.				
	4.					
14. Special Handling Instructions and Additional Information 9b.1) Profile Number: NC44289 "CERCLA Waste" A&D Job #: 1909-0295 PO #: 1003431 Emergency Response Number: 800-255-3924 Contract Number M150007551						
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/Officer's Printed/Typed Name: <i>as agent for</i> <i>Richard Clark, CTS Corporation</i> Signature: <i>[Signature]</i> Month: <i>11</i> Day: <i>12</i> Year: <i>19</i>						
TRANSPORTER	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____					
	17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name: <i>Alan Gilman</i> Signature: <i>[Signature]</i> Month: <i>11</i> Day: <i>12</i> Year: <i>19</i>					
	Transporter 2 Printed/Typed Name: _____ Signature: _____ Month: _____ Day: _____ Year: _____					
DESIGNATED FACILITY	18. Discrepancy 18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> 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. <i>H132</i> 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: <i>Nalaisue Hill</i> Signature: <i>[Signature]</i> Month: <i>11</i> Day: <i>13</i> Year: <i>19</i>						

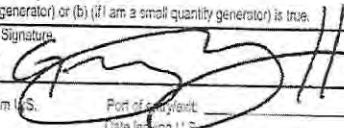


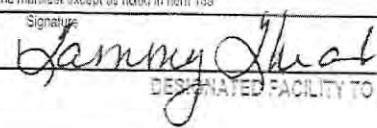
Please print or type.

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	4. Manifest Tracking Number 013308086 FLE		
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					
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 Chemical Waste Management, Inc. 36964 Alabama Hwy 17 Emelle, AL 35459		U.S. EPA ID Number ALD000622464					
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No. Type		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes	
X	1. NA3077, Hazardous waste solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	15	T	E001	
	2.						
	3.						
	4.						
14. Special Handling Instructions and Additional Information 9b.1) Profile Number: NC44289 "CERCLA Waste" A&D Job #: 1909-0295 PO #: 1003431 Emergency Response Number 800-255-3924 Contract Number M-30007951							
15. GENERATOR/SOFFEROR'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/Officer's Printed/Typed Name Rodney M. Clark, as agent for CTS Corporation				Signature <i>[Signature]</i>		Month Day Year 11 15 19	
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> 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 Alan Kilmer				Signature <i>[Signature]</i>		Month Day Year 11 15 19	
Transporter 2 Printed/Typed Name				Signature		Month Day Year	
18. Discrepancy							
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> 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. H132		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 Malisha Hill				Signature <i>[Signature]</i>		Month Day Year 11 18 19	

Please print or type.

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	4. Manifest Tracking Number 013308087 FLE	
5. Generator's Name and Mailing Address CTS Corporation 4925 Indiana Ave. Generator's Phone: 828-252-8130 Lisle, IL 60532 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 Chemical Waste Management, Inc. 36964 Alabama Hwy 17 Facility's Phone: 205-652-9721 Emelle, AL 35459				U.S. EPA ID Number ALD000622464		
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))		10. Containers No. Type	11. Total Quantity	12. Unit Wt./Vol.
	X	1. NA3077, Hazardous waste solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171		1 CM	16	T
		2.				
		3.				
		4.				
14. Special Handling Instructions and Additional Information 9b.1) Profile Number: NC44269 "CERCLA Waste" A&D Job #: 1909-0295 PO #: 1003431 Emergency Response Number: 800-255-3924 Contract Number: M18007951						
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/Offor's Printed/Typed Name: Gilbert Hutchins as agent for CTS Corporation Signature:  Month Day Year: 11 20 19						
TRANSPORTER INTL	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of Export: Asheville, NC Transporter signature (for exports only):  Date loaded: 11/20/19					
	17. Transporter Acknowledgment or Receipt of Materials Transporter 1 Printed/Typed Name: Alan Gilkrist Signature:  Month Day Year: 11 20 19					
	Transporter 2 Printed/Typed Name: _____ Signature: _____ Month Day Year: _____					
DESIGNATED FACILITY	18. Discrepancy 18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection					
	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. H132 2. _____ 3. _____ 4. _____					
	20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 19a Printed/Typed Name: Tammy Thrash Signature:  Month Day Year: 11 21 19					

Please print or type.

