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SITE ASSESSMENT, REMEDIATION & REVITALIZATION

REMEDIAL INVESTIGATION WORK PLAN ADDENDUM

FORMER BRAMLETTE MGP SITE

JULY 2019

PREPARED FOR:



DUKE ENERGY CAROLINAS, LLC

PREPARED BY:





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Fom King Project Geologist

EXECUTIVE SUMMARY

Duke Energy Carolinas, LLC (Duke Energy) entered a Responsible Party Voluntary Cleanup Contract (VCC 16-5857-RP) with the South Carolina Department of Health and Environmental Control (SCDHEC) on July 26, 2016. The VCC pertains to the former Bramlette manufactured gas plant (MGP) and four contiguous parcels of property. Terms of the contract require a groundwater remedial investigation (RI) to:

- Determine the source, nature, and extent of groundwater impacts resulting from past operation of the MGP
- Submit a baseline risk assessment or other evaluation of human health and the environment
- If requested by SCDHEC, submit a feasibility study (FS) or other evaluation of remedial alternatives

The purpose of this RI Work Plan Addendum (RIWP-A) is to describe additional focused investigation of the Bramlette MGP Site. RI activities at the Bramlette MGP were recently completed in accordance with the RIWP-A (dated April 13, 2018) for improving the Conceptual Site Model (CSM) and identifying areas where focused investigation will achieve requirements of the VCC.

After installation of 48 soil borings and six monitoring wells, the lithologic detail across the CSM is better understood. Non-aqueous phase liquids (NAPL) including oil-like material (OLM) and tar-like material (TLM) were identified, each with distinct mobility characteristics. Recent monitoring of groundwater, surface water, and sediment indicates that constituents in groundwater are not affecting the Reedy River.

Objectives of planned RI addendum activities are to:

- Verify near-surface soil concentrations of constituents of interest (COI) within the MGP operations area (Parcel 1)
- Delineate lateral extent of NAPL at Parcel 1 and Parcel 3 (area east of Vaughn landfill)
- Delineate horizontal extent and vertical extent of COIs in groundwater
- Quantify bedrock characteristics
- Quantify mobility characteristics of NAPL

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- Update receptor survey
- Collect sufficient data to support baseline human health and screening level ecological risk assessment (SLERA)
- Complete baseline human health risk assessment in accordance with 2018 RIWP-A

Once complete, data will be evaluated and used to establish Site specific comparison criteria that are protective of human health and the environment. That evaluation will be summarized in an RI report.

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LIST OF ACRONYMS

μg/L	micrograms per liter
ASTDR	Agency for Toxic Substances and Disease Registry
bls	below land surface
CFR	Code of Federal Regulations
COI	constituents of interest
CSM	conceptual site model
CSXT	CSXT Transportation, Inc.
DPT	direct push technology
Duke Energy	Duke Energy Carolinas, LLC
EM	electromagnetic
EPA	Environmental Protection Agency
FLASH	flow-log analysis of single holes
FS	Feasibility Study
GPR	ground penetrating radar
GPS	global positioning system
USEPA	U.S.
IDW	investigation derived waste
MCL	maximum contaminant level
MGP	manufactured gas plant
NAPL	non-aqueous phase liquid
OLM	oil-like material
OSHA	Occupational Safety and Health Administration
PIANO	paraffins, isoparaffin, aromatics, naphthenes, and olefins
PID	photoionization detector
PSG	passive soil gas
PVC	polyvinyl chloride
QC	quality control
RFEM	radio frequency electromagnet
RI	remedial investigation
RIWP	Remedial Investigation Work Plan
RIWP-A	Remedial Investigation Work Plan Addendum
RSL	Regional Screening Level
RTK	real time kinematic
SCDHEC	South Carolina Department of Health and Environmental Control
Site	five parcels (Parcel 1, Parcel 2, Parcel 3, Parcel 4, and Parcel 5)
	owned by CSXT Transportation, Inc.

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LIST OF ACRONYMS CONTINUED

SLERA	Screening Level Ecological Risk Assessment
SVOC	semi-volatile organic compounds
TDEM	time domain electromagnetic
TLM	tar-like material
USGS	United States Geological Survey
VCC	Voluntary Cleanup Contract
VOC	volatile organic compounds

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1.0 INTRODUCTION

Duke Energy is conducting a remedial investigation (RI) at the site of the former Bramlette manufactured gas plant (MGP) (400 East Bramlette Road) (**Figure 1-1**). The RI is being conducted under a Responsible Party Voluntary Cleanup Contract (VCC 16-5857-RP) with the South Carolina Department of Environmental Control (SCDHEC) dated July 29, 2016. The site is approximately 30 acres and is bounded generally by the CSX Transportation (CSXT) railroad corridor to the north, west, and south and West Washington Street, the Legacy Charter School, and the City of Greenville Sanitation Department to the east. The Reedy River and Swamp Rabbit Trail define the western boundary of the site. The Property is identified by County of Greenville as Tax Map Serial Number:

- 0140000300300 Parcel 1
- 0140000300200 Parcel 2
- 0138000100100 Parcel 3
- 0054000300100 Parcel 4
- 0054000600100 Parcel 5

Former MGP operations were conducted on Parcel 1. Active railroad operations are conducted in Parcel 2 and a CSXT field office is located in Parcel 3. An unpermitted landfill (Vaugh Landfill) is contained within Parcel 3. Parcel 1, 4, and 5 are vacant lots. The surrounding area is mixed use including industrial, vacant lots, recreation (Swamp Rabbit Trail), residential, and the elementary school.

1.1 Site History

The MGP was constructed in 1917 and operated until 1952. Most of the operational structures were demolished by 1958. However, review of aerial photography indicates gas holders and foundations remained in place through the 1970s. Duke Energy assumed ownership and operation of the MGP in 1939 and sold the property and operations to Piedmont Natural Gas in 1951. Property transactions from 1963 to 1967 transferred ownership of the five parcels to Seaboard Coast Line Railroad Company also known as CSX Transportation, Inc. (CSXT).

Vaughn Construction placed construction and demolition material on Parcel 3 from 1988 to 1993. SCDHEC directed CSXT to evaluate and mitigate damage to wetlands caused by the unpermitted landfill in 1995. During the evaluation of the Vaughn

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Landfill, non-aqueous phase liquid (NAPL) was encountered, resulting in Duke Energy's involvement with the assessment and remediation of the Bramlette Road properties. Removal of NAPL impacted soil and material from Parcel 1 was planned and implemented in 2000 and 2001. This effort was completed in 2002 with the removal of 61,088 tons of impacted soil and debris.

Routine groundwater monitoring occurred from 2003 to 2016, when the VCC was signed. A Remedial Investigation Work Plant (RIWP) was developed and implemented in 2016 and 2017. An RI Work Plan Addendum (RWIP-A) was developed and implemented in 2018 and the first quarter of 2019.

A detailed accounting of ownership history, previous investigation, and project reporting is included as **Appendix A**.

1.2 Background

The VCC summarizes extensive assessment and remediation activities that have been conducted at the former MGP facility (Parcel 1). The former Vaughn Landfill is unrelated to the former Bramlette MGP facility but was concurrently investigated during previous assessment work. In correspondence dated February 26, 2001, regarding the former Vaughn Landfill parcel, SCDHEC noted that removal of the landfill debris was not recommended and that the only required action was continued groundwater monitoring near the landfill. This determination was supported based on SCDHEC's evaluation of Site risk conditions and recognition of the following facts and conclusions:

- The MGP-related NAPL is viscous and relatively non-mobile
- The areal extent of constituents in groundwater were stable
- Biological assessments of the area demonstrated that the MGP-related constituents were not significantly affecting flora and fauna
- No surface water or downstream/downgradient impacts related to the MGP were observed
- No drinking water wells existed within 0.5 miles of the Site
- In a February 2001 letter to the United States Army Corps of Engineers, SCDHEC recommended CSXT perform off-Site mitigation rather than on-Site mitigation to compensate for wetland impacts attributed to the unpermitted landfill. CSXT was responsible for and completed the recommended mitigation.

Previous remedial actions performed at the Site included removing the primary areas of MGP-related source material. Monitoring data show an overall trend of stable to declining COI concentrations.

Previous investigations have characterized the general extent of the residual NAPL associated with the drainage ditches at the Site. Groundwater monitoring wells, temporary wells, soil borings, and surface water and sediment sampling locations are presented in **Figure 1-2**. Findings from the RIWP-A were incorporated into an improved conceptual site model (CSM) and identified areas where additional focused investigation will achieve requirements of the VCC.

Objectives of planned RI addendum activities are to:

- Verify near-surface soil concentrations of constituents of interest (COIs) within Parcel 1 (MGP source area)
- Delineate lateral extent of NAPL at Parcel 1, Parcel 2, and Parcel 3 (area east of Vaughn Landfill)
- Delineate horizontal and vertical extent of COIs in groundwater
- Quantify bedrock characteristics
- Quantify mobility characteristics of NAPL
- Update receptor survey
- Collect sufficient data to support baseline human health and screening level ecological risk assessment (SLERA)
- Complete a baseline human health and screening level ecological risk assessment

Once complete, data will be evaluated and used to establish Site specific criteria that are protective of human health and the environment.

2.0 UPDATED CONCEPTUAL SITE MODEL

Conclusions from the 2018/first quarter 2019 RIWP-A assessment have been used to update the CSM. A plan view representation of the CSM in is included as **Figure 2-1** and components of the CSM are described below.

2.1 Hydrogeologic Setting

Topography at the site is relatively wide, flat, and low lying, and includes delineated wetlands. Parcels 2, 3, 4, and 5 are located within the 100-year flood plain of the Reedy River **(Figure 2-1)**. The Vaughn landfill (942 feet) and debris piles on Parcel 2 (946 feet) are the points of highest elevation (Parcel 1 elevation ranges from approximately 932 feet to 938 feet). Recent extensive soil coring confirmed the presence of alluvial deposits, including a laterally extensive coarse sand deposit.

Historical drainage ditches provide surface water drainage southward from the floodplain area east of the elevated railroad. Stormwater drainage ditches from the former MGP parcel drain through a culvert southward under Bramlette Road to the historical drainage ditches in the floodplain. From Bramlette Road, the main floodplain drainage ditch extends approximately 2,200 feet south and drains under a railroad trestle near Willard Street to the Reedy River. There are no other known surface water drainage outlets from the Site to the river between Bramlette Road and the railroad trestle near Willard Street.

The groundwater system, consistent with the regolith-fractured rock system, is characterized as an unconfined, interconnected aquifer system indicative of the Piedmont Physiographic Province. A conceptual model of groundwater flow in the Piedmont assumes a regolith and bedrock drainage basin with a perennial stream. Groundwater is recharged by drainage and rainfall infiltration in the upland areas, followed by discharge to the perennial stream.

Flow in the regolith is similar to that of porous media, while flow in bedrock is primarily within secondary porosity features (fractures). Hydrostratigraphic units present at the Site are described in the following table.

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Hydrostratigraphic unit		Extent	Hydraulic characteristics (Cm/sec)	Photo
Fill		Laterally extensive in Parcel 2 and Parcel 3 – Vaughn Landfill Fill present from land surface to approximately 8 feet below land surface (bls)	8.82 x 10 ⁻⁴	
	Alluvium	Laterally extensive (not confirmed in Parcel 1). Lean clay over coarse to fine sand. Alluvium present from approximately 8 feet bls to 19 feet bls.	1.23 x 10 ⁻² –	
Regoliti	Saprolite	Laterally extensive. Saprolite generally present at 19 feet bls to 20 - 40 feet bls.	1.45 x 10 ⁻³	
Transition	Partially weathered rock Highly fractured rock	Laterally extensive.	2.00 x 10 ⁻⁴ – 8.22	
zone		Highly 25 – 50 feet bls. fractured rock	x 10 ⁻⁵	CON CONTRACTOR
Bedrock Laterally extensive. Top of bedrock encountered from 30 – 50 feet bls.		1.87x10 ⁻⁵		

2.2 Source

The Bramlette Road MGP Site (Parcel 1) is approximately 3.7 acres in size. The MGP operations area contained a retort house, three gas holders, a water gas plant, tar and ammonia washer tanks, purifiers, a tar extractor and holder, and an underground heating oil tank. In 2001 and 2002, near-surface soil impacted by former operations and an underground storage tank was removed. Source material was excavated to a depth of approximately 6 feet bls across 1.4 acres Site and to a depth of 12 feet bls across 2.4 acres. Limited areas in Parcel 2 (drainage ditch and suburban propane area) were also excavated. Excavated soil was thermally treated off-Site and returned to backfill the excavation.

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OLM and TLM are two distinct types of NAPL that have been observed at the Site OLM is generally limited in vertical extent to the coarse sand deposit that overlies saprolite. TLM occurs as thin lenses within clay deposits near historical drainage channels. Photographs of OLM (1) and TLM (2) are included below.



(1) NAPL (oil-like, carbureted water gas residuals [coal tar]) present within the coarse sands atop the saprolite unit



(2) Shallow tar-like material (high viscosity) at the base of the landfill material and associated with relict/former historic land surface (coincident with former drainage traces)

2.3 COIs

Benzene and naphthalene are the primary organic constituents of interest. These compounds are included in the list of constituents within the U.S. Environmental Protection Agency (USEPA) VOC Method 8260 and SVOC Method 8270.

2.4 Migration Pathways

Groundwater flows to the southwest toward the Reedy River. The water table is encountered between land surface and approximately 13 feet bls, which is consistent with the depth of some former process structures. Locations and areas where groundwater is encountered at greater depth (i.e., depths of 13 feet bls) are generally coincident with areas where fill has been placed over native materials such as the railroad grade along the Swamp Rabbit Trail and the Vaughn landfill.

Surface water includes delineated wetlands (Duke Energy, 2003) and the Reedy River. Historical drainage ditches were present from the MGP operations area through lowlying areas to the Reedy River (**Figure 1-2**).

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Near surface soils at the former MGP have been removed, treated, and returned to the Site along with additional fill. NAPL has been observed within the soil matrix along surface water and groundwater flow pathways from the MGP to the southern extent of the Vaughn landfill. TLM is observed within the natural lean clay deposits (relict land surface) immediately beneath and within the fill and debris deposits. OLM is observed deeper beneath the lean clay within a coarse sand deposit that overlies saprolite.

2.5 Receptors

An updated receptor survey will be completed to support the final RI report. A summary of potential receptors was provided in the RIWP-A (ERM, April 2018). Key points include:

- The area is served by public water service; no water supply wells are within a half mile.
- The Swamp Rabbit Trail, a county linear greenway park, is located just west of the CSXT railroad corridor and parallels the Reedy River.
- Potential human health exposure scenarios are limited to current and future Site workers who might disturb soil within the impacted areas and trespassers who might access the property from adjacent public property.
- Previous assessments of potential environmental receptors indicated no adverse effects to flora (1996) or fauna (1999).

Implementation of the RIWP-A activities began in October 2018 with the installation of monitoring wells along the Swamp Rabbit Trail. Those activities completed in April 2019 with the NAPL assessment and monitoring well installation and sampling at the Vaughn landfill area. Field methods were conducted in accordance with the Quality Assurance Project Plan (QAPP) prepared by SynTerra (September, 2018). NAPL assessment activities are detailed in the *First Quarter 2019 Quarterly Progress Report* (April 15, 2019).NAPL assessment activities were completed on Parcel 2, 3, and along the Swamp Rabbit Trail and shown on **Figure 1-2**. The following is a summary of the completed RIWP-A activities:

- Installation of monitoring wells MW-29S, MW-29TZ, MW-30S, MW-31S, MW-31TZ, and MW-03BR
- Environmental media sampling for VOC (USEPA Method 8260) and SVOC (USEPA Method 8270)
 - Collection and analysis of 12 surface water samples
 - Collection and analysis of 11 sediment samples
 - Site-wide groundwater monitoring
 - Collection and analysis of 45 soil samples
 - Collection of three sheen samples
- Collection of two NAPL samples (MW-06A and MW-3BR) for chemical analysis by:
 - Paraffins, isoparaffin, aromatics, naphthenes, and olefins (PIANO) VOCs USEPA Method 8260B/5035 High-Resolution sampling and analysis
 - Alkylated PAHs by EPA Method 8270D-SIM
 - o Saturated hydrocarbons by EPA Method 8015D-modified
- Collection of one NAPL sample (MW-06A) for physical properties analysis by:
 - Density & Specific Gravity by ASTM D1481
 - o Viscosity by ASTM D445

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- Collection of three sheen samples for analysis by:
 - PIANO VOCs USEPA Method 8260B High-Resolution
 - o Polycyclic aromatic hydrocarbons (PAHs) USEPA Method 8270D
 - Saturated hydrocarbons USEPA 8015D
- Visual observation and field screening of 48 soil cores
- Collection and analysis of 12 samples for geotechnical parameters (ASTM D422, D2216, D2974)
- Abandonment of three monitoring wells
- Installation of three staff gauges

3.1 Summary of Findings

Implementation of the RIWP-A activities identified areas where focused investigation will achieve requirements of the VCC. Findings of the investigation include:

- Constituents in groundwater are not present in monitoring wells MW-30S and the MW-31 cluster located between the Site and the Reedy River, indicating COIs are not migrating to the Reedy River.
- No VOCs or SVOCs were detected at concentrations greater than reporting limits within the Reedy River (six near bank surface water samples).
- OLM and TLM are present at the site.
 - OLM, found within and outside of historical drainage ditches, primarily in deeper native coarse sand deposits.
 - TLM, typically found near historical drainage ditches, occurs as thin lenses within the native lean clay deposit and is at the base of fill in some locations.