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	4. Manifest Tracking Number 013308088 FLE		
5. Generator's Name and Mailing Address CTS Corporation 4925 Indiana Ave. Generator's Phone: 828-252-8130 Lisle, IL 60532 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 Chemical Waste Management, Inc. 36964 Alabama Hwy 17 Facility's Phone: 205-652-9721 Emelle, AL 35459					U.S. EPA ID Number ALD000622464		
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No. Type		11. Total Quantity	12. Unit WL/Vol.	13. Waste Codes
	X	1. NA3077, Hazardous waste solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	15 13	T	EQ01
		2.					
		3.					
		4.					
14. Special Handling Instructions and Additional Information 9b.1) Profile Number: NC44289 "CERCLA Waste" A&D Job #: 1909-0295 PO #: 1003431 Emergency Response Number: 800-255-3924 Contract Number: MIS0007951							
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/Officer's Printed/Typed Name: Rodney M. Clark, as agent for CTS Corporation Signature: <i>[Signature]</i> Month: 11 Day: 22 Year: 19							
INTL	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____						
TRANSPORTER	17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name: Alan Gilstrap Signature: <i>[Signature]</i> Month: 11 Day: 22 Year: 19 Transporter 2 Printed/Typed Name: _____ Signature: _____ Month: _____ Day: _____ Year: _____						
	18. Discrepancy 18a. Discrepancy Indication Space <input checked="" type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection Corrected to rec'd wt. Per Mike Griffin 11/26/19 (PW) 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: _____						
DESIGNATED FACILITY	19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems) 1. H132 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: Tammy Thrash Signature: <i>[Signature]</i> Month: 11 Day: 25 Year: 19						

Please print or type.

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		4. Manifest Tracking Number 013308089 FLE					
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													
6. Generator's Phone 828-252-8130													
7. Transporter 1 Company Name A&D Environmental Services (SC), LLC													
U.S. EPA ID Number SCD987598331													
8. Designated Facility Name and Site Address Chemical Waste Management, Inc. 36964 Alabama Hwy 17 Emelle, AL 35459													
U.S. EPA ID Number ALD000622464													
Facility's Phone 205-652-9721													
9a. HM		9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))				10. Container		11. Total Quantity		12. Unit		13. Waste Codes	
						No. Type		Quantity		Unit		Waste Codes	
X		NA3077, Hazardous waste solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171				1 CM		15		T		F001	
14. Special Handling Instructions and Additional Information 9b.1) Profile Number: NC44289 "CERCLA Waste" A&D Job #: 1909-0295 PO #: 1003431													
Emergency Response Number 800-255-3924													
Contract Number: 1900007981													
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 Content. 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/Officer's Printed/Typed Name Rodney M. Clark, as agent for CTS Corporation													
Signature <i>Rodney M. Clark</i>													
Month Day Year 12/16/19													
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of embarkment: _____ Date leaving U.S.: _____													
17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name A&D Environmental Services													
Signature <i>A&D</i>													
Month Day Year 12/16/19													
Transporter 2 Printed/Typed Name Signature Month Day Year													
18. Discrepancy 18a. Discrepancy Indication Spans <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Packed <input type="checkbox"/> Partial Packed <input type="checkbox"/> Full Rejection Manifest Reference Number: _____													
18b. Alternate Facility (or Generator) U.S. EPA ID Number Facility's Phone Month Day Year													
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) H132													
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 Tammy Thrash													
Signature <i>Tammy Thrash</i>													
Month Day Year 12/17/19													

Please print or type.

Form Approved OMB No. 2050-0038

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number NCD003149556	2. Page 1 of 1	3. Emergency Response Phone 800-255-3924	4. Manifest Tracking Number 013308090 FLE	
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 Chemical Waste Management, Inc. 36964 Alabama Hwy 17 Ermette, AL 35459 Facility's Phone: 205-652-9721 U.S. EPA ID Number ALD000622464						
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No. Type		11. Total Quantity	12. Unit Wt/Vol
	X	NA3077, Hazardous waste solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	15	T
14. Special Handling (Instructions and Additional Information) 9b.1) Profile Number: NC44289 "CERCLA Waste" Truck S-235 A&D Job #: 1909-0295 PO #: 1003431 Box A01060 Emergency Response Number 800-255-3924 Contract Number MI50007651						
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/Officer's Printed/Typed Name Rodney M. Clark, as agent for CTS Corporation Signature Rodney M. Clark Month Day Year 10/15/20						
TRANSPORTER INT'L	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Part 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 Doug Johnson Signature Doug Johnson Month Day Year 11/15/20					
	Transporter 2 Printed/Typed Name Signature Month Day Year					
DESIGNATED FACILITY	18. Discrepancy 18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection Manifest Reference Number U.S. EPA ID Number					
	18b. Alternate Facility (or Generator) U.S. EPA ID Number					
	Facility's Phone Month Day Year					
	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. H1B2 2. 3. 4.					
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 19a. Printed/Typed Name Tammy Thrash Signature Tammy Thrash Month Day Year 11/16/20						

Please print or type.

Form Approved, OMB No. 2050-0039

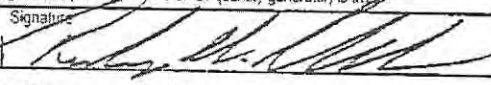

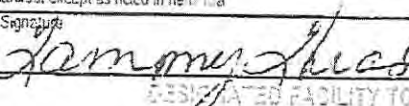
UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number NCD003149556	2. Page 1 of 1	3. Emergency Response Phone 800-255-3924	4. Manifest Tracking Number 013308091 FLE	
5. Generator's Name and Mailing Address CTS Corporation 4925 Indiana Ave. Generator's Phone: 828-252-8130 Lisle, IL 60532			Generator's 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 Chemical Waste Management, Inc. 36964 Alabama Hwy 17 Facility's Phone: 205-652-9721 Emelle, AL 35459			U.S. EPA ID Number ALD000622464			
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))		10. Containers		11. Total Quantity
				No.	Type	12. Unit WL/Vol.
	X	1. ⁸² NA3077 ^{RMC 1/17/20} Hazardous waste - solid, n.o.s. ^{liquid, n.o.s.} (Trichloroethylene), 9, PG III, ERG#171		1	CM	11 T
		2.				
		3.				
		4.				
14. Special Handling Instructions and Additional Information						
9b.1) Profile Number: NC44289 "CERCLA Waste" S-235 Emergency Response Number 800-255-3924 2001-0146 V603 A&D Job #: 1005-0255 ^{RMC 1/17/20} PO #: 1003431 885 Generated Number MIS0007551						
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/Offor's Printed/Typed Name Rodney M. Clark, as agent for CTS Corporation Signature <i>Rodney M. Clark</i> Month 1 Day 17 Year 20						
INT'L	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> 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 Doug Johnson Signature <i>Doug Johnson</i> Month 1 Day 17 Year 20		Transporter 2 Printed/Typed Name Signature Month Day Year			
DESIGNATED FACILITY	18. Discrepancy					
	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection					
	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. H132		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 Tammy Thrash Signature <i>Tammy Thrash</i> Month 1 Day 17 Year 20						

Please print or type

S-235

PS 30832

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	4. Manifest Tracking Number 013308092 FLE
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			
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 Chemical Waste Management, Inc. 36964 Alabama Hwy 17 Emelle, AL 35459		U.S. EPA ID Number ALD000622464			
Facility's Phone: 205-652-9721					
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No. Type		11. Total Quantity	12. Unit Wt./Vol.
X	1. NA3077, Hazardous waste solid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	CM	15 8	T
	2.				
	3.				
	4.				
14. Special Handling Instructions and Additional Information 9b.1) Profile Number: NC44289 "CERCLA Waste" Emergency Response Number: 800-255-3924 2001-0146 A&D Job #: 1992-0255 RMC 1/20/20 PO #: 1003431 RMC 1/20/20 885 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/Officer's Printed/Typed Name Rodney M. Clark, as agent for CTS Corporation		Signature 		Month 1	Day 20
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.		Port of entry/exit: Date leaving U.S.		Year 20	
17. Transporter Acknowledgment of Receipt of Materials					
Transporter 1 Printed/Typed Name Alan G. Istrap		Signature 		Month 1	Day 20
Transporter 2 Printed/Typed Name		Signature		Year 20	
18. Discrepancy					
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection					
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)					
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 18a					
Printed/Typed Name Tammy Thrash		Signature 		Month 1	Day 22
				Year 20	

Please print or type.