3.2 Monitoring Well Installation and Abandonment

Six monitoring wells were installed during the 2018/first quarter 2019 RIWP-A. Monitoring well installation records are included in **Appendix B**. Monitoring well locations are shown on **Figure 3-1**, and well construction details are summarized in **Table 3-1**.

Newly installed groundwater monitoring wells and findings based on initial monitoring are summarized as follows:

MW-03BR

Primary COIs at MW-03BR were detected at concentrations (Benzene – 1,920 μg/L and naphthalene – 4,060 μg/L) greater than the regulatory standards.

MW-29S

• COIs are not detected in the shallow flow system, indicating COIs in shallow groundwater are not migrating to this location from Parcel 1 (MW-7R).

MW-29TZ

• Primary COIs at MW-29TZ were detected at concentrations (Benzene - $620 \mu g/L$ and naphthalene - 2,910 $\mu g/L$) greater than the regulatory standards.

MW-30S, MW-31S, and MW-31TZ

• COIs are not detected at concentrations greater than reporting limits, indicating COIs in groundwater are not migrating to the Reedy River.

Monitoring wells MW-3D, MW-6A, and MW-19 were abandoned during the 2018/first quarter 2019 RIWP-A assessment. Access to MW-23 and MW-24 was not possible due to ponded water; therefore, those wells have not been abandoned. Water levels are being monitored and these wells will be abandoned when access improves.

During abandonment of MW-6A, the monitoring well became dislodged and was removed. Approximately 3 feet of TLM was observed within the well screen. A sample of this material was collected and submitted to Alpha Analytical for analysis. The open borehole was grouted by the tremie method in accordance with SCDHEC R.61-71.

Results of slug test analysis are provided in **Table 3-2**. Wells along the Swamp Rabbit Trail are slightly more conductive than wells screened in the same hydrostratigraphic unit at the Site. The transition zone wells are within the range of expected values compared with existing Site wells. Fractured bedrock conductivity measured at MW-03BR is similar to the transition zone and the least conductive hydrostratigraphic unit at the Site.

3.3 NAPL Assessment

Soil borings were completed using the rotary sonic drilling technique to collect continuous core samples for field screening, sampling, and visual observation. Boring logs are provided in **Appendix B**, and soil analytical results are summarized in

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Table 3-3. Observations of NAPL extent are shown on **Figure 3-1** and summarized below:

- The western extent of NAPL is defined by the drainage feature that parallels the western side of the Vaughn Landfill, as supported by observations from transect borings T17, T6, T7, T8, T14, and T15 and boring T13-SB1.
- The southern extent of the NAPL investigation is bounded by RI-SB3, immediately south of MW-21 (and abandoned MW-6A). While NAPL was not observed in cores collected during the installation of well MW-21, an accumulation of NAPL within the well has occurred since its installation.
- NAPL was not observed in transect T3 borings, indicating NAPL is limited to the ditch that parallel (located on the north side of E Bramlette Road) which suggests that NAPL impacts do not extend further south than those observed at the T2 borings (south-central portion of Parcel 2).
- OLM was not observed south of the drainage feature that bisects the central portion of the Vaughn Landfill.
- Thin lenses of TLM were present near historical drainage channels and accumulated within MW-06A.
- OLM was observed along the path of the historic drainage ditch that parallels the north side of E Bramlette Road.
- OLM is limited to the northern portion of the Vaughn Landfill, is present within deeper sand deposits, and is observed outside of historical drainage features.

Table 3-3 provides the analytical results from chemical fingerprinting analyses conducted on NAPL samples from MW-06A and MW-03BR. In general, the range of hydrocarbons and relative concentrations are indicative of typical MGP-related carbureted water gas tars derived from coal-based feedstocks and oil-based feedstocks. The NAPL recovered from MW-06A was heavily weathered (based upon visual inspection) and subjected to physical properties testing (PTS Labs). The specific gravity was measured at approximately 1.17 and the viscosity was measured at 42,500 centistokes (at 70 °F); the viscosity of this material is consistent with that of ketchup.

3.4 Water-Level Measurements and Groundwater Flow

Installation of six additional monitoring wells, three staff gauges, and three Reedy River water measuring stations has increased resolution of water level elevation data across the site. Groundwater flow is generally toward the southwest from the MGP parcel toward the Reedy River as indicated on **Figure 3-2**.

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In addition to manual water level gauging, six data logging pressure transducers are installed at three monitoring well clusters across the site. Hydrographs showing water level data are included for the MGP parcel (**Figure 3-3**), the Vaughn landfill (**Figure 3-4**), and adjacent to the Reedy River (**Figure 3-5**). To date, observations from data collected include:

- Groundwater elevation correlates to precipitation events and the Reedy River stage level.
- Vertical gradients within the MW-31S/TZ well cluster are minimal and vary from upward to downward.
- Vertical gradient information suggests the Reedy River can act as a gaining stream or a losing stream based on precipitation and ground saturation.

3.5 Environmental Media Sampling and Analysis Groundwater Assessment and Results

A site-wide groundwater monitoring event was completed from March 20 to March 22, 2019. After installation, a groundwater samples was collected from MW-03BR on April 10, 2019. Groundwater samples were analyzed for VOCs (USEPA Method 8260B) and SVOCs (USEPA Method 8270D). Analytical results are summarized in **Table 3-4**. Primary COI concentrations for benzene and naphthalene are presented in plan view in **Figure 2-1**. Cross-sections, including benzene and naphthalene concentrations, are presented in **Figure 3-6** and **Figure 3-7**.

Surface Water Assessment and Results

Surface water samples were collected from the Reedy River on December 19, 2018, and from the Vaughn Landfill parcel on March 19, 2019. Analytical results are summarized in **Table 3-5**. Surface water sample locations are shown in **Figure 1-2**. Results are summarized as follows:

- VOC and SVOC concentrations in surface water samples collected from the Reedy River were less than reporting limits.
- VOC and SVOC concentrations from surface water sample locations SW-1 through SW-6 are less than regulatory standards.
- Chloromethane was detected at SW-02, SW-04, and SW-06. Chloromethane is a naturally occurring compound with an estimated 99 percent of chloromethane in the environment derived from natural sources such as rotting wood (ASTDR, 1998).

Sediment Assessment and Results

Sediment samples were collected from the Reedy River on December 19, 2018, and from the Vaughn Landfill parcel on March 19, 2019. Analytical results are summarized in **Table 3-6.** Sediment samples were collected close to the location where surface water samples were collected (**Figure 1-2**). Results are summarized as follows:

- Concentrations of VOCs and SVOCs in Reedy River sediments are less than USEPA RSLs for industrial soil.
- Concentrations of VOCs and SVOCs detected in SW-01-SED through SW-06-SED are less than the USEPA RSLs for industrial soil.

Soil Assessment and Results

Soil samples were collected at depths ranging from 10 feet bls to 22 feet bls. Analytical results are summarized in **Table 3-7**, and sample locations are depicted in **Figure 1-2**. Results are summarized as follows:

Concentrations of VOCs and SVOCs identified in soil are less than USEPA regional screening levels (RSLs) for industrial soil with the exception of the northeast area of the Vaughn Landfill near T9-SB-19 (benzo(a)pyrene, 3,530 µg/L).

Sheen Assessment and Results

Three sheens observed at the site were sampled on April 24, 2018. Locations sampled included standing water along the southern end of Parcel 2, a ponded area east of the Vaughn Landfill, and the drainage ditch west of the Vaughn Landfill. Sheens were collected using Teflon nets and analyzed by the following methods:

- PIANO VOCs by USEPA Method 8260 High Resolution
- PAHs by USEPA Method 8270D
- Saturated hydrocarbons by USEPA Method 8015D

Results from all three sheens sampled indicate the presence of hydrocarbons. Sample results are summarized in **Table 3-8**. Sheen locations that were sampled are shown in **Figure 1-2**.

Analytical laboratory reports for all media are included in **Appendix C.**

4.0 PROPOSED ADDITIONAL REMEDIAL INVESTIGATION ACTIVITIES

Interpretation of data collected during the 2018/first quarter 2019 RIWP-A assessment activities identified areas where additional focused assessments are necessary to fulfill requirements of the VCC. Information from the proposed activities will be used to determine:

- Current soil concentrations of constituents of interest (COI) within the MGP operations area of Parcel 1
- Extent of NAPL at Parcel 1 and Parcel 3 (area east of Vaughn landfill)
- Horizontal extent and vertical extent of COIs in groundwater north and west of MW-29TZ and within bedrock across the Site
- Mobility characteristics of NAPL
- Human health and ecological risk

Investigation procedures, document management, sample nomenclature, and data quality are described in detail within the QAPP. Assessment proposed in this addendum will be conducted in accordance with the QAPP. Proposed assessment activities (in order of implementation) include:

- Parcel 1 surface geophysical survey
- Parcel 1 near-surface soil sampling at
- Parcel 1 passive soil gas survey
- Parcel 2 test pits
- Parcel 1 and Parcel 2 soil borings
- Off-Site soil borings (east of Parcel 3)
- Groundwater monitoring well installation
- Bedrock characterization including borehole geophysics
- Site wide Groundwater monitoring
- Parcel 3 and 4 Surface water and sediment monitoring

4.1 Surface Geophysical Survey

Surface geophysical survey methods for clearing areas of utilities prior to subsurface investigation and defining structures that remain in place at Parcel 1 and Parcel 2 are proposed (**Figure 4-1** and **Figure 4-1A**). Survey information will be evaluated to identify MGP operational structures that remain in place. Surface geophysics data will be correlated with other screening tools to target placement of soil borings and monitoring wells. Targeted placement of borings and monitoring wells will be used to delineate the presence of NAPL and monitor concentrations of COIs in soil and groundwater.

Ground Penetrating Radar (GPR)

GPR is an electromagnetic method that detects interfaces between subsurface materials with differing dielectric constants. The GPR system consists of: an antenna, which houses a transmitter and receiver; a profiling recorder, which processes the received signal and produces a graphic display of the data; and a video display unit, which processes and transmits the GPR signal to a color video display and recording device.

Depth of investigation of the GPR signal is highly Site-specific, and is limited by signal attenuation (absorption) of the subsurface materials. Signal attenuation is dependent on the electrical conductivity of the subsurface materials. Signal attenuation is greatest in materials with relatively high electrical conductivities such as clays and brackish groundwater, and lowest in relatively low conductivity materials such as unsaturated sand or rock. Depth of investigation is also dependent on antenna frequency and generally increases with decreasing frequency; however, the ability to identify smaller subsurface features is diminished with decreasing frequency.

EM-61

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

The Geonics EM-61 system used in this investigation operates within these principles. However, the EM-61 TDEM system can discriminate between moderately conductive earth materials and very conductive metallic targets. The EM-61 consists of a portable coincident loop time domain transmitter and receiver with a 1.0-meter x 0.5-meter coil system. The EM-61 generates 150 pulses per second and measures the response from the ground after transmission or between pulses. The secondary EM responses from

metallic targets are of longer duration than those created by conductive earth materials. By recording the later time EM arrivals, only the response from metallic targets is measured, rather than the field generated by the earth material.

Radio Frequency EM Utility Locating Equipment

Radio Frequency Electromagnetic (RFEM) utility locating equipment consists of a transmitter and a dual-function receiver. The receiver can be operated in a "passive" mode or in an "active" mode. The two modes of operation provide various levels of detection capabilities depending on the specific target or application.

The EM system is operated in the "active" mode by either inducting or conducting a signal into the underground utility to be traced. A transmitter is placed over and in line with a suspected buried utility. The transmitter induces a signal, which propagates along the buried utility. As the receiver is moved back and forth across the suspected path of the utility, the trace signal induces a signal into the receivers coil sensor. A visual and audio response indicates when the receiver is directly over the buried utility.

Another means of detecting in the active mode utilizes a method to "conduct" a signal within the buried utility. To accomplish this, a cable from the transmitter is clamped onto an exposed section of the buried utility and a signal propagates along the buried line. This technique minimizes any interference caused by parasitic emissions from adjacent cables in congested areas. When the system is used in the passive mode, the receiver is responding to a current that is 60 hertz (Hz) cycle and energized by underground utilities.

Interference can and might occur when buried utilities intersect or are adjacent. This "bleed-off" effect might provide a false response to the identification of the tracked utility. "Bleed-off" is caused by utilities that might be energized in the "active" or "passive" mode.

Field Procedures

Buried pipes and cables will be located using a combination of GPR and RFEM pipe and cable locating equipment. The RFEM equipment will be used in active mode by connecting a RFEM transmitter to an above-ground utility feature and inducing signals from the ground surface, and in passive mode by scanning the site for radio and 60 Hz signals from subsurface utilities. Identified buried pipes and cables will be marked on the ground surface using marking paint and/or flags. We anticipate investigating relevant portions of Parcel 1, Parcel 2, and Parcel 3 and areas of the Swamp Rabbit Trail for underground utilities. Both active and abandoned utilities will be mapped during

this phase of the investigation. Detected utilities will be surveyed using a real-time kinematic/global positioning system (RTK/GPS) or total station.

GPR and EM-61 data will be collected throughout the site using an appropriate profile spacing determined by the geophysics professional in the field. Positioning control will be accomplished by integrating a RTK/GPS system. After completion of the fieldwork, the geophysical data will be digitally processed to aid in interpretation. Location of notable anomalies will be added to the data to facilitate the interpretation. Geophysical anomalies will be marked in the data and exported to Microsoft Excel and AutoCAD format.

A final report — including descriptions of the geophysical systems and procedures, analysis and interpretation of the geophysical data, and maps — will be prepared.

4.2 MGP Source Area Soil Screening and Sampling

Near-surface soil sampling will be conducted within the bounds of the 2000-2001 excavation area to verify near-surface soil concentrations of COIs are within applicable regulatory standards or site specific target levels for intended property use. Prior to subsurface investigation, each boring location will be surveyed for utilities as described in **Section 4.1**. A certified South Carolina well drilling contractor will be retained to drill approximately 1-inch diameter soil borings to six feet bls using direct push technology (DPT). An unbiased grid with 60 foot spacing will be established across the study area plotting 47 to 50 near surface soil borings (**Figure 4-1A**).

A photo ionization detector (PID) will be used to screen soils during the investigation, and measurements will be recorded in the field logbook. Two soil samples will be collected from each boring for laboratory analyses for VOCs (USEPA Method 8260) and SVOCs (USEPA Method 8270). A shallow sample will be collected from 0.5 to 1 foot bls and a deeper sample from 5.5 to 6 feet bls.

4.3 Soil Gas

A passive soil gas (PSG) survey using adsorbent sampling devices will be conducted within the bounds of the 2000-2001 excavation area. PSG data will be used to define potential "hot spots" in order to target specific locations for soil coring, test pits, and monitoring well installation. All field methods will be conducted in accordance with methods described in ASTM D7758-17 Passive Soil Gas Sampling in the Vadose Zone for Source Identification, Spatial Variability Assessment, Monitoring, and Vapor Intrusion Evaluations. Soil gas sampling devices will be placed collocated with the surface soil sampling grid (**Figure 4-1A**).

Once surface soil sampling is complete, an adsorbent PSG sampler will be suspended upside down approximately 4 to 6 inches bls and capped with an aluminum foil plug and a soil cover to prevent ingress of ambient air. Drilling equipment will be decontaminated in between each location to avoid cross-contamination. The location of each sampling device will be marked in the field and on a handheld GPS device for ease of recovery. Proper field documentation of ambient conditions will be collected for each location.

All sampling devices will be deployed for seven days. After the exposure period, samplers will be retrieved and shipped without preservatives to the Beacon Environmental laboratory for analysis following USEPA Method 8260C procedures. Field quality control (QC) samples and duplicate samples using replicate sorbents will be collected in accordance with ASTM D7758-17. All samples will be managed under chain-of-custody protocol. After interpretation of analytical results, deeper borings can be evaluated for completion in areas of highest concentrations as described in **Section 4.2**.