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UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number NCD003149556		2. Page 1 of 1		3. Emergency Response Phone 800-255-3924		4. Manifest Tracking Number 013308093 FLE					
		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					
								U.S. EPA ID Number					
7. Transporter 2 Company Name								U.S. EPA ID Number					
								U.S. EPA ID Number					
8. Designated Facility Name and Site Address DART, a Clean Earth Company 4132 Pompano Road Charlotte, NC 28215 Facility's Phone: 704-395-9559								U.S. EPA ID Number NCD121700777					
								U.S. EPA ID Number					
9a. HM		9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) 1. NA3082, Hazardous waste liquid, n.o.s. (Trichloroethylene), 9, PG III ERG#171				10. Containers No. Type 1 TT		11. Total Quantity 4650		12. Unit Wt./Vol. G		13. Waste Codes F001	
X													
3.													
4.													
14. Special Handling Instructions and Additional Information 9b.1) Profile Number: 193330082 "CERCLA Waste" A&D Job #: 1909-0295 PO #: 1003 S16 Emergency Response Number 800-255-3924 Contract Number MIS0007951													
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/Offor's Printed/Typed Name Robert M. Clark, as agent for CTS Corporation													
Signature <i>[Signature]</i>													
Month Day Year 11 13 19													
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> 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 Doug Johnson													
Signature <i>[Signature]</i>													
Month Day Year 11 13 19													
Transporter 2 Printed/Typed Name													
Signature													
Month Day Year													
18. Discrepancy													
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection													
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. H135 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 Sub Medix													
Signature <i>[Signature]</i>													
Month Day Year 11 13 19													

Please print or type.

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		4. Manifest Tracking Number 013308094 FLE			
		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							
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 DART, a Clean Earth Company 4132 Pompano Road Charlotte, NC 28215		U.S. EPA ID Number NCD121700777		Facility's Phone: 704-395-9559							
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))				10. Containers		11. Total Quantity	12. Unit Wt/Vol	13. Waste Codes	
						No.	Type				
	X	1. NA3082, Hazardous waste liquid, n.o.s. (Trichloroethylene), 9, PG III ERG#171				1	TT	5,032	G	F001	
		2.									
		3.									
		4.									
14. Special Handling Instructions and Additional Information 9b.1) Profile Number: 193330082 "CERCLA Waste" A&D Job #: 1909-0295 PO #: 1003 516 Emergency Response Number: 800-255-3924 Contract Number: MIS0007951											
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/Offoror's Printed/Typed Name: Reddy, M. Clark, CTS Corporation Signature: <i>[Signature]</i> Month: 11 Day: 14 Year: 19											
INTL	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____										
	17. Transporter Acknowledgment of Receipt of Materials										
	Transporter 1 Printed/Typed Name: Doug Johnson Signature: <i>[Signature]</i> Month: 11 Day: 14 Year: 19										
TRANSPORTER	Transporter 2 Printed/Typed Name: _____ Signature: _____ Month: _____ Day: _____ Year: _____										
	18. Discrepancy										
	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection										
	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: _____										
DESIGNATED FACILITY	19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)										
	1. H135 2. _____ 3. _____ 4. _____										
	20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 19a Printed/Typed Name: Rick Reed Signature: <i>[Signature]</i> Month: 11 Day: 14 Year: 19										

Please print or type.

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	4. Manifest Tracking Number 013308095 FLE	
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			
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 DART, a Clean Earth Company 4132 Pompano Road Charlotte, NC 28215			U.S. EPA ID Number NCD121706777			
Facility's Phone: 704-395-9559						
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.
			No.	Type		
	X	NA3082, Hazardous waste liquid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	TT	4945	G
14. Special Handling Instructions and Additional Information 9b.1) Profile Number: 193330082 "CERCLA Waste" A&D Job #: 1909-0295 PO #: 1003 516			Emergency Response Number 800-255-3924 Contract Number MIS0007951			
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/Officer's Printed/Typed Name <i>Richard M. Clark as agent for CTS Corporation</i>			Signature <i>Richard M. Clark</i>		Month Day Year 11 15 19	
INT'L	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.			Part 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 <i>Doug Johnson</i>			Signature <i>Doug Johnson</i>		Month Day Year 11 15 19
DESIGNATED FACILITY	Transporter 2 Printed/Typed Name			Signature		Month Day Year
DESIGNATED FACILITY	18. Discrepancy					
	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection					
	Manifest Reference Number:					
	U.S. EPA ID Number					
DESIGNATED FACILITY	18b. Alternate Facility (or Generator)					
	Facility's Phone:					
	18c. Signature of Alternate Facility (or Generator)					
	Month Day Year					
DESIGNATED FACILITY	19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)					
	1. HIS		2.		3.	
DESIGNATED FACILITY	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 <i>Scott M. Davis</i>			Signature <i>Scott M. Davis</i>		Month Day Year 11 15 19

Please print or type.

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	4. Manifest Tracking Number 013308096 FLE
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 DART, a Clean Earth Company 4132 Pompano Road Charlotte, NC 28215 Facility's Phone: 704-395-9559 28215 28216				U.S. EPA ID Number NCD121700777	
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity
	X	1. NA3082, Hazardous waste liquid, n.o.s. (Trichloroethylene), 9, PG III ERG#171	1	TT	2057
		2.			
		3.			
		4.			
12. Unit Wt./Vol. G					
13. Waste Codes F001					
14. Special Handling Instructions and Additional Information 9b.1) Profile Number: 193330082 "CERCLA Waste" A&D Job # 1999-0295 2001-0146 PO #: 1003-516 RMC H135 PO#: 1003854 Emergency Response Number 800-255-3924 Contract Number M130007951					
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/Officer's Printed/Typed Name Rodney M. Clark, as agent for CTS Corporation Signature Month Day Year 1 15 20					
INT'L	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> 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 Signature Month Day Year Transporter 2 Printed/Typed Name Signature Month Day Year				
TRANSPORTER	18. Discrepancy 18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection Manifest Reference Number:				
	18b. Alternate Facility (for Generator) U.S. EPA ID Number Facility's Phone: 18c. Signature of Alternate Facility (or Generator) Month Day Year				
DESIGNATED FACILITY	19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems) 1. H135 2. 3. 4.				
	20. Designated Facility Owner/Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18c Printed/Typed Name Signature Month Day Year Rick Reed R. Reed 1 15 20				

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 NCD003149556		b. Manifest Document Number 191115-1		c. Page 1 of 1	
d. Generator's Name and Location: CTS CORPORATION 235 MILLS GAP ROAD AHSEVILLE, NC f. Phone: 336-434-7750			e. Generator's Mailing Address: A&D ENVIRONMENTAL SERVICES, INC PO BOX 484 HIGH POINT, NC 27261 g. Phone: 336-434-7750		
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. Type	n. Total Quantity	o. Unit Wt/Vol
31151915510	10/10/2020	SOIL CUTINGS FROM INVESTIGATIVE DRILL WORK	1 CM	18	T
CUSTOMER# 423					
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) <i>Rachan M. Clark</i> as agent for CTS Corporation			q. Signature <i>[Signature]</i>		r. Date 11/15/19

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			S-235 R01050 AD8709		
c. Driver Name (Print) <i>Alan G. Givens</i>	d. Signature <i>[Signature]</i>	e. Date 11-15-19			

III. DESTINATION (Generator complete IIIa-c and Destination Site completes IIId-g)

a. Disposal Facility and Site Address: Union County Regional MSW Landfill 868 Wildcat Road Enoree, SC 29335 b. Phone: 864-969-4460		c. US EPA Number	d. Discrepancy Indication Space:
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 <i>[Signature]</i>	g. Date 11-25-19	

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. <input type="checkbox"/> Friable <input type="checkbox"/> Non-Friable <input type="checkbox"/> 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.			
h. Operator's Name and Title (Print)		i. Date	
*Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both			

NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

2881-0146

If waste is asbestos waste, complete Sections I, II, III and IV
If waste is NOT asbestos waste, complete Sections I, II and III

864-979-425

I. GENERATOR (Generator completes Ia-f)

a. Generator's US EPA ID Number NCD003149556		b. Manifest Document Number 200114-1		c. Page 1 of 1	
d. Generator's Name and Location: CTS CORPORATION 235 MILLS GAP ROAD ANSEVILLE, NC Asheville, NC		e. Generator's Mailing Address: A&D ENVIRONMENTAL SERVICES, INC PO BOX 484 HIGH POINT, NC 27261			
f. Phone: 336-434-7750		g. Phone: 336-434-7750			
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.	n. Total Quantity	o. Unit Wt/Vol
31181915510	10/10/2020	SOIL CUTTINGS FROM INVESTIGATIVE DRILL WORK	1	4	T
CUSTOMER# 423					

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.