4.4 Test Pits

Shallow test pits or soil borings are proposed in the area indicated in **Figure 4-1A** to verify adequate removal of near-surface soils impacted by the MGP. The extent of excavation in 2001 and 2002 might have been limited by debris piles on Parcel 2 west of the MGP. Reconnaissance of the debris on-site and results of surface geophysics and PSG screening will be used to complete the test pit investigation design. Test pits will not exceed a depth of four feet bls. If shallow test pits indicate potential NAPL presence greater than four feet bls, soil boring will be used to define vertical extent.

4.5 Soil Borings

One objective of this work plan and the overall RI is to delineate the extent of NAPL impacts. As such, additional soil borings within Parcel 1 and to the east of Parcel 3 (Vaughn Landfill) are warranted. The soil cores will be visually inspected and logged for lithology and evidence of visible MGP-related impacts. Field screening will include headspace measurements using a PID in accordance with procedures described in Section 4.2 and the QAPP. Additional "step-out" borings may be necessary based upon the observed extent (if any) of NAPL impacts.

Borings will be abandoned upon completion to terminal depth. Borings greater than 5 feet in depth shall be completely filled from the bottom of the borehole to the land surface with bentonite-cement, neat cement, or 20 percent high solids sodium bentonite grout. The boring shall be abandoned by forced injection of grout or pouring through a

tremie pipe starting at the bottom of the borehole and proceeding to the surface in one continuous operation.

Parcel 1

Soil borings within the potential source area (Parcel 1) will provide additional lithologic detail and assess NAPL presence, thickness, and extent near the former MGP process area and beneath the extent of previously excavated material. Up to six borings are anticipated and will be advanced to approximately 40 feet bls or top of bedrock. This depth is selected based upon the current understanding of subsurface lithology shown on **Figure 3-6**. Number of borings and their exact locations will be determined based on evaluation of the surface geophysical survey and PSG survey. The general area where borings are planned is shown in **Figure 4-1A**.

Off-Site Soil Borings (Adjacent to Parcel 3)

As indicated on **Figure 3-1**, the soil borings completed during March 2019 along transect T-9 included visible NAPL observations located primarily within the coarse sand unit immediately above the saprolite. These visible NAPL impacts were observed at various discrete depth intervals between approximately 8 to 17 feet bls. Observations included tar blebs, NAPL-coated grains and/or thin (i.e., several inches or less) lenses of NAPL-saturated matrix. The boring logs are included in **Appendix B**.

Figure 4-1 presents the proposed areas for additional environmental media investigations. One area is located to the east of Parcel 3 and adjacent to existing monitoring well MW-25R (the proposed sampling area is shown as a yellow rectangle on **Figure 4-1**) where the area is currently inundated by standing water. It is proposed that the beaver dam be removed from the Site such that the standing water can drain from the area. At that point additional reconnaissance can be completed to evaluate the ability to drill four sonic borings within this area for purposes of NAPL extent delineation. The exact locations will be determined based on field conditions and drilling rig accessibility and property owner access agreement (to be executed). The borings will be drilled to a minimum depth of 24 feet bls. This depth is selected based upon the depths of observed NAPL residuals at the T-9 and T-10 transects (northeastern Parcel 3).

4.6 Monitoring Well Installation

The existing monitoring well network will be expanded to completely delineate the horizontal and vertical extent of COIs in groundwater. Proposed groundwater monitoring well details are summarized in **Table 4-1**.

Thirteen (13) locations are proposed based on existing information. The installation of well clusters (including wells in the shallow, transition, and bedrock flow zones) are proposed for locations where there are no existing monitoring wells and hydrostratigraphic units are sufficiently thick to maintain a minimum of 15 feet of separation between adjacent well screens. Screening level data and field observations will be incorporated in the decision making process for final well count and placement.

Conceptual locations for monitoring wells and monitoring well clusters are shown in **Figure 4-1**.

Field Methods

Sonic drilling methods are recommended for this scope of work. Sonic drilling uses high frequency rotation vibration aided by down pressure and rotation to advance drilling tools through the subsurface. Sonic drilling reduces the amount of drill cuttings and recovers continuous core samples for lithologic description, field analysis, and laboratory testing.

Previous site investigation has identified the presence of NAPL beneath the former MGP structures and within clay and coarse sand deposits at Parcel 3. Sonic drilling is an appropriate method for minimizing potential drawdown of constituents deeper into the subsurface. The following drilling sequence is in general accordance with ASTM D6914/D6914M-16 and can reduce cross-contamination and protect the integrity of core samples and monitoring well installation:

- 1. Sample barrel insertion
- 2. Sample barrel extraction
- 3. Sample recovery
- 4. Repeat sampling process and drill with casing as necessary to prevent caving or slough
- 5. NAPL encountered or increased annulus for permanent surface casing installation is determined to be necessary
- 6. Insertion of a larger diameter casing (commonly referred to as an override casing)
- 7. Advance override casing to target depth. If NAPL was encountered, clean (decontaminated) tooling will be used on subsequent runs
- 8. Continue advancing sample barrel and casing to target borehole depth

Monitoring Well Design

Monitoring wells will be pre-approved prior to installation in accordance with SCDHEC regulation R.61-71 H. All wells will be drilled, constructed, and abandoned by a South Carolina certified well driller per S.C. Code Section 40-23-10 et seq. Typical shallow well construction details for stick-up and flush mount completion are shown in **Figure 4-2** and **Figure 4-3**. Typical bedrock well construction details for stick-up and flush mount completion are shown in **Figure 4-5**. Stick-up well completions are preferable, however flush mount wells are necessary at monitoring wells proposed along the Swamp Rabbit Trail.

Each well will consist of Schedule 40 flush-joint-threaded polyvinyl chloride (PVC) pipe fitted to standard well screens. Screens shall have 0.010-inch wide slots with a No. 2 (or equivalent) filter pack. Permanent surface casings are used to prevent cross communication between isolated flow zones or prevent introduction of overlying material deeper into the subsurface. Permanent Schedule 80 PVC surface casing will be installed where the presence of NAPL is known and at bedrock well locations.

Well centralizers are not likely to be employed during monitoring well installation. In saturated conditions, centralizers often inhibit the placement of bentonite seal and result in the bridging of bentonite within the borehole. Hanging the well (suspending from a lift ring) helps avoid well deflection while the well is constructed. The well will be hung approximately 1 foot off the bottom of the boring (to allow filter material below the well screen and to limit potential well deflection).

The diameter of the drilled hole shall be large enough to allow for a minimum of 1.5 inches of annular space on all sides of the casing for forced injection of grout through a tremie pipe.

All grouting shall be accomplished using forced injection to emplace the grout. A grout shoe is the preferred method of grouting. When emplacing the grouting material, the tremie pipe shall be lowered to the bottom of the zone to be grouted. The tremie pipe shall be kept full continuously from start to finish of the grouting procedure, with the discharge end of the tremie pipe being continuously submerged in the grout until the zone to be grouted is completely filled.

A cement or aggregate reinforced concrete pad at the ground surface that extends 6 inches beyond the borehole diameter and 6 inches below ground surface is required. The pad shall be capable of preventing infiltration between the surface casing and the borehole to the subsurface.

Monitoring wells will be completed with above-ground steel or aluminum protective casings with locking caps.

Monitoring Well Identification

Standard well tag information is defined in SCDHEC regulation R.61-71.H.2.c . Well tags will be aluminum, permanently affixed to the protective cover, and completed with a stencil set.

Monitoring wells installed on CSXT property will include the following required information on well identification tags:

CSXT Railroad Agreement Number: CSXT812078 Railroad phone number: 1-800-232-0144

4.7 Bedrock Characterization

Additional characterization of bedrock will be used to further develop the CSM and provide vertical delineation of COIs in groundwater. Methods and objectives of bedrock characterization include:

Method	Objective	
Lineament survey	Identify predominant geologic structural control on groundwater flow	
Water level monitoring	Evaluate interconnectivity of bedrock fractures	
Groundwater monitoring well installation and sampling	Delineate vertical occurrence of COIs in groundwater	
Groundwater monitoring well installation	Quantify nature and occurrence of bedrock	
Borehole geophysics	fractures including fracture orientation, spacing, hydraulic aperture, and transmissivity	
FLASH analysis		

Lineament survey

A lineament survey in the vicinity of the site and surrounding area can identify linear features at ground surface that might have resulted from underlying bedrock fractures, fracture zones, faults or other geologic structures. Areas near the MGP will be visually reviewed to identify linear features. The selected aerial photograph and topographic map will be evaluated separately and independently to provide verification of features through agreement. Aerial imagery and topographic survey information used for the lineament evaluation will meet the following criteria:

- Selected images and topographic maps will be produced prior to and during MGP operation (1917 1958).
- The scale and resolution are sufficiently detailed to identify apparent linear features not caused by anthropogenic activity.

Linear features may represent the approximate vicinity of preferential groundwater flow zones in bedrock. The following list developed by the U.S. Geological Survey (USGS) (Clark et. al., 1996) summarizes types of features that can be used to identify lineaments in this evaluation:

- Linear topographic features
- Straight stream segments
- Aligned gaps in ridges
- Vegetation

Lineaments will be summarized and presented on a site layout map, including a rose diagram lineament summary.

Water level monitoring

Monitoring hydraulic head pressure in nearby monitoring wells during drilling and well development activities can provide evidence of interconnected bedrock fractures. Understanding how bedrock fractures are connected can increase understanding of preferential groundwater flow pathways through the subsurface and provide insight into local heterogeneity.

Up to six data logging pressure transducers will be placed adjacent to well installation and development activities. Transducers will be programmed to record water levels at a frequency of one measurement per minute to allow correlation to field drilling logs. To improve correlation of water levels with field activities, the oversight geologist will synchronize data logger date and time with field note timekeeping.

Borehole geophysics and analysis

After completion of the boreholes to target depth, a series of borehole geophysical logs will be conducted along the entire open bore length (bedrock) of seven proposed drilling locations. These locations include : MW-03BRL, MW-21BR, MW-29BR, MW-35BR, MW-36BR, MW-37BR, and MW-40BR, as shown on **Figure 4-1**.

Borehole geophysical logs will be conducted to determine appropriate discrete screen intervals within the fractured bedrock flow system. Logs will include fluid

temperature/resistivity/3-arm caliper/SPR, optical and/or acoustic televiewer, and heat pulse flowmeter under ambient and pumping conditions.

A report documenting the findings of the geophysical survey will include logs, interpretations, and results. Using optical televiewer data, the dip, azimuth and aperture for detected fractures will be calculated, and the results will be presented in tadpole and stereographic plots.

Heat pulse flow data will be used for the analysis of borehole vertical flow logs using the Flow-Log Analysis of Single Holes (FLASH) computer program. Vertical flow logs in conjunction with the geophysical logs and well construction details will be used to:

- Create vertical flow profile of hydraulic conductivity with depth
- Calculate hydraulic aperture of fractures
- Quantify fracture spacing (vertical)

During the heat pulse flowmeter logging, care will be taken by the geophysics contractor to measure, record, and provide documentation of water level measurements from a data logging pressure transducer. Pumping flow rates will be measured to the nearest 0.1 gallon per minute. It is anticipated that pumping rates of approximately 1 gallon per minute can be sustained during the logging. Water level measurements and pumping flow rates are necessary to verify flowmeter data quality.

4.8 Groundwater Monitoring

A site-wide groundwater monitoring event including newly installed and existing monitoring wells is planned after installation and development of the proposed wells (**Figure 4-2**). Due to access constraints, existing well MW-18 will be replaced by the proposed MW-31 cluster in the sampling program. Site wells will be gauged for water levels prior to sampling.

Monitoring wells will be purged using low-flow methods and groundwater quality parameters (e.g., pH, conductivity, temperature, and oxidation-reduction potential) will be stabilized prior to sample collection. Field personnel will utilize a peristaltic pump or submersible pump with dedicated downhole tubing to retrieve groundwater samples. Groundwater samples will not be collected from monitoring wells where measurable (0.01 feet) NAPL is encountered.

Samples from each location will be properly preserved and shipped to a South Carolina certified laboratory for analysis of VOCs (USEPA Method 8260) and SVOCs (USEPA

Method 8270). All samples will be placed in coolers containing ice and managed under chain-of-custody protocol.

4.9 Surface Water and Sediment Sampling

Surface water and sediment samples will be collected to provide additional input for the SLERA, to assess current sediment quality in the ponded areas between the landfill parcel and the Reedy River, and to verify NAPL extent. Samples will be collected in accordance with the QAPP at locations within the ponded areas south of the Vaughn Landfill. Up to four samples will be collected from each area (**Figure 4-1**).

4.9.1 Surface Water Sampling

Surface water samples will be collected at each location prior to collecting sediment samples. Prior to surface water sample collection, field parameters will be measured by submerging a caged probe into the water. Field parameters will include the following:

- pH (standard units; s.u.)
- Temperature (degrees Celsius; °C)
- Specific conductance [SC] (micromhos, µmho)
- Dissolved oxygen [DO] (milligrams per liter; mg/L)
- Oxidation/Reduction Potential [ORP] (millivolts; mV)
- Turbidity (nephelometric turbidity units, NTU)
- Color
- Odor

Surface water sample collection will commence after field parameters stabilize.

Surface water samples will be collected at the midpoint of the water column. Samples may be collected by directly filling submerged bottleware or by pumping surface water into the bottleware using a peristaltic pump, HDPE tubing, and silicon tubing. If a peristaltic pump is used, HDPE tubing will be held in place with a weight or a float as needed. Samples for VOC analysis will not be pumped through silicone tubing; a backpumping method will be employed to fill these bottles. Effort will be made to avoid entraining air in the samples. A stainless-steel strainer may be added to the tubing to avoid clogging the tubing. All equipment will be inspected by the field program on-Site supervisor and calibrated daily, as applicable, prior to use in the field according

Samples will be properly preserved and submitted to a South Carolina certified laboratory for analysis of VOCs (USEPA Method 8260) and SVOCs (USEPA Method 8270).

4.9.2 Sediment Sampling

Where feasible, sediment cores will be collected in each location to a maximum depth of 5 feet below ground surface. Cores will be collected using manual push coring methods or mechanical methods, depending on Site access conditions. Cores will be sub-sectioned into discrete samples corresponding to depths of 0.0-to 0.5-foot depth, and 0.5-foot to 1-foot, 1-foot to 2-foot, 2-foot to 3-foot, 3-foot to 4-foot, and 4-foot to 5-foot. Coring depth may be limited by refusal of hand-held equipment where mechanical access is not possible. Following collection, cores will be maintained in an upright position as much as possible. Any superficial water collected during the coring will be drained from the sampling device (e.g., if using a hard liner, by drilling a small hole a few inches above the sediment surface and allowing the water to drain). The core will be sub-sectioned using a handheld saw or similar device. Care will be taken to prevent material from flowing out of the hard liner during sectioning. Core sections will be emptied into stainless-steel bowls for homogenizing.

Field personnel will make three attempts to collect sediment cores per location. If the initial location does not provide sample recovery, coring will be attempted three additional times within a 20-foot radius of the original location. If cores cannot be retrieved after three attempts, shallow sediment samples will be collected in place of cores. Shallow samples, if applicable, will be collected using a hard liner or petite ponar (or similar) to a depth of approximately 6 inches.

Samples will be collected in accordance with the QAPP. After sampling, each sample will be homogenized using a stainless-steel spoon to mix the sediment in the bowl prior to filling the sample containers. Sediment will be transferred into sampling containers using a stainless-steel spoon or other appropriate device. Any foreign materials present (e.g., gravel, vegetation) in the sediment will be avoided when filling sample bottles. The sediment samples will be placed in iced coolers and managed under chain-of-custody protocols for submittal to a South Carolina certified laboratory for analysis of VOCs (USEPA using EPA Method 8260 and SVOCs (USEPA to include low level parent and alkylated PAHs) using
either EPA Method 8270 or EPA Method 8270 SIM. A maximum of three Method 8270 SIM analyses will be performed per sample location (e.g., a sample from the midpoint of the core, and the deepest sample).

4.10 IDW Management

Solid and liquid IDW will be generated during collection of soil cores, monitoring well installation, and environmental media sampling. Solids and liquids will be contained as appropriate in 55-gallon barrels or lined roll off containers and transported to an approved disposal facility in a timely manner. IDW containing free product should be segregated. All reusable equipment will be decontaminated using Liquinox (or similar) and water between sampling locations. Decontamination fluids will be collected and disposed of with IDW.

4.11 Applicable Regulatory Standards and Screening Levels

The data collected during proposed RI activities will continue to be compared to regulatory standards and criteria presented in the RIWP-A (ERM, April 13, 2018). Applicable criteria and screening levels are presented in **Table 4-2** and also listed below:

Groundwater

- SCDHEC R. 61-58 State Primary Drinking Water Standards, effective October, 2014, Appendix B maximum contaminant level (MCL) based on the USEPA National Recommended Water Quality Criteria, dated 2006
- SCDHEC regulation document R.61-68, Water Classifications & Standards, effective June 27, 2014, groundwater classification as GB, Human Health MCLs provided in the Appendix of R.61-68
- SCDHEC Quality Assurance Program Plan UST Management Division, effective February 2016, Appendix D

Surface water

• SCDHEC R.61-68, Water Classifications & Standards, surface water classification as FW, Human Health MCLs provided in the Appendix of R.61-68

Sediment/soil

• USEPA RSLs for industrial soil

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Duke Energy Carolinas, LLC - Former Bramlette MGP Site

5.0 RISK ASSESSMENT

Risk assessments will be performed to evaluate potential risks associated with exposure to environmental media at the site. A Baseline Human Health Risk Assessment of groundwater will be performed using selected historical data along with the collection of new groundwater data collected during the RI.

A phased screening level approach will be taken to assess potential human health risk from exposure to surface water and soil/sediment. In addition, a SLERA will be performed to assess potential ecological impacts.

An overview of the methodology and procedures that will be used to estimate potential human health and screening level ecological risks posed by constituents detected at the site are presented in the approved RIWP-A (ERM, April 13, 2018).

Duke Energy Carolinas, LLC - Former Bramlette MGP Site

6.0 SCHEDULE AND REPORTING

After completion of the RIWP-A activities described above, a RI report will be prepared. The report will summarize the compiled results of remedial investigations conducted under the VCC. The RI report will include a description of activities undertaken at the site, results of the sample analysis, and an updated CSM. The report will include laboratory data sheets, data tables summarizing results of the assessment, and figures illustrating assessment activities and results of the sampling activities.

The following preliminary schedule is proposed, which is dependent on SCDHEC's written approval of the RIWP-A and obtaining the necessary property access agreements. Upon approval of the RIWP-A by SCDHEC, an updated project schedule will be developed.

RIWP-A submittal to SCDHEC	July 3, 2019
Q2 2019 Progress Report submittal to SCDHEC	July 15, 2019
SCDHEC approval of 2019 RIWP-A	August 16, 2019
Q3 2019 Progress Report submittal to SCDHEC	October 15, 2019
Execute access agreements	90 days from RIWP-A approval
Q4 2019 Progress Report submittal to SCDHEC	January 15, 2020
Complete 2019 RIWP-A assessment	First Quarter 2020
Q1 2020 Progress Report	April 15, 2020
Submit RI Report	Second Quarter 2020

7.0 REFERENCES

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- Beacon Environmental Services, Inc. "Passive Soil Gas Testing: Standard for Site Characterization."
- Clark, Jr., Stewart, Richard Bridge Moore, Eric W. Ferguson, and M. Zoe Picard. "Criteria and Methods for Fracture-Trace Analysis of the New Hampshire Bedrock Aquifer." U.S. Geological Survey.
- Duke Energy Site Remediation Services Group. 2000. "Phase III Investigation and Site Assessment Report: CSXT/Vaughn Landfill and Bramlette Road MGP Sites."
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- O'Neill, Harry, Joseph E. Odencrantz, Wes Bratton, and Kenneth Moser. 2010. "Innovative, Non-Intrusive Passive Soil Gas Collection device Maps Large Carbon Tetrachloride Plume at the DOE Hanford Site." WM2010 Conference.
- South Carolina Department of Health and Environmental Control. 2016. "Regulation 61-71 Well Standards."
- South Carolina Department of Health and Environmental Control. 2016. "Voluntary Cleanup Contract in the Matter of CSXTF Bramlette Road Site, Greenville County and Duke Energy Carolinas, LLC."
- SynTerra Corporation. 2018. "Quality Assurance Project Plan (QAPP): Former Bramlette MGP Site."

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Duke Energy Carolinas, LLC - Former Bramlette MGP Site	SynTerra

US EPA. 2014. "Passive Samplers for Investigations of Air Quality: Method Description, Implementation, and Comparison to Alternative Sampling Methods."

Figures













NOTES:

WATER LEVELS WERE COLLECTED ON MAY 2, 2019.

ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN

⁴ MONTORING WELL LOCATIONS AND ELEVATIONS SURVEYED BY A SOUTH CAROLINA LICENSED PROFESSIONAL LAND SURVEYOR.

SWAMP RABBIT TRAIL CENTERLINE FROM CITY OF GREENVILLE.











SCALE 150
CALE 15
ATE: 6/10/2019
ATE: 6/10/2019 ATE: 6/10/2019

BENZENE AND NAPHTHALENE **CONCENTRATIONS IN GROUNDWATER GREENVILLE, SOUTH CAROLINA**



SCALE 150
CALE 15
ATE: 6/10/2019 ATE: - ATE: 6/10/2019 ATE: 6/10/2019

FIGURE 3-7 BENZENE AND NAPHTHALENE **CONCENTRATIONS IN GROUNDWATER CROSS-SECTION B-B'** BRAMLETTE MGP SITE EAST BRAMLETTE ROAD **GREENVILLE, SOUTH CAROLINA**













Tables

TABLE 3-1 MONITORING WELL CONSTRUCTION DETAILS REMEDIAL INVESTIGATION WORK PLAN ADDENDUM FORMER BRAMLETTE MGP SITE DUKE ENERGY CAROLINAS, LLC, GREENVILLE, SC

	Installed	Installed By/For							Botton	n of Well	Screen		Screen I	Interval			Preliminary Revised Hyrdro, Strationaphic
Well	matalieu	,	Install Date	Well Status	Northing	Easting	Ground Elevation	TOC Elevation	Dotton		Length	Тор	Bottom	Тор	Bottom	Historical Well Classification	Well Classifications ¹
	Consultant	Client/Owner							ft-bls	Elevation	ft	f	t-bls	Elev	vation		
								CSXT PARCEL 1 - FOR	MER MGP SI	ТЕ							
MW-7	AES	CSXT	Mar-96	Abandoned			933.44	935.74	15.0	918.4	10	5	15	928.4	918.4	Shallow	
MW-7R	Anchor QEA	Duke Energy	Jun-17	Active	1104849.061	1574503.135	932.93	936.01	15.0	917.9	10	5	15	927.9	917.9	Shallow	
MW-8	Duke Engineering	Duke Power	Mar-99	Abandoned			933.54	935.99	15.5	918.0	13	1.7	14.7	931.8	918.8	Combined	
MW-9	Duke Engineering	Duke Power	Mar-99	Abandoned			933.54	936.03	30.4	903.1	5	25.2	30.2	908.3	903.3	Deep	
MW-9R	Duke Engineering	Duke Energy	Jun-17	Active	1104848.766	1574514.012	933.62	936.47	10.5	903.7	15	21	19	912.6	907.6	Combined	
MW-10	Duke Engineering	Duke Power	Feb-99	Abandoned			941.47	943.39	25.7	922.0	10	14	24	936.5	925.5	Mid-Depth	
MW-12	Duke Engineering	Duke Power	Feb-99	Abandoned			939.19	941.89	12.0	927.2	10	1.5	11.5	937.7	927.7	Shallow	
MW-13	Duke Engineering	Duke Power	Mar-99	Abandoned			938.08	940.48	23.1	915.0	10	11.5	21.5	926.6	916.6	Mid-Depth	
MW-13R	Anchor QEA	Duke Energy	Jun-17	Active	1105219.021	1574610.864	937.93	940.94	23.5	914.5	10	10	20	927.9	917.9		
MW-14	Duke Engineering	Duke Power	Mar-99	Abandoned			937.64	940.18	13.0	924.6	10	2	12	935.6	925.6	Shallow	
MW-15	Duke Engineering	Duke Power	Mar-99	Active	1105042.194	1574275.573	936.39	939.09	58.4	878.0	5	50	55	886.4	881.4	Deep	Deep Saprolite
MW-16	Duke Engineering	Duke Power	Mar-99	Active	1105037.868	1574270.95	936.73	938.61	16.0	920.7	10	5	15	931.7	921.7	Shallow	Shallow
MW-17	Duke Engineering	Duke Power	Mar-99	Abandoned			933.29	935.22	16.0	917.3	13.9	1.6	15.5	931.7	917.8	Combined	
MW-26	Anchor QEA	Duke Energy	Jun-17	Active	1105207.707	1574618.806	937.90	940.91	58.4	879.5	10	45	55	892.9	882.9		
MW-27	Anchor QEA	Duke Energy	Jun-17	Active	1105213.38	1574614.926	937.83	940.93	38.6	899.2	10	25	35	912.8	902.8		
MW-28	Anchor QEA	Duke Energy	Jun-17	Active	1104848.427	1574522.331	933.88	936.69	44.6	889.3	10	35	45	898.9	888.9		
1044 000	0.7		5 1 40		1530035 (01	11015/1015	CSXT	PARCEL 2 - NORTH OF I	EAST BRAML	ETT ROAD	10	-	15	005.0	015.0		
MW-29S	SynTerra	Duke Energy	Feb-19	Active	1573975.681	1104564.845	930.25	932.86	17.8	912.5	10	5	15	925.3	915.3		
IVIVV-291Z	Synterra	Duke Energy	Feb-19	Active	15/39/2.226	1104558.837	930.27	932.90		896.3	5	26	31	904.3	899.3		
M/M/ 1	AES	CSYT	Mar 96	Activo	1104522 176	157/1/7 69/	021 47	024 21	15.0	016.5	10	5	15	026 5	916 5	Shallow	Shallow
MW/- 2	AES	CSXT	Mar-96	Active	1104323.178	1573894 503	931.47	934.31	15.0	910.5	10	5	15	920.5	910.3	Shallow	Shallow
MW-3	AES	CSXT	Mar-96	Active	1104205 179	1574124 53	932.90	935.53	14.0	918.9	5	9	13	923.9	918.9	Shallow	Shallow
MW-3D	AES	CSXT	Mar-96	Abandoned	1104199.629	1574122.517	932.81	935.41	20.0	912.8	5	15	20	917.8	912.8	Deep	Mid-Depth Saprolite
MW-3BR	SynTerra	Duke Energy	Mar-19	Active	1574138.038	1104216.352	932.99	935.87	64.5	868.5	5	59	64	874.0	869.0		
MW-4	AES	CSXT	Mar-96	Abandoned			932.54	935.06	7.0	925.5	5	2	7	930.5	925.5	Shallow	
MW-6	AES	CSXT	Mar-96	Abandoned			930.67	933.24	12.0	918.7	10	2	12	928.7	918.7	Shallow	
MW-6A	Duke Engineering	Duke Energy	Nov-05	Abandoned	1103722.942	1574325.996	928.50	931.62	15.0	913.5	10	5	15	923.5	913.5	Shallow	Shallow
MW-18	Duke Engineering	Duke Power	Mar-99	Active	1103555.79	1574116.247	931.08	933.34	25.0	906.1	15	9.5	24.5	921.6	906.6	Combined	Shallow
MW-19	Duke Engineering	Duke Power	Mar-99	Abandoned	1104516.773	1574147.074	931.65	934.20	19.0	912.7	10	9	19	922.7	912.7	Mid-Depth	Mid-Depth Saprolite
MW-20	Duke Engineering	Duke Power	Apr-99	Active	1104213.556	1574128.665	933.23	935.71	25.5	907.7	5	20	25	913.2	908.2	Deep	Mid-Depth Saprolite
MW-21	Duke Engineering	Duke Power	Mar-99	Active	1103738.846	1574327.052	930.68	934.53	18.0	912.7	13	5	18	925.7	912.7	Deep	Shallow
RI-SG-1	SynTerra	Duke Energy	Mar-19	Active	1104444.149	1573969.381	927.79										
RI-SG-2	SynTerra	Duke Energy	Mar-19	Active	1104200.322	1574301.565	930.31										
RI-SG-3	SynTerra	Duke Energy	Mar-19	Active	1103695.769	1574251.979	927.44										
	٨٢٥	CEVT	Mar O/	Active	11020/0 / 02	1574402 005	020.72	O20 50			3	A	14	025.7	015 7	Challen	Challour
IVIVV-5 MM/ 22	AES AFS	CSXI	1VI21-96	Active	1103060.693	1574402.095	929.73	929.58	14.U 36.5	915.7	10	4	14	905 5	915.7 805 5	Snallow	Snallow Mid-Denth Sancolito
11144-22	AL3	0341	גג-ולע	ACTIVE	1103003.770	1374400.424	730.47 CSXT PA	RCEL 5 - REFDY RIVEP			s s	20	30	700.0	070.0	wid-Deptii	
MW-23	Duke Engineering	Duke Power	May-99	Active	1103037.2	1574608 164	922.25	924.63	43.0	879.3	10	32.5	42 5	889.8	879.8	Deen	Deep Saprolite
MW-23	Duke Engineering	Duke Power	May-99	Active	1103032.223	1574601.039	922.23	926.13	11.0	911.2	10	0.4	10.4	921.8	911.8	Shallow	Shallow
							GREENV	ILLE COUNTY - LEGACY	CHARTER E	LEMENTARY							
MW-25	Duke Engineering	Duke Power	May-99	Abandoned			928.53	928.53	16.7	911.8	15	1	16	927.5	912.5	Combined	
MW-25R	S&ME	Duke Energy	Jul-11	Active	1104577.939	1574384.196	930.79	930.75	16.6	914.2	15	1.6	16.6	929.2	914.2	Combined	Shallow
						•	GRE	EENVILLE COUNTY - SW	AMP RABBI	TRAIL							
MW-30	SynTerra	Duke Energy	Dec-18	Active	1104136.705	1573788.946	932.84	932.60	19.9	912.9	15	4.9	19.9	927.9	912.9		
MW-31S	SynTerra	Duke Energy	Oct-18	Active	1103712.782	1573935.913	932.51	932.11	20.0	912.5	15	5	20	927.5	912.5		
MW-31TZ	SynTerra	Duke Energy	Oct-18	Active	1103705.803	1573938.694	932.37	932.07	38.0	894.4	10	28	38	904.4	894.4		
								REEDY RIV	VER								
RI-RR-1	SynTerra	Duke Energy	Apr-19	Active	1104357.704	1573609.153	938.68										
RI-RR-2	SynTerra	Duke Energy	Apr-19	Active	1103762.840	1573864.499	934.14										
RI-RR-3	SynTerra	Duke Energy	Apr-19	Active	1102176.144	1575064.152	929.49										
RI-RR-4	SynTerra	Duke Energy	Apr-19	Active	1102266.233	1575034.784	925.81										
																	Prepared by: VJH/MSM Checked by: TCK

Notes:

'---' Indicates that data is not availible or not applicable

¹ Proposed Hydro-Stratigraphic Well Classifications (Altamont, 2016) based on the following subjective criteria: Deep Saprolite - Saturated Screen Mid-Point greater than 20± feet below water table surface.

Elevation - Feet relative to North American Vertical Datum (NAVD 1988)

ft - feet

ft-bls - Feet below land surface

Mid-Depth Saprolite - Saturated Screen Mid-Point between $7\pm$ and $20\pm$ feet below water table surface.

Shallow - Saturated Screen Mid-Point (SSMP) less than 7± feet.