Robert Clark, AS agent for CTS Corporation

p. Generator Authorized Agent Name (Print)	q. Signature	r. Date
		1/14/20

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: 803-957-9178		
c. Driver Name (Print)	d. Signature	e. Date
DOUG JOHNSON		1-14-20

Box AO 50th

III. DESTINATION (Generator complete IIIa-c and Destination Site completes IIId-g)

a. Disposal Facility and Site Address: Union County Regional MSW Landfill 808 Wildcat Road Enoree, SC 29335		c. US EPA Number	d. Discrepancy Indication Space:
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	
		1-14-2020	

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. <input type="checkbox"/> Friable <input type="checkbox"/> Non-Friable <input type="checkbox"/> 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		j. Date	

*Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number <i>NC0 003 149 556</i>		2. Page 1 of <i>1</i>		3. Emergency Response Phone <i>704 275 1544</i>		4. Manifest Tracking Number 008547957 JJK			
		5. Generator's Name and Mailing Address <i>CTS of Asheville (Wood Pile Area Susan Avenue) 1308 Rama Avenue Asheville, NC 28806 Generator's Phone: 828-252-8130</i>		Generator's Site Address (if different than mailing address) <i>CTS of Asheville 755 Mills Gap Road Asheville, NC 28803</i>							
6. Transporter 1 Company Name <i>Continuum Environmental Inc.</i>		U.S. EPA ID Number <i>NC0000 169 391</i>									
7. Transporter 2 Company Name		U.S. EPA ID Number									
8. Designated Facility Name and Site Address <i>Met-A-Clean Earth Company 4152 Longwood Road Charlotte, NC 28214 Facility's Phone: 704-395-9559</i>		U.S. EPA ID Number <i>NC0 121 704 777</i>									
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))				10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes	
						No.	Type				
	X	1. <i>RD, NA3002, HAZARDOUS WASTE, LIQUID, P.O.S., (TRICHLOROETHYLENE), 9, PG II, EX # A1</i>				02	DM	110	G	D012	D010
	X	2. <i>UN3077, HAZARDOUS WASTE, SOLID, N.O.S., 9, PG II, EX # A1</i>				01	DM	55	G	D010	F002
	X	3. <i>UN3077, HAZARDOUS WASTE, SOLID, N.O.S., 9, PG II, EX # A1</i>				03	DM	165	G	D010	F002
		4.									
14. Special Handling Instructions and Additional Information <i>#1 2234-1 #2 19333 0477 #3 19333 0475</i>											
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 <i>Rodney Clark, as agent for CTS Cooperative</i>						Signature <i>[Signature]</i>		Month <i>11</i>	Day <i>7</i>	Year <i>19</i>	
INT'L	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____										
	17. Transporter Acknowledgment of Receipt of Materials										
TRANSPORTER	Transporter 1 Printed/Typed Name <i>William W. Dalgarnett</i>						Signature <i>[Signature]</i>		Month <i>11</i>	Day <i>07</i>	Year <i>19</i>
	Transporter 2 Printed/Typed Name						Signature		Month	Day	Year
DESIGNATED FACILITY	18. Discrepancy										
	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> 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. <i>H135</i>		2. <i>H141</i>		3. <i>H141</i>		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 <i>Scott M. ...</i>						Signature <i>[Signature]</i>		Month <i>11</i>	Day <i>7</i>	Year <i>19</i>	

APPENDIX F

UPDATED SCHEDULE FOR INTERIM REMEDIAL DESIGN/REMEDIAL ACTION

CTS OF ASHEVILLE, INC. SUPERFUND SITE
SCHEDULE FOR INTERIM REMEDIAL DESIGN/REMEDIAL ACTION (Including ISCO Remedial Action Construction)

[illegible]

Notes:

The schedule is based on indicated period for EPA approval or conditional approval of submittals without significant revisions, and is dependant on weather conditions and equipment availability, as applicable.

The project deliverable submittal dates shown above meet the stipulated schedules listed in the Consent Decree.

Date indicates the beginning of the week (period of work).

G - Groundwater sampling activities

A - Ambient Air sampling activities

S - Surface Water sampling activities

ISCO - In-situ Chemical Oxidation

EPA document review and finalization period

Site wide monitoring and reporting

Field activities/site visits are in red outline