Historical	Well	Classification
matorical	ww.cm	olassification

TABLE 3-2 SLUG TEST RESULTS REMEDIAL INVESTIGATION WORK PLAN ADDENDUM FORMER BRAMLETTE MGP SITE DUKE ENERGY CAROLINAS, LLC, GREENVILLE, SC

Shallow Zone								
Well ID	Slug Test	Slug Test	Analytical Hydraulic Co Solution Measured	Hydraulic Co (cm/s	onductivity sec)	Hydraulic Conductivity (ft/day)		
		Number		Geometric Mean	Measured	Geometric Mean		
MW 295	Rising Head	Test 1	Bouwer-Rice	1.23E-02	1 225 02	3.49E+01	3.49E+01	
10100-293	Rising Head	Test 2	Bouwer-Rice	1.23E-02	1.23E-02	3.49E+01		
MW 205	Rising Head	Test 1	Bouwer-Rice	8.01E-03	E 74E 02	2.27E+01	1.63E+01	
10100-303	Rising Head	Test 2	Bouwer-Rice	4.12E-03	5.74E-03	1.17E+01		
MW/ 215	Rising Head	Test 1	Bouwer-Rice	4.08E-03	2 425 02	1.16E+01	6.88E+00	
10100-313	Rising Head	Test 2	Bouwer-Rice	1.45E-03	2.43E-03	4.10E+00		
			GE	OMETRIC MEAN	5.56E-03		1.58E+01	
			HIGHEST	CONDUCTIVITY	1.23E-02		3.49E+01	
			LOWEST	CONDUCTIVITY	1.45E-03		4.10E+00	

Transition Zone								
Well ID	Slug Test	Slug Test	Analytical	Hydraulic Co (cm/s	onductivity sec)	Hydraulic Conductivity (ft/day)		
		Number	301011011	Measured	Geometric Mean	Measured	Geometric Mean	
	Rising Head	Test 1	Hvorslev	8.22E-05	0.405.05	2.33E-01	2.72E-01	
10100-2912	Rising Head	Test 2	Hvorslev	1.12E-04	9.00E-05	3.18E-01		
MIN/ 21T7	Rising Head	Test 1	Hvorslev	2.00E-04	1.045.04	5.67E-01		
10100-3112	Rising Head	Test 2	Hvorslev	1.88E-04	1.942-04	5.32E-01	5.50E-01	
			GE	OMETRIC MEAN	1.36E-04		3.87E-01	
		HIGHEST CONDUCT			2.00E-04		5.67E-01	
			LOWEST	CONDUCTIVITY	8.22E-05		2.33E-01	

Bedrock Zone								
Well ID	Slug Test	Slug Test	Analytical	Hydraulic Co (cm/s	onductivity sec)	Hydraulic Conductivity (ft/day)		
		Number	Solution	Measured	Geometric Mean	Measured	Geometric Mean	
	Rising Head	Test 1	Hvorslev	1.90E-05	1 975 05	5.38E-02	5.29E-02	
WW-U3BR	Rising Head	Test 2	Hvorslev	1.84E-05	1.872-05	5.21E-02		
			GE	OMETRIC MEAN	1.87E-05		5.29E-02	
			HIGHEST CONDUCTIVIT		1.90E-05		5.38E-02	
			LOWEST	CONDUCTIVITY	1.84E-05		5.21E-02	

Prepared by: CHB Checked by: TCK

Notes:

ft - feet bls - below land surface cm - centimeter sec - second gpm - gallons per minute

Analyte	Reporting Units	MW-6A NAPL	MW-3BR NAPL
3-Methyl-1-butene	µg/kg	ND	ND
Isopentane	μg/kg	ND	ND
1-Pentene	µg/kg	ND	ND
2-Methyl-1-Butene	µg/kg	ND	ND
Pentane	μg/kg	ND	ND
trans-2-Pentene	µg/kg	ND	ND
ris-2-Pentene	μg/kg	ND	ND
Tertiary Butanol	µg/kg	ND	ND
2,2-Dimethylbutane	μg/kg	ND	ND
4-Methyl-1-pentene	µg/kg	ND	ND
Cyclopentane	µg/kg	ND	ND
2,3-Dimethylbutane	μg/kg	ND	ND
2-Methylpentane	µg/kg	ND	ND
Methyl tert butyl ether	µg/kg	ND	ND
3-Methylpentane	µg/kg	ND	ND
1-Hexene	μg/kg	ND	ND
n-Hexane	μg/kg	ND	ND
trans-2-Hexene	μg/ kg	ND	ND
2-Methyl-2-pentene	ua/ka	ND	ND
cis-2-Hexene	μg/kg	ND	ND
Ethyl-Tert-Butyl-Ether	µg/kg	ND	ND
2,2-Dimethylpentane	µg/kg	ND	ND
Methylcyclopentane	μg/kg	ND	ND
2,4-Dimethylpentane	µg/kg	ND	ND
2,2,3-Trimethylbutane	µg/kg	ND	ND
1,2-Dichloroethane	μg/kg	ND	ND
3,3-Dimethylpentane	μg/kg	ND	ND
Cyclohexane	μg/kg	ND	ND
	μg/kg	326001	19201
2 3-Dimethylpentane	μg/kg	ND	ND
Thiophene	μg/kg	ND	ND
1,1-Dimethylcyclopentane	µg/kg	ND	ND
3-Methylhexane	µg/kg	ND	ND
Tertiary-Amyl Methyl Ether	µg/kg	ND	ND
1,3-Dimethylcyclopentane (cis)	µg/kg	ND	ND
3-Ethylpentane	µg/kg	ND	ND
1,3-DMCP (trans)/2-Methyl-1-hexene	μg/kg	ND	ND
1-Heptene/1,2-DMCP (trans)	μg/kg	ND	ND
trans-3-Hentene	μg/kg	ND	ND
Heptane	µ9/kg	ND	ND
trans-2-Heptene	μg/kg	ND	ND
cis-2-Heptene	μg/kg	ND	ND
2,2-Dimethylhexane	µg/kg	ND	ND
Methylcyclohexane	μg/kg	ND	ND
2,5-Dimethylhexane	μg/kg	ND	ND
Xylene (Total)	µg/kg	874000	29300
2,4-Dimethylhexane	μg/kg	ND	ND
Ethylcyclopentane	μg/kg	ND	ND
2.3.4-Trimethylpentalle	۱۱۵/ka ۲۹/۳۹	ND	ND
2,3,3-Trimethylpentane	μα/ka	ND	ND
2,3-Dimethylhexane	μg/kg	ND	ND
2-Methylheptane	µg/kg	ND	ND
4-Methylheptane	μg/kg	ND	ND
3-Methylheptane	μg/kg	ND	ND
3-Ethylhexane	μg/kg	ND	ND
Toluene	µg/kg	198000	3110J
2-Methylthiophene	μg/kg	ND	ND
1,4-UIMetnylcyclohexane (trans)	μg/kg	ND	IND ND
3-Metnyitniopnene	µg/kg		
Octane	μg/ Kg μg/ Kg	ND	
1,2-Dimethylcyclohexane (trans)	µg/kg	ND	ND
1,2-Dibromoethane	μg/kg	ND	ND
cis-2-Octene	μg/kg	ND	ND
Isopropylcyclopentane	µg/kg	ND	ND
1,2-Dimethylcyclohexane (cis)	µg/kg	ND	ND
2,5-Dimethylheptane	μg/kg	ND	ND

Analyte	Reporting Units	MW-6A NAPL	MW-3BR NAPL
3,5-Dimethylheptane	µg/kg	ND	ND
3,3-Dimethylheptane	μg/kg	ND	ND
1,1,4-Trimethylcyclohexane	µg/kg	ND	ND
2,3-Dimethylheptane	µg/kg	ND	ND
3,4-Dimethylheptane	µg/kg	ND	ND
4-Methyloctane	µg/kg	ND	ND
Ethylbenzene	μς/κς	311000	26500
2-Ethylbenzene 2-Ethylthiophene	ug/kg	ND	ND
3-Methyloctane	µg/kg	ND	ND
3,3-Diethylpentane	µg/kg	ND	ND
p/m-Xylene	μg/kg	614000	19800
1-Nonene	μg/kg	ND	ND
trans-3-Nonene	µg/kg	ND	ND
cis-3-Nonene	μg/kg	ND	ND
Styrene	µg/kg	28700J	ND
o-Xylene	ug/kg	260000	9480
2-Nonene	µg/kg	ND	ND
Isopropylcyclohexane	µg/kg	ND	ND
Isopropylbenzene	µg/kg	63100J	3090J
3,3-Dimethyloctane	μg/kg	ND	ND
n-Propylbenzene	µg/kg	11100J	798J
2-Methylnonane	μg/kg	ND	ND
3-Methylnonane	µg/kg	ND 340000	ND 34000
1-Methyl-5-Eurybenzene	μg/kg	195000	17000
1,3,5-Trimethylbenzene	μg/kg	204000	9590
1-Decene	μg/kg	ND	ND
Isobutylcyclohexane	µg/kg	ND	ND
1-Methyl-2-Ethylbenzene	µg/kg	51400J	2530J
Decane (C10)	µg/kg	74100J	1140J
tert-Butylbenzene	µg/kg	ND	ND
1,2,4-Trimethylbenzene	µg/kg	554000	28500
sec-Butylbenzene	μg/ κg	ND	ND
1-Methyl-3-Isopropylbenzene	µg/kg	53000J	4210
1-Methyl-4-Isopropylbenzene	µg/kg	33500J	2300J
1,2,3-Trimethylbenzene	µg/kg	194000	8640
1-Methyl-2-Isopropylbenzene	µg/kg	ND	ND
Indane	µg/kg	207000	53900
1,3-Diethylbenzene	μg/kg	44400]	11100
I-Metnyl-3-N-Propyidenzene	μg/kg	24700J	78900
1-Methyl-4-N-Propylbenzene	ua/ka	18500]	2040]
n-Butylbenzene	µg/kg	18300J	1130J
1,2-Dimethyl-4-Ethylbenzene	µg/kg	56600J	5050
1,2-Diethylbenzene	µg/kg	ND	ND
1-Methyl-2-N-Propylbenzene	μg/kg	ND	566]
1,4-Dimethyl-2-Ethylbenzene	µg/kg	33800J	26103
Undecane	μg/kg	121000	3/60
1.3-Dimethyl-5-Ethylbenzene	μ9/K9 μα/ka	137000	2500
1,3-Dimethyl-2-Ethylbenzene	۳۶٬۷۶۹ μg/kg	14100J	6583
1,2-Dimethyl-3-Ethylbenzene	μg/kg	20000J	1390J
1,2,4,5-Tetramethylbenzene	µg/kg	59500J	7400
1,2,3,5-Tetramethylbenzene	μg/kg	94200J	12800
N-Pentylbenzene	µg/kg	14700J	398J
1,2,3,4-Tetramethylbenzene	μg/kg	74600J	6220
1,3-Dimethyl-5-tert-Butylbenzene	µg/kg	ND 1570001	ND 8360
1,3.5-Triethvlbenzene	μy/Ky ua/ka	ND	ND
Naphthalene	μg/kq	2850000E	191000E
Benzothiophene	μg/kg	706000	62600
1,2,4-Triethylbenzene	μg/kg	ND	ND
Hexylbenzene	μg/kg	ND	ND
ММТ	µg/kg	ND	ND
Tridecane	μg/kg	171000J	13200
2-Methylnaphthalene	μg/kg	9570000	2160000E
Tetradecane (C14)	49/kg	1890001	17200
Pentadecane	μg/kg	242000J	7980

Analyte	Reporting Units	MW-6A NAPL	MW-3BR NAPL
Dibromofluoromethane	%	82	83
Toluene-d8	%	86	85
4-Bromofluorobenzene	%	103	105
Naphthalene	μg/kg	33500000	2100000
2-Methylnaphthalene	ug/kg	NA	2600000
1-Methylnaphthalene	ug/kg	NA	1400000
Dibromofluoromethane	%	80	81
4-Bromofluorobenzene		103	104
cis/trans-Decalin	ma/ka	9.51	ND
C1-Decalins	mg/kg	15.8	1.28J
C2-Decalins	mg/kg	30	2.37
C3-Decalins	mg/kg	26.7	3.04
C4-Decalins	mg/kg	43.4	5.29
Naphthalene	mg/kg	27500E	1840
C1-Naphthalenes	mg/kg	13200	2280
C2-Naphthalenes	mg/kg	7680	1970
C3-Naphthalenes	mg/kg	32/0	830
Benzothionbene	mg/kg	1100	70.7
C1-Benzo(b)thiophenes	mg/kg	523	130
C2-Benzo(b)thiophenes	mg/kg	333	125
C3-Benzo(b)thiophenes	mg/kg	154	47.9
C4-Benzo(b)thiophenes	mg/kg	57.2	11.9
Biphenyl	mg/kg	2160	203
Dibenzofuran	mg/kg	6150	119
Acenaphthylene	mg/kg	2920	190
Acenaphthene	mg/kg	10200	884
Fluorene	mg/kg	7800	509
C1-Fluorenes	mg/kg	2260	320
C2-Fluorenes	mg/kg	1170	1/1 51.0
Dibenzothionhene	mg/kg	1110	197
4-Methyldibenzothiophene(4MDT)	mg/kg	84	70.5
2/3-Methyldibenzothiophene(2MDT)	mg/kg	257	76.4
1-Methyldibenzothiophene(1MDT)	mg/kg	70.5	13.7
C1-Dibenzothiophenes BS	mg/kg	612	180
C2-Dibenzothiophenes	mg/kg	364	83.4
C3-Dibenzothiophenes	mg/kg	289	19.7
C4-Dibenzothiophenes	mg/kg	142	4.68
Phenanthrene	mg/kg	20100E	1530
2-Methylphenanthrene (2MP)	mg/kg	1540	301
2-Methylanthracene (2MA)	mg/kg	1420	119
9/4-Methylphenanthrene (9MP)	mg/kg	1610	210
1-Methylphenanthrene (1MP)	mg/kg	1120	137
C1-Phenanthrenes/Anthracenes	mg/kg	7620	1090
C2-Phenanthrenes/Anthr BS	mg/kg	3040	329
C3-Phenanthrenes/Anthracenes	mg/kg	1220	60.3
C4-Phenanthrenes/Anthracenes	mg/kg	422	9.27
Retene	mg/kg	ND 7240	ND
Carbazole	mg/kg	1880	17 3
Fluoranthene	mg/kg	10600	324
Benzo(b)fluorene	mg/kg	2120	61.7
Pyrene	mg/kg	8130	543
C1-Fluoranthenes/Pyrenes	mg/kg	6460	394
C2-Fluoranthenes/Pyrenes	mg/kg	2180	99.1
C3-Fluoranthenes/Pyrenes	mg/kg	894	22.1
C4-Fluoranthenes/Pyrenes	mg/kg	444	7.22
Naphthobenzothiophenes	mg/kg	530	22.2
C1-Naphthobenzothiophenes	mg/kg	322	12.2
	mg/kg	1/0	4.24
C4-Naphthobenzothiophenes	ma/kg	44 6	2.28
Benz(a)anthracene	ma/ka	5350	143
Chrysene/Triphenylene	mg/kg	4400	108
C1-Chrysenes	mg/kg	2450	82.1
C2-Chrysenes BS	mg/kg	1220	29.6
C3-Chrysenes	mg/kg	1080	14.6
C4-Chrysenes	mg/kg	372	5.29
Benzo(b)fluoranthene	mg/kg	3280	47.2

Analyte	Reporting Units	MW-6A NAPL	MW-3BR NAPL
Benzo(j)+(k)fluoranthene	mg/kg	4010	73.8
Benzo(a)fluoranthene	mg/kg	1600	34.3
Benzo(e)pyrene	mg/kg	2750	60.5
Benzo(a)pyrene	mg/kg	5320	141
Perylene	mg/kg	1360	17.7
Indeno(1,2,3-cd)pyrene	mg/kg	2700	37.2
Dibenz(a,h)+(a,c)anthracene	mg/kg	784	11.1
Benzo(g,h,i)perylene	mg/kg	2790	44.5
Naphthalene-d8	%	124	127
Phenanthrene-d10	%	108	110
Benzo(a)pyrene-d12	%	106	101
Naphthalene	mg/kg	34500	NA
Phenanthrene	mg/kg	23300	NA
Naphthalene-d8	%	106	NA
Phenanthrene-d10	%	108	NA
Benzo(a)pyrene-d12	%	100	NA
n-Nonane (C9)	mg/kg	59.3J	ND
n-Decane (C10)	mg/kg	191	8.40J
n-Undecane (C11)	mg/kg	371	28.6
n-Dodecane (C12)	mg/kg	1280	80.5
n-Tridecane (C13)	mg/kg	659	23.6
2,6,10-Trimethyldodecane (1380)	mg/kg	125J	4.20J
n-Tetradecane (C14)	mg/kg	454	56.9
2,6,10-Trimethyltridecane (1470)	mg/kg	ND	145
n-Pentadecane (C15)	mg/kg	12200	954
n-Hexadecane (C16)	mg/kg	9030	620
Norpristane (1650)	mg/kg	ND	ND
n-Heptadecane (C17)	mg/kg	391	30.4
Pristane	mg/kg	477	46.2
n-Octadecane (C18)	mg/kg	25700	1760
Phytane	mg/kg	8620	499
n-Nonadecane (C19)	mg/kg	329	13.9J
n-Eicosane (C20)	mg/kg	192	37.4
n-Heneicosane (C21)	mg/kg	287	10.2J
n-Docosane (C22)	mg/kg	338	14.2J
n-Tricosane (C23)	mg/kg	315	ND
n-Tetracosane (C24)	mg/kg	645	9.01J
n-Pentacosane (C25)	mg/kg	ND	ND
n-Hexacosane (C26)	mg/kg	122J	ND
n-Heptacosane (C27)	mg/kg	172J	ND
n-Octacosane (C28)	mg/kg	254	7.58J
n-Nonacosane (C29)	mg/kg	ND	51.5
n-Triacontane (C30)	mg/kg	ND	8.31J
n-Hentriacontane (C31)	mg/kg	537	17.4J
n-Dotriacontane (C32)	mg/kg	360	ND
n-Tritriacontane (C33)	mg/kg	948	15.8J
n-Tetratriacontane (C34)	mg/kg	74.5J	ND
n-Pentatriacontane (C35)	mg/kg	460	10.6J
n-Hexatriacontane (C36)	mg/kg	63.5J	ND
n-Heptatriacontane (C37)	mg/kg	318	5.26J
n-Octatriacontane (C38)	mg/kg	ND	ND
n-Nonatriacontane (C39)	mg/kg	ND	ND
n-Tetracontane (C40)	mg/kg	ND	ND
Total Petroleum Hydrocarbons (C9-C44)	mg/kg	590000	35900
Total Saturated Hydrocarbons	mg/kg	650003	4460J
ortho-terphenyl	%	97	104
d50-Tetracosane	%	108	100

Prepared by: <u>TCK</u> Checked by: <u>TDP</u>

Notes:

MW-6A NAPL sample collected while abandoning well on 3/26/19

MW-3BR NAPL sample collected while drilling well on 3/27/19

% - percent

< - concentration not detected at or above the adjusted reporting limit.

 $\mu g/kg$ - Micrograms per liter

 ${\sf E}$ - Analyte concentration exceeded the calibration range. The reported result is estimated.

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

mg/kg - Milligrams per kilogram

NA - Not analyzed

ND - Non detect

TABLE 3-4 ANALYTICAL RESULTS SUMMARY - GROUNDWATER REMEDIAL INVESTIGATION WORK PLAN ADDENDUM FORMER BRAMLETTE MGP SITE DUKE ENERGY CAROLINAS, LLC, GREENVILLE, SC

		8260B (VOA and MTBE)								8260B (O	ther VOC)			8270D (PAH)						
			F 11 H			Xylene										A				
	Analytical Parameter	Benzene	Ethylbenzene	Toluene	m&p-Xylene	o-Xylene	Total Xylene	MIBE	2-Butanone (MEK)	2-Hexanone	Acetone	Irichioroethene	Naphthalene	1-Methyinaphthaiene	2-Methyinaphthalene	Acenaphthene	Acenaphthylene	Anthracene		
	Reporting Units	µg∕L	µg∕L	µg∕L	µg∕L	μg/L	µg∕L	µg∕L	μg/L	µg∕L	μg/L	µg∕L	µg∕L	μg∕L	μg/L	µg∕L	μg/L	µg∕L		
	Regulatory Standard	5	700	1,000	NE	NE	10,000	40	NE	NE	NE	NE	25	NE	NE	NE	NE	NE		
Sample ID	Sample Collection Date				Analytical Res	sults				Analytica	al Results				Analytica	l Results				
MW-01	03/20/2019	25.8	44.9	11.2	35.4	27.8	63.3	<10	<50	<50	<250	<10	1700 M1	491	479	225	<10	10.5		
MW-02	03/20/2019	3.4	<1	<1	<2	<1	<1	<1	<5	< 5	<25	<1	2.3 j	<10	<10	<10	<10	<10		
MW-03BR	4/10/2019	620	128	251	118	61.9	180	<10	<50	< 50	<250	<10	2910	226 E	367 E	24.6	167 E	2.9 ј		
MW-05	03/21/2019	<1	<1	<1	<2	<1	<1	<1	<5	< 5	<25	<1	<1	<10	<10	<10	<10	<10		
MW-07R	03/22/2019	25.5	0.75 j	<1	1.7 j	0.25 j	<1	1.5	<5	< 5	<25	<1	33.8	6.5 j	6.3 j	2.3 j	<9.9	<9.9		
MW-09R	03/22/2019	<1	<1	<1	<2	<1	<1	2.3	<5	< 5	<25	<1	<1	<9.9	< 9.9	<9.9	<9.9	<9.9		
MW-13R	03/21/2019	<1	<1	<1	<2	<1	<1	1.2	<5	<5	<25	0.72 j	<1	<10	<10	<10	<10	<10		
MW-15	03/22/2019	<1	<1	<1	<2	<1	<1	<1	<5	<5	<25	<1	<1	< 9.8	<9.8	<9.8	< 9.8	<9.8		
MW-16	03/22/2019	<1	<1	<1	<2	<1	<1	<1	<5	<5	<25	<1	<1	<9.9	< 9.9	<9.9	< 9.9	< 9.9		
MW-21	03/20/2019	30.4	4.8	8.9	2.8	7.2	9.9	<1	<5	<5	<25	<1	57.5	21	<9.8	27.8	1.8 j	4.1 j		
MW-22	03/21/2019	<1	<1	<1	<2	<1	<1	<1	<5	<5	<25	<1	0.65 j	<10	<10	<10	<10	<10		
MW-25R	03/21/2019	<1	<1	<1	<2	<1	<1	<1	<5	<5	<25	<1	1.5 J	<10	<10	<10	<10	<10		
MW-26	03/21/2019	<1	<1	<1	<2	<1	<1	0.48 J	<5	<5	<25	<1	<1	< 10	< 10	< 10	< 10	< 10		
WW-27	03/21/2019	<1	<1	<1	<2	<1	<1	1.8	<5	< 5	< 25	<1	<1	< 10	< 10	< 10	< 10	< 10		
MW-28	03/22/2019	<1	<1	<1	<2	<1	<1		< 5	<5	<25	<1	<1	< 9.8	< 9.8	< 9.8	< 9.8	< 9.8		
MW 2017	03/21/2019	< 1	<1	< 1	<2	<	200	< 1	< 5	< 5	<25	< 1	< 1	259.5	< 10 412 F	< 10 100 F	<10	<10		
NW 205	12/12/2019	1920	411	- 00.3	-2	-1	290	<25	<125	< 125	< 023	<25	4080	238 E	412 E	109 E	<10	<10		
MW-305	02/21/2018	<1	<1	<1	<2	<1	<1	<1	<5	<5	<25	<1	<1	<10	<10	<10	<10	<10		
MW-303	12/12/2018	<1	<1	<1	<2	<1	<1	<1	<5	<5	<25	<1	<1	<10	<10	281	<10	<10		
MW-315	03/21/2019	<1	<1	<1	<2	<1	<1	<1	<5	<5	< 25	<1	<1	< 10	< 10	3 i	< 10	<10		
MW-315	12/12/2018	<1	<1	<1	<2	<1	<1	<1	<5	<5	< 25	<1	0 38 i	< 10	< 10	<10	<10	<10		
MW-31TZ	03/21/2019	<1	<1	<1	<2	<1	<1	<1	<5	<5	<25	<1	<1	<10	<10	<10	<10	<10		
QC SAMPLE RESULTS																				
EQB	12/12/2018	<1	<1	<1	<2	<1	<1	<1	3.7 j	0.58 j	18.6 j	<1	<1	<10	<10	<10	<10	<10		
EQB-01	12/19/2018	<1	<1	<1	<2	<1	<1	<1	<5	<5	<25	<1	<1	<9.9	<9.9	< 9.9	< 9.9	< 9.9		
EQB-1	03/20/2019	<1	<1	<1	<2	<1	<1	<1	<5	<5	<25	<1	<1	NA	NA	NA	NA	NA		
EQB-2	03/21/2019	<1	<1	< 1	<2	<1	<1	<1	<5	< 5	<25	<1	<1	NA	NA	NA	NA	NA		
EB-01	03/22/2019	<1	<1	<1	<2	<1	<1	<1	<5	<5	<25	<1	<1	<10	<10	<10	<10	<10		
EQB-3	03/22/2019	<1	<1	<1	<2	<1	<1	<1	<5	<5	<25	<1	<1	NA	NA	NA	NA	NA		
EB	4/10/2019	<1	<1	<1	<2	<1	<1	<1	<5	< 5	<25	<1	<1	<10	<10	<10	<10	<10		
FB 1	12/12/2018	<1	<1	<1	<2	<1	<1	<1	3.6 j	0.56 j	18.4 j	<1	<1	<10	<10	<10	<10	<10		
FB-01	12/19/2018	<1	<1	<1	<2	<1	<1	<1	<5	<5	<25	<1	<1	<9.4	<9.4	<9.4	<9.4	<9.4		
FD-01 (MW-02)	03/20/2019	1.5	<1	<1	<2	<1	<1	<1	<5	<5	<25	<1	0.98 j	<10	<10	<10	<10	<10		
FD-02 (MW-13R)	03/21/2019	<1	<1	<1	<2	<1	<1	1.1	<5	< 5	<25	0.57 j	<1	<10	<10	<10	<10	<10		
MW-30S DUP	12/12/2018	<1	<1	<1	<2	<1	<1	<1	<5	< 5	<25	<1	<1	<10	<10	<10	<10	<10		
TRIP BLANK	12/12/2018	<1	<1	<1	<2	<1	<1	<1	<5	<5	<25	<1	<1	NA	NA	NA	NA	NA		
TRIP BLANK	12/19/2018	<1	<1	<1	<2	<1	<1	<1	<5	< 5	<25	<1	<1	NA	NA	NA	NA	NA		
TRIP BLANK	03/12/2019	<1	<1	<1	<2	<1	<1	<1	<5	< 5	<25	<1	<1	NA	NA	NA	NA	NA		
TRIP BLANK	03/14/2019	<1	<1	<1	<2	<1	<1	<1	<5	<5	<25	<1	<1	NA	NA	NA	NA	NA		
TRIP BLANK	03/15/2019	<1	<1	<1	<2	<1	<1	<1	<5	<5	<25	<1	<1	NA	NA	NA	NA	NA		
TRIP BLANK_SED	03/19/2019	<1	<1	<1	<2	<1	<1	<1	<5	< 5	<25	<1	<1	NA	NA	NA	NA	NA		
TRIP BLANK_Soil	03/19/2019	<1	<1	<1	<2	<1	<1	<1	<5	< 5	<25	<1	<1	NA	NA	NA	NA	NA		
TRIP BLANK_SW	03/19/2019	<0.15	<0.26	<0.24	<0.41	<0.22	<0.63	<0.28	< 3.3	<0.57	<6.2	<0.22	< 0.35	NA	NA	NA	NA	NA		
TRIP BLANK	03/21/2019	<1	<1	<1	<2	<1	<1	<1	<5	<5	<25	<1	<1	NA	NA	NA	NA	NA		
TB_SED	03/22/2019	<1	<1	<1	<2	<1	<1	<1	<5	< 5	<25	<1	<1	NA	NA	NA	NA	NA		
TRIP BLANK	03/22/2019	<1	<1	<1	<2	<1	<1	<1	<5	<5	<25	<1	<1	NA	NA	NA	NA	NA		
TRIP BLANK_GW	03/22/2019	<1	<1	<1	<2	<1	<1	<1	<5	<5	<25	<1	<1	NA	NA	NA	NA	NA		
TB	4/10/2019	<1	<1	<1	<2	<1	<1	<1	<5	<5	<25	<1	<1	NA	NA	NA	NA	NA		

Notes:

Bold type indicates that the compound was detected above the adjusted method detection limit.

Yellow shading indicates that the compound was detected above a potentially applicable regulatory standard listed in Section 4.8 of the RIWP-A

< - concentration not detected at or above the adjusted reporting limit.

µg/L - Micrograms per liter

E - Analyte concentration exceeded the calibration range. The reported rrug/L - Micrograms per liter j - Estimated concentration above the adjusted method detection limit an umhos/cm - Micro mhos per centimeter

M1 - Matrix spike recovery was high: the associated Laboratory Control Spike (LCS) was acceptable.

NA - Not analyzed

NE - No regulatory standard established at this time. A site-specific target level may be established as part of the risk assessment outlined in Section 5.0 of the RIWP-A.

Prepared by: <u>MSM</u> Checked by: <u>TDP</u>

TABLE 3-4 ANALYTICAL RESULTS SUMMARY - GROUNDWATER REMEDIAL INVESTIGATION WORK PLAN ADDENDUM FORMER BRAMLETTE MGP SITE DUKE ENERGY CAROLINAS, LLC, GREENVILLE, SC

						82	70D (PAH)								827	0D (Other SVOC)		
	Analytical Parameter	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Phenanthrene	Pyrene	2,4-Dimethylphenol	2,4-Dinitrotoluene	2-Methylphenol(o-Cresol)	Dibenzofuran	Phenol
	Reporting Units	µg∕L	µg∕L	µg∕L	µg∕L	μg/L	µg∕L	μg/L	µg∕L	µg∕L	μg/L	μg/L	µg∕L	μg/L	µg∕L	μg/L	µg∕L	µg∕L
	Regulatory Standard	10	0.2	10	NE	10	10	10	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Sample ID	Sample Collection Date					Analy	tical Results								Ar	nalytical Results		
MW-01	03/20/2019	<10	< 10	<10	<10	<10	<10	<10	3 ј	66.1	<10	56.3	4.2 j	<10	< 10	<10	22.5	<10
MW-02	03/20/2019	<10	< 10	<10	<10	<10	< 10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
MW-03BR	4/10/2019	<10	<10	<10	< 10	<10	< 10	<10	<10	24.7	<10	17	<10	75.2	<10	4.8 j	7.5 j	<10
MW-05	03/21/2019	<10	<10	<10	<10	<10	< 10	<10	<10	<10	<10	<10	<10	<10	<10	<10	< 10	<10
MW-07R	03/22/2019	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9
MW-09R	03/22/2019	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9
MW-15K	03/22/2019	< 9.8	< 9.8	<9.8	< 9.8	< 9.8	< 9.8	< 9.8	< 9.8	< 9.8	< 9.8	< 9.8	< 9.8	< 9.8	< 9.8	< 9.8	< 9.8	< 9.8
MW-16	03/22/2019	< 9.9	< 9.9	<9.9	<9.9	<9.9	< 9.9	< 9.9	<9.9	< 9.9	<9.9	< 9.9	< 9.9	< 9.9	< 9.9	<9.9	< 9.9	< 9.9
MW-21	03/20/2019	< 9.8	< 9.8	<9.8	<9.8	<9.8	< 9.8	<9.8	3.9 j	12.8	<9.8	2.2 j	2.9 j	< 9.8	< 9.8	<9.8	11.3	< 9.8
MW-22	03/21/2019	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
MW-25R	03/21/2019	<10	<10	<10	<10	<10	< 10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
MW-26	03/21/2019	<10	< 10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	< 10	<10
MW-27	03/21/2019	<10	< 10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
MW-28	03/22/2019	<9.8	< 9.8	< 9.8	<9.8	< 9.8	<9.8	< 9.8	<9.8	<9.8	< 9.8	< 9.8	<9.8	< 9.8	< 9.8	< 9.8	< 9.8	< 9.8
MW-29S	03/21/2019	<10	< 10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
MW-29TZ	03/21/2019	<10	<10	<10	<10	<10	<10	<10	<10	19.3	<10	9.5 j	<10	174 E	<10	8.8 j	6.2 j	11.1
MW-30S	12/12/2018	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
MW-303	12/12/2018	<10	< 10	<10	<10	<10	< 10	<10	< 10	< 10	<10	<10	< 10	<10	< 10	<10	<10	< 10
MW-315	03/21/2019	<10	< 10	<10	<10	<10	< 10	<10	<10	<10	<10	<10	< 10	<10	<10	<10	<10	<10
MW-31TZ	12/12/2018	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	5.3 i	<10	<10	<10
MW-31TZ	03/21/2019	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
QC SAMPLE RESULTS																		
EQB	12/12/2018	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
EQB-01	12/19/2018	<9.9	< 9.9	< 9.9	< 9.9	< 9.9	<9.9	< 9.9	<9.9	<9.9	< 9.9	< 9.9	<9.9	< 9.9	< 9.9	< 9.9	< 9.9	<9.9
EQB-1	03/20/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EQB-2	03/21/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EB-01	03/22/2019	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
EQB-3	03/22/2019	NA +10	NA 10	NA - 10	NA +10	NA	NA +10	NA +10	NA 10	NA 10	NA	NA 10	NA - 10	NA 10	NA +10	NA	NA 10	NA 10
EB FR 1	12/12/2018	<10	<10	<10	<10	<10	< 10	<10	< 10	< 10	<10	<10	< 10	< 10	<10	<10	<10	< 10
FB-01	12/19/2018	< 9.4	< 9.4	< 9.4	< 9.4	< 9.4	< 9.4	< 9.4	< 9.4	< 9.4	< 9.4	< 9.4	< 9.4	< 9.4	< 9.4	< 9.4	< 9.4	< 9.4
FD-01 (MW-02)	03/20/2019	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
FD-02 (MW-13R)	03/21/2019	<10	< 10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
MW-30S DUP	12/12/2018	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
TRIP BLANK	12/12/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRIP BLANK	12/19/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRIP BLANK	03/12/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRIP BLANK	03/14/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRIP BLANK	03/15/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRIP BLANK_SED	03/19/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRIP BLANK_Soil	03/19/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRIP BLANK_SW	03/19/2019	NA	NA	NA	NA	NA	NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	03/21/2019	NA NA	NA			INA NA	NA	NA NA	NA NA	NA NA	NA NA	NA	NA	NA NA	NA NA	NA NA	NA	NA NA
TRIP RI ANK	03/22/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRIP BLANK_GW	03/22/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ТВ	4/10/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

Bold type indicates that the compound was detected above the adjusted method detection limit.

Yellow shading indicates that the compound was detected above a potentially applicable regulatory standard listed in Section 4.8 of the RIWP-A

< - concentration not detected at or above the adjusted reporting limit.

µg/L - Micrograms per liter

E - Analyte concentration exceeded the calibration range. The reported result is estimated. j - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

M1 - Matrix spike recovery was high: the associated Laboratory Control Spike (LCS) was acceptable.

NA - Not analyzed

NE - No regulatory standard established at this time. A site-specific target level may be established as part of the risk assessment outlined in Section 5.0 of the RIWP-A.

Prepared by: MSM

Checked by: TDP

TABLE 3-5 ANALYTICAL RESULTS SUMMARY - SURFACE WATER REMEDIAL INVESTIGATION WORK PLAN ADDENDUM FORMER BRAMLETTE MGP SITE DUKE ENERGY CAROLINAS, LLC, GREENVILLE, SC

				82	60B (VOA and MT	BE)			8260B (Other VOC)			8270D	(PAH)		
		Demonstra	Edually and a	Tabaaaa		Xylene		MTDE	Oblementations	Newbolk		2 Mathedram tabalana	0		A
	Analytical Parameter	Benzene	Ethylbenzene	loiuene	m&p-Xylene	o-Xylene	Total Xylene	MIBE	Chloromethane	Naphthalene	1-Metnyinaphthalene	2-metnyinaphtnaiene	Acenaphthene	Acenaphthylene	Anthracene
	Reporting Units	µg∕L	µg∕L	µg∕L	µg/L	µg∕L	µg/L	µg∕L	µg∕L	µg∕L	µg∕L	µg/L	µg∕L	µg/L	µg∕L
	Regulatory Standard	5	700	1,000	NE	NE	10,000	40	NE	25	NE	NE	NE	NE	NE
Sample ID	Sample Collection Date				Analytical Result	s			Analytical Results			Analytical	I Results		
SW-01	03/19/2019	<1	<1	<1	<2	<1	<1	<1	<1	<1	<10	<10	<10	<10	<10
SW-02	03/19/2019	<1	<1	<1	<2	<1	<1	<1	4.4	<1	<10	<10	<10	<10	<10
SW-03	03/19/2019	<1	<1	<1	<2	<1	<1	<1	<1	<1	<10	<10	<10	<10	<10
SW-04	03/19/2019	2.3	0.5 j	<1	<2	<1	<1	<1	13.2	<10	<10	<10	<10	<10	<10
SW-05	03/19/2019	<1	<1	<1	<2	<1	<1	<1	<1	<1	<10	<10	<10	<10	<10
SW-06	03/19/2019	<1	<1	<1	<2	<1	<1	<1	10.5	<1	<10	<10	<10	<10	<10
SW-07	12/19/2018	<1	<1	<1	<2	<1	<1	<1	<1	<1	<9.6	<9.6	<9.6	<9.6	<9.6
SW-08	12/19/2018	<1	<1	<1	<2	<1	<1	<1	<1	<1	< 9.8	<9.8	< 9.8	<9.8	<9.8
SW-09	12/19/2018	<1	<1	<1	<2	<1	<1	<1	<1	<1	< 9.8	<9.8	< 9.8	< 9.8	<9.8
SW-10	12/19/2018	<1	<1	<1	<2	<1	<1	<1	<1	<1	< 9.8	<9.8	< 9.8	< 9.8	<9.8
SW-11	12/19/2018	<1	<1	<1	<2	<1	<1	<1	<1	<1	<9.8	<9.8	< 9.8	< 9.8	<9.8
SW-12	12/19/2018	<1	<1	<1	<2	<1	<1	<1	<1	<1	<10	<10	<10	<10	<10
QC SAMPLE RESUL	TS		<u>ı </u>		<u> </u>			1			L.				
SW-DUP1 (SW-12)	12/19/2018	<1	<1	<1	<2	<1	<1	<1	<1	<1	<9.6	<9.6	<9.6	< 9.6	<9.6
			<u> </u>		<u> </u>		<u>I</u>							Prepared by: MSM	Checked by: TDP

Notes:

Bold type indicates that the compound was detected above the adjusted method detection limit.

Yellow shading indicates that the compound was detected above a potentially applicable regulatory standard listed in Section 4.8 of the RIWP-A

< - concentration not detected at or above the adjusted reporting limit.

µg/L - Micrograms per liter

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

NE - No regulatory standard established at this time. A site-specific target level may be established as part of the risk assessment outlined in Section 5.0 of the RIWP-A.

TABLE 3-5 ANALYTICAL RESULTS SUMMARY - SURFACE WATER REMEDIAL INVESTIGATION WORK PLAN ADDENDUM FORMER BRAMLETTE MGP SITE DUKE ENERGY CAROLINAS, LLC, GREENVILLE, SC

		8270D (PAH)												
	Analytical Parameter	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Phenanthrene	Pyrene	
	Reporting Units	µg/L	µg∕L	µg∕L	µg∕L	µg/L	µg∕L	µg∕L	µg∕L	µg∕L	µg/L	µg∕L	µg∕L	
	Regulatory Standard	10	0.2	10	NE	10	10	10	NE	NE	NE	NE	NE	
Sample ID	Sample Collection Date					Ar	nalytical Results							
SW-01	03/19/2019	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
SW-02	03/19/2019	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
SW-03	03/19/2019	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
SW-04	03/19/2019	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
SW-05	03/19/2019	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
SW-06	03/19/2019	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
SW-07	12/19/2018	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	<9.6	
SW-08	12/19/2018	<9.8	<9.8	<9.8	<9.8	< 9.8	<9.8	<9.8	< 9.8	<9.8	<9.8	<9.8	<9.8	
SW-09	12/19/2018	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	
SW-10	12/19/2018	<9.8	<9.8	<9.8	<9.8	<9.8	<9.8	< 9.8	<9.8	<9.8	< 9.8	<9.8	<9.8	
SW-11	12/19/2018	<9.8	<9.8	<9.8	<9.8	< 9.8	<9.8	< 9.8	<9.8	<9.8	< 9.8	<9.8	<9.8	
SW-12	12/19/2018	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
QC SAMPLE RESUL	TS													
SW-DUP1 (SW-12)	12/19/2018	<9.6	< 9.6	<9.6	<9.6	< 9.6	<9.6	<9.6	<9.6	<9.6	<9.6	< 9.6	<9.6	

Notes:

Bold type indicates that the compound was detected above the adjusted method detection limit.

Yellow shading indicates that the compound was detected above a potentially applicable regulatory standard listed in Section 4.8 of the RIWP-A

< - concentration not detected at or above the adjusted reporting limit.

µg/L - Micrograms per liter

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

NE - No regulatory standard established at this time. A site-specific target level may be established as part of the risk assessment outlined in Section 5.0 of the RIWP-A.

Prepared by: MSM

Checked by: TDP

TABLE 3-6 ANALYTICAL RESULTS SUMMARY - SEDIMENT REMEDIAL INVESTIGATION WORK PLAN ADDENDUM FORMER BRAMLETTE MGP SITE DUKE ENERGY CAROLINAS, LLC, GREENVILLE, SC

					8260	B (VOA and MT	BE)				8260B (Oth		8270D (PAH)				
		Doroont Moisturo	Ponzono	Ethylhonzono	Toluono		Xylene		MTRE	2 Butanana (MEK)	4 Mothyl 2 pontonono (MIRK)	Asstans	Chloroform	Mothylono oblorido	Nonhtholono	1 Mothylpophthologo	2 Mothylpophthologo
An	aityical Parameter	Percent Moisture	вепzепе	Etnyibenzene	roluene	m&p-Xylene	o-Xylene	Xylene (Total)	WITE	2-Butanone (MEK)	4-metnyi-2-pentanone (MIBK)	Acetone	Chioroform	Methylene chloride	Naprinalene	I-Methyinaphthalene	2-metnyinaphtnaiene
	Reporting Units	%	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	μg/kg μg/kg		µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Industri	al Screening Level	NE	5,100	25,000	47,000,000	2,400,000	2,800,000	2,500,000	210,000	190,000,000	000,000 140,000,000 670,000,000		1,400	1,000,000	17,000	73,000	3,000,000
Sample ID	Sample Collection Date	Analytical Results	I Results Analytical Results								Analytical	Results				Analytical Resul	ts
SW-01-SED	03/19/2019	55.8	<9.6	<9.6	<9.6	<19.3	<9.6	<19.3	<9.6	12.7 j	12 j,B	211	4.3 j	18.2 j	2.7 j	7.5 j,M1	12.3 j,M1
SW-02-SED	03/22/2019	55.4	<12.1	<12.1	<12.1	<24.2	<12.1	<24.2	<12.1	<242	<121	35.8 j	<12.1	<48.5	8 j	4 j	5.9 j
SW-03-SED	03/19/2019	29.2	<7.8	<7.8	<7.8	<15.6	<7.8	<15.6	<7.8	<156	10.5 j,B	251	<7.8	<31.3	2.7 j	57.2	90.5
SW-04-SED	03/19/2019	66.5	<19.8	<19.8	<19.8	<39.6	<19.8	<39.6	<19.8	31.1 j	<198	738	9.1 j	62.3 j	14.4 j	11.3 j	11.5 j
SW-05-SED	03/19/2019	64.7	<13.2	<13.2	<13.2	<26.5	<13.2	<26.5	<13.2	17.1 j	<132	455	5.9 j	14.8 j	14.2 j	8.6 j	9.3 j
SW-06-SED	03/19/2019	55.9	<13	<13	<13	<26	<13	<26	<13	11.5 j	<130	183 j	5.2 j	14.1 j	<13	54.7	83.9
SW-07-SED	12/19/2018	26.9	<7.8	<7.8	<7.8	<15.5	<7.8	<15.5	<7.8	<155	<77.7	<155	<7.8	<31.1	<7.8	<451	<451
SW-08-SED	12/19/2018	21.4	<4.9	<4.9	<4.9	<9.8	<4.9	<9.8	<4.9	<97.6	<48.8	<97.6	<4.9	<19.5	< 4.9	<420	<420
SW-09-SED	12/19/2018	20.7	<6.2	<6.2	<6.2	<12.4	<6.2	<12.4	<6.2	<124	<62.1	<124	<6.2	<24.8	<6.2	<423	<423
SW-10-SED	12/19/2018	20.6	<4.4	<4.4	<4.4	<8.9	< 4.4	<8.9	< 4.4	<88.8	<44.4	<88.8	<4.4	<17.8	< 4.4	<420	<420
SW-11-SED	12/19/2018	26.7	<5	<5	<5	<10.1	<5	<10.1	<5	<101	<50.3	<101	<5	< 20.1	<5	<449	<449
SW-12-SED	12/19/2018	20.3	<4.4	< 4.4	<4.4	<8.8	< 4.4	<8.8	< 4.4	<88.1	<44.1	<88.1	<4.4	<17.6	<411	<411	<411
QC SAMPLE RESULTS																	
SW-DUP1-SED (SW-12)	12/19/2018	20.1	<4.4	<4.4	<4.4	<8.7	<4.4	<8.7	<4.4	<87.1	<43.5	<87.1	<4.4	<17.4	< 4.4	<419	<419
																Prepared by: MSM	Checked by: TDP

Notes:

Bold type indicates that the compound was detected above the adjusted method detection limit.

Yellow shading indicates that the compound was detected above a potentially applicable screening level listed in Section 4.8 of the RIWP-A

% - Percent

< - concentration not detected at or above the adjusted reporting limit.

B - Target analyte detected in method blank at or above the reporting limit. Target analyte concentration in sample is less than 10X the concentration in the method blank. Analyte concentration in sample could be due to blank contamination.

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

M1 - Matrix spike recovery was high: the associated Laboratory Control Spike (LCS) was acceptable.

NE - No screening level established at this time. A site-specific risk-based screening level may be established as part of the risk assessment process outlined in Section 5.0 of the RIWP-A.

µg/kg - Micrograms per kilogram

TABLE 3-6 ANALYTICAL RESULTS SUMMARY - SEDIMENT REMEDIAL INVESTIGATION WORK PLAN ADDENDUM FORMER BRAMLETTE MGP SITE DUKE ENERGY CAROLINAS, LLC, GREENVILLE, SC

								82	70D (PAH)							
Ana	Ityical Parameter	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Phenanthrene	Pyrene
	Reporting Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Industria	I Screening Level	45,000,000	NE	230,000,000	21,000	2,100	21,000	NE	210,000	2,100,000	2,100	30,000,000	30,000,000	21,000	NE	23,000,000
Sample ID	Sample Collection Date							Analy	tical Results							
SW-01-SED	03/19/2019	10 j,M1	113 M1	60.2 M1	296 M1	295 M1	358 M1	189 M1	155 M1	266 M1	57.1 M1	351 M1	17.2 j,M1	169 M1	91 M1	488 M1
SW-02-SED	03/22/2019	2.5 j	15 j	15.4 j	63.9	61.5	77.7	27.4	31.4	66.5	9.7 j	90.2	3.8 j	26.6	32.9	88.2
SW-03-SED	03/19/2019	218	31.8	459	909	599	1050	334	321	890	132	1910	259	328	1730	1450
SW-04-SED	03/19/2019	28.5 j	140	90.4	432	415	537	210	212	421	65.2	628	35.1	188	195	776
SW-05-SED	03/19/2019	<28.7	139	115	1030	584	813	278	281	1240	110	889	26.7 j	224	850	1980
SW-06-SED	03/19/2019	55.5	418	714	2160	1840	2170	733	715	1910	256	3400	207	772	2020	2990
SW-07-SED	12/19/2018	<451	<451	<451	<451	<451	<451	<451	<451	<451	<451	106 j	<451	<451	< 451	90 j
SW-08-SED	12/19/2018	<420	<420	<420	<420	<420	<420	<420	<420	<420	<420	<420	<420	<420	<420	<420
SW-09-SED	12/19/2018	<423	<423	<423	<423	<423	<423	<423	<423	<423	<423	<423	<423	<423	<423	<423
SW-10-SED	12/19/2018	<420	<420	<420	<420	<420	<420	<420	<420	<420	<420	<420	<420	<420	<420	<420
SW-11-SED	12/19/2018	<449	<449	<449	<449	<449	<449	<449	<449	<449	<449	<449	<449	<449	<449	<449
SW-12-SED	12/19/2018	<411	106 j	167 j	503	435	562	183 j	236 j	490	<411	822	<411	186 j	217 ј	791
QC SAMPLE RE	EUSLTS															
SW-DUP1-SED (SW-12)	12/19/2018	<419	<419	<419	145 j	162 j	213 j	124 j	92 j	141 j	<419	230 j	<419	104 j	<419	197 j

Notes:

Bold type indicates that the compound was detected above the adjusted method detection limit.

Yellow shading indicates that the compound was detected above a potentially applicable screening level listed in Section 4.8 of the RIWP-A

% - Percent

< - concentration not detected at or above the adjusted reporting limit.

B - Target analyte detected in method blank at or above the reporting limit. Target analyte concentration in sample is less than 10X the concentration in the method blank. Analyte concentration in sample could be due to blank contamination.

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

M1 - Matrix spike recovery was high: the associated Laboratory Control Spike (LCS) was acceptable.

NE - No screening level established at this time. A site-specific risk-based screening level may be established as part of the risk assessment process outlined in Section 5.0 of the RIWP-A.

µg/kg - Micrograms per kilogram

Prepared by: MSM

Checked by: TDP

TABLE 3-7 ANALYTICAL RESULTS SUMMARY - SOIL REMEDIAL INVESTIGATION WORK PLAN ADDENDUM FORMER BRAMLETTE MGP SITE DUKE ENERGY CAROLINAS, LLC, GREENVILLE, SC

		ASTM D2974-87	8260B (VOA and MTBE)										8270D (PAH)						
		Percent	_				Xylene						_						
	Analytical Parameter	Moisture	Benzene	Ethylbenzene	Toluene	m&p-Xylene	o-Xylene	Xylene (Total)	MTBE	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Chloroform	Acetone	Chloromethane	Isopropylbenzene (Cumene)	Methylene chloride	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene
	Reporting Units	%	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	μg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
	ndustrial Screening Level	NE	5,100	25,000	47,000,000	2,400,000	2,800,000	2,500,000	210,000	1,800,000	1,500,000	1,400	670,000,000	460,000	9,900,000	1,000,000	17,000	73,000	3,000,000
Sample ID	Sample Collection Date	Analytical Results			A	nalytical Resul	ts						Analytical Re	sults				Analytical Resu	lts
T10-SB3 (14 5)	03/14/2019	11.4	45 i M1	64 i M1 R1	< 7.1	< 14.3	< 7.1	< 14.3	< 7.1	<71	< 7 1	< 7.1	14 7 i l 1	< 14.3	<71	< 28.5	241 M1	68.4 M1	118 M1
T11-SB1 (18.5)	03/14/2019	7.2	< 5.6	<5.6	<5.6	<11.2	< 5.6	<11.2	<5.6	< 5.6	<5.6	<5.6	<112	<11.2	< 5.6	<22.4	105	27.1	48.5
T11-SB2 (16.5)	03/14/2019	8.7	< 8.4	< 8.4	< 8.4	<16.8	< 8.4	<16.8	< 8.4	<8.4	< 8.4	<8.4	<168	<16.8	<8.4	<33.6	61.2	10.8 j	15.6
T11-SB3 (13.5)	03/14/2019	11.9	<6.6	<6.6	<6.6	<13.1	< 6.6	<13.1	<6.6	<6.6	<6.6	<6.6	<131	<13.1	<6.6	<26.3	3.4 j	<11.4	<11.4
T12-SB1 (16.5)	03/20/2019	14.3	<5	<5	<5	<10	<5	<10	<5	<5	<5	<5	67.2 j	<10	<5	<19.9	<5	<11.5	<11.5
T12-SB3 (16)	03/20/2019	20.2	<6.2	<6.2	<6.2	<12.4	<6.2	<12.4	<6.2	<6.2	<6.2	<6.2	89.6 j	<12.4	<6.2	<24.7	<6.2	<12.4	<12.4
T13-SB1 (13)	03/20/2019	8.9	<5.6	<5.6	<5.6	<11.1	<5.6	<11.1	< 5.6	<5.6	< 5.6	<5.6	40.7 j	<11.1	<5.6	<22.3	4.3 j	3.5 j	6.2 j
T13-SB2 (15)	03/20/2019	19	<6.5	< 6.5	<6.5	<12.9	<6.5	<12.9	<6.5	<6.5	<6.5	<6.5	67.3 j	<12.9	<6.5	<25.9	1.6 j	3.4 j	4.9 j
T14-SB3 (12.5)	03/19/2019	26.1	<5.6	< 5.6	<5.6	<11.2	<5.6	<11.2	< 5.6	<5.6	<5.6	2.4 j,B	74.4 j	<11.2	<5.6	3.5 j	2.8 j	0.93 j	3 j
T15-SB1 (15.5)	03/19/2019	16.5	<6.8	<6.8	<6.8	<13.5	<6.8	<13.5	<6.8	<6.8	<6.8	2.9 j,B	<135	<13.5	<6.8	12 j	<12	<12	<12
T15-SB2 (17)	03/19/2019	9	< 3.9	< 3.9	< 3.9	<7.7	<3.9	<7.7	< 3.9	<3.9	< 3.9	1.8 j,B	69.7 j	<7.7	<3.9	<15.5	2.5 j,B	<11.1	<11.1
T17-SB1 (15.5)	03/29/2019	16.5	<6.7	<6.7	<6.7	<13.5	<6.7	<13.5	<6.7	<6.7	<6.7	< 6.7	33.8 j	<13.5	<6.7	<26.9	<6.7	10.1 j	<12
T17-SB2 (15.5)	03/29/2019	9.4	26	8.4	< 5.4	<10.9	<5.4	<10.9	<5.4	<5.4	< 5.4	<5.4	33.5 j,M1	< 10.9	<5.4	<21.7	90.6	78.7 M1	3.5 j
T1-SB1 (16.5)	03/21/2019	13.7	< 5.5	< 5.5	< 5.5	<11	<5.5	<11	< 5.5	<5.5	<5.5	<5.5	<110	<11	<5.5	<21.9	<5.5	<11.6	<11.6
T1-SB1 (17)	03/21/2019	10.5	<4.6	<4.6	<4.6	< 9.3	<4.6	< 9.3	< 4.6	<4.6	<4.6	<4.6	<93	< 9.3	<4.6	<18.6	<4.6	<11.2	<11.2
T1-SB2 (15.5)	03/21/2019	4.3	<8.1	<8.1	<8.1	<16.3	<8.1	<16.3	<8.1	<8.1	<8.1	<8.1	<163	<16.3	<8.1	<32.5	<8.1	<10.3	<10.3
T1-SB2 (16.5)	03/21/2019	15.8	< 5.3	<5.3	< 5.3	<10.7	<5.3	<10.7	<5.3	<5.3	<5.3	<5.3	<107	< 10.7	< 5.3	<21.3	2.8 j	<12	0.84 j
T2-SB3 (15)	03/21/2019	16.4	< 5.4	<5.4	<5.4	<10.9	<5.4	<10.9	<5.4	< 5.4	< 5.4	<5.4	<109	< 10.9	< 5.4	<21.8	1.4 j	<12.1	1.9 j
T4-SB1 (15.5)	03/18/2019	15.7	<5.3	<5.3	< 5.3	<10.7	<5.3	<10.7	<5.3	< 5.3	<5.3	2.4 j,B	61.4 j	< 10.7	< 5.3	<21.4	1.2 j	<11.8	<11.8
T4-SB2 (18)	03/19/2019	8.9	<5.8	<5.8	<5.8	<11.7	<5.8	<11.7	<5.8	< 5.8	<5.8	2.4 j,B	74 j	<11.7	< 5.8	6 j	5.2 j	2.3 j	3.6 j
T4-SB3 (17)	03/18/2019	6.7	<5.5	<5.5	<5.5	<10.9	<5.5	<10.9	<5.5	<5.5	<5.5	<5.5	84.6 j	< 10.9	< 5.5	<21.8	4.4 j	3.7 ј	5.8 j
T5-SB2 (17)	03/18/2019	8.8	<6.6	<6.6	<6.6	<13.2	<6.6	<13.2	<6.6	<6.6	<6.6	2.7 j,B	470	<13.2	<6.6	10.4 j	93.4	476	865
T5-SB3 (18)	03/18/2019	10.7	<6.4	<6.4	<6.4	<12.9	<6.4	<12.9	<6.4	< 6.4	< 6.4	2.6 j,B	13.8 j	<12.9	< 6.4	12.1 j	10100	202	365
T6-SB3 (17.5)	03/18/2019	13.2	79.9 j	110 j	<120	<241	<120	<241	<120	56.2 j	<120	55.3 j,B	1790 j	<241	<120	<482	3820	174	317
T7-SB1 (17)	03/15/2019	23.4	74.5 j	89.5 j	<194	< 388	<194	<388	<194	< 194	< 194	< 194	1740 j	124 j,L1	< 194	<777	4730 BC	64.7	124
T7-SB1 (19)	03/15/2019	12.6	7.5	8.1	<4.2	4.5 j	2.3 j	< 8.4	<4.2	2.4 j	<4.2	<4.2	20.3 j	<8.4	<4.2	<16.8	1710 B,BC	10.4 j	18.7
T7-SB2 (15.5)	03/15/2019	12.2	< 4.4	< 4.4	< 4.4	< 8.9	< 4.4	< 8.9	<4.4	< 4.4	<4.4	< 4.4	26.2 j	<8.9	<4.4	<17.7	113 BC	43.9	80.5
T7-SB3 (16)	03/15/2019	17.5	9.8	8.5	<5.4	6.9 j	< 5.4	<10.9	<5.4	17.8	7	<5.4	49.6 j	<10.9	2.5 j	<21.8	1860 B,BC	54.1	91.8
T8-SB2 (10)	03/12/2019	30.8	<6	<6	<6	5 j	<6	<11.9	<6	<6	<6	<6	26.3 j	<11.9	<6	<23.9	3.3 j	13 j	8 j
T8-SB2 (17)	03/12/2019	23.2	<5.4	<5.4	<5.4	<10.7	< 5.4	<10.7	<5.4	<5.4	< 5.4	2.1 j,B,M1	<107	< 10.7	<5.4	<21.4	<5.4	<13.1	<13.1
T8-SB3 (17)	03/12/2019	9	< 5.4	< 5.4	< 5.4	<10.9	< 5.4	<10.9	< 5.4	<5.4	< 5.4	2.3 j,B	14.2 j	< 10.9	< 5.4	<21.8	35.3	1.9 j	3.4 j
T9-SB1 (18)	03/13/2019	11.5	3.4 j	<5.9	2.7 j	<11.7	<5.9	<11.7	<5.9	<5.9	< 5.9	2.4 j	19.8 j	<11.7	< 5.9	<23.4	137	32.4	58.6
T9-SB2 (19)	03/13/2019	8.3	<236	<236	<236	<473	<236	<473	<236	<236	<236	102 j	<4730	<473	<236	<945	5260	25900	39200
T9-SB2 (22)	03/13/2019	3.8	<5.4	<5.4	<5.4	<10.8	<5.4	<10.8	<5.4	< 5.4	<5.4	2.3 j	36 j	<10.8	< 5.4	<21.7	6.4	10.5	21.6
QC SAMPLE RESULTS																			
BLIND DUPLICATE_T13-SB2	(15) 03/20/2019	13.7	< 5.5	<5.5	<5.5	<11	<5.5	<11	< 5.5	<5.5	<5.5	<5.5	53.4 j	<11	<5.5	<22	2.5 j	<11.4	0.85 j
BLIND DUPLICATE_T9-SB1 ((18) 03/13/2019	11.3	23.7	4.6 j	15.4	<12.8	<6.4	<12.8	<6.4	<6.4	< 6.4	3 j	22.6 j	<12.8	<6.4	<25.6	306	71.3	137
																		Prepared by: MSM	Checked by: TDP

Notes:

Bold type indicates that the compound was detected above the adjusted method detection limit.

Yellow shading indicates that the compound was detected above a potentially applicable screening level listed in Section 4.8 of the RIWP-A

% - Percent

< - concentration not detected at or above the adjusted reporting limit.

B - Target analyte detected in method blank at or above the reporting limit. Target analyte concentration in sample is less than 10X the concentration in the method blank. Analyte concentration in sample could be due to blank contamination.

BC - The same analyte was detected in an associated blank at a concentration above 1/2 the reporting limit but below the aboratory reporting limit.

D6 - The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

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

L1 - Analyte recovery in the laboratory control sample (LCS) was above quality control (QC) limits. Results may be biased high.

M1 - Matrix spike recovery was high: the associated Laboratory Control Spike (LCS) was acceptable.

NE - No screening level established at this time. A site-specific risk-based screening level may be established as part of the risk assessment process outlined in Section 5.0 of the RIWP-A. R1 - Relative Percent Difference (RPD) value was outside control limits.

µg/kg - Micrograms per kilogram
TABLE 3-7 ANALYTICAL RESULTS SUMMARY - SOIL REMEDIAL INVESTIGATION WORK PLAN ADDENDUM FORMER BRAMLETTE MGP SITE DUKE ENERGY CAROLINAS, LLC, GREENVILLE, SC

									8270D (PAH)								8270D (Other SVOC)
Ai	nalytical Parameter	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Phenanthrene	Pyrene	Dibenzofuran
	Reporting Units	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Industr	ial Screening Level	45,000,000	NE	230,000,000	21,000	2,100	21,000	NE	210,000	2,100,000	2,100	30,000,000	30,000,000	21,000	NE	23,000,000	1,000,000
Sample ID	Sample Collection Date			•				A	nalytical Results								Analytical Results
T10-SB3 (14.5)	03/14/2019	57.1 M1	<11.3	6.2 j	<11.3	<11.3	<11.3	<11.3	<11.3	<11.3	<11.3	1.6 j	19.5 M1	<11.3	38.7	2.2 j	<376
T11-SB1 (18.5)	03/14/2019	19.4	3.3 j	3.7 j	<10.9	<10.9	<10.9	<10.9	<10.9	< 10.9	<10.9	3 j	9.9 j	<10.9	26.1	4.9 j	<358
T11-SB2 (16.5)	03/14/2019	22	1.4 j	2.8 j	<10.9	<10.9	<10.9	<10.9	<10.9	< 10.9	<10.9	<10.9	7 j	<10.9	12	1.5 j	<356
T11-SB3 (13.5)	03/14/2019	7.4 j	1.1 j	<11.4	<11.4	<11.4	<11.4	<11.4	<11.4	<11.4	<11.4	<11.4	3.3 j	<11.4	<11.4	<11.4	<376
T12-SB1 (16.5)	03/20/2019	<11.5	<11.5	<11.5	<11.5	<11.5	<11.5	<11.5	<11.5	<11.5	<11.5	<11.5	<11.5	<11.5	<11.5	<11.5	<382
T12-SB3 (16)	03/20/2019	2.4 j	<12.4	<12.4	<12.4	<12.4	<12.4	<12.4	<12.4	<12.4	<12.4	<12.4	1.5 j	<12.4	<12.4	<12.4	<418
T13-SB1 (13)	03/20/2019	3.7 ј	4.9 j	5.3 j	10.5 j	9.8 j	10.8 j	3.9 j	4.1 j	9.1 j	1.4 j	18.2	3.7 ј	3.9 j	9.9 j	21.3	<366
T13-SB2 (15)	03/20/2019	19	2.7 ј	3.3 j	5.2 j	4.5 j	4.6 j	1.8 j	2.4 j	4.5 j	<12.5	10.5 j	4.1 j	1.8 j	10.8 j	8.8 j	<410
T14-SB3 (12.5)	03/19/2019	0.77 j	0.85 j	1.6 j	2.7 ј	1.8 j	2.7 ј	<13.6	0.84 j	2.3 j	<13.6	6.1 j	1.3 j	<13.6	6.1 j	4.6 j	<442
T15-SB1 (15.5)	03/19/2019	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<397
T15-SB2 (17)	03/19/2019	<11.1	0.57 j	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<360
T17-SB1 (15.5)	03/29/2019	15.4	<12	0.67 j	<12	<12	<12	<12	<12	<12	<12	<12	3.7 ј	<12	3.4 j	<12	<391
T17-SB2 (15.5)	03/29/2019	53.8	1 j	6.7 j	<11.2	<11.2	<11.2	<11.2	<11.2	<11.2	<11.2	<11.2	19.6	<11.2	42	1.3 j	<367
T1-SB1 (16.5)	03/21/2019	6.4 j	<11.6	<11.6	<11.6	<11.6	<11.6	<11.6	<11.6	<11.6	<11.6	<11.6	1 j	<11.6	<11.6	<11.6	<376
T1-SB1 (17)	03/21/2019	<11.2	<11.2	<11.2	<11.2	<11.2	<11.2	<11.2	<11.2	<11.2	<11.2	<11.2	<11.2	<11.2	<11.2	<11.2	<369
T1-SB2 (15.5)	03/21/2019	<10.3	<10.3	<10.3	<10.3	<10.3	<10.3	<10.3	<10.3	<10.3	<10.3	<10.3	<10.3	<10.3	<10.3	<10.3	<347
T1-SB2 (16.5)	03/21/2019	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<397
T2-SB3 (15)	03/21/2019	<12.1	<12.1	<12.1	<12.1	<12.1	<12.1	<12.1	<12.1	<12.1	<12.1	<12.1	<12.1	<12.1	<12.1	<12.1	<395
T4-SB1 (15.5)	03/18/2019	25.8	1.1 j	0.63 j	<11.8	<11.8	<11.8	<11.8	<11.8	<11.8	<11.8	<11.8	0.91 j	<11.8	<11.8	<11.8	< 391
T4-SB2 (18)	03/19/2019	2.8 j	0.75 j	0.71 j	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	2.2 j	<11.1	6.6 j	1.6 j	<365
T4-SB3 (17)	03/18/2019	4.8 j	0.87 j	0.53 j	<10.7	<10.7	<10.7	<10.7	<10.7	<10.7	<10.7	< 10.7	2.2 j	<10.7	4.5 j	<10.7	<357
T5-SB2 (17)	03/18/2019	506	<10.8	180	76.2	55.7	41.2	14.9	16.4	57.1	4.9 j	195	286	12.6	805	337	<364
T5-SB3 (18)	03/18/2019	122	27.4	42.6	9 j	5.1 j	3.8 j	1.2 ј	1.8 j	6.5 j	<11.1	35.5	85.8	1.1 j	203	61.8	<372
T6-SB3 (17.5)	03/18/2019	127	<11.6	13.8	1.2 j	0.79 j	1 j	<11.6	0.52 j	0.82 j	<11.6	6.6 j	42.6	<11.6	73.9	9.7 j	<374
T7-SB1 (17)	03/15/2019	41.7	<13	1.6 j	<13	<13	<13	<13	<13	<13	<13	<13	10.8 j	<13	12.5 j	<13	<425
T7-SB1 (19)	03/15/2019	8 j	0.7 j	0.65 j	<11.4	<11.4	<11.4	<11.4	<11.4	<11.4	<11.4	<11.4	2.5 j	<11.4	4.3 j	<11.4	<372
T7-SB2 (15.5)	03/15/2019	43.8	7 j	10.7 j	4.9 j	3.7 j	3.9 j	1.5 j	1.6 j	4 j	<11.2	12.2	19.4	1.3 j	48.5	19.7	< 370
T7-SB3 (16)	03/15/2019	38.4	<12.1	<12.1	<12.1	<12.1	<12.1	<12.1	<12.1	<12.1	<12.1	<12.1	5.1 j	<12.1	2.3 j	<12.1	<393
T8-SB2 (10)	03/12/2019	95.1 D6	205 D6	189 D6	826 D6	727 D6	1050 D6	399 D6	429 D6	799 D6	116 D6	1070 D6	49.7 D6	376 D6	249 D6	1310 D6	<477
T8-SB2 (17)	03/12/2019	<13.1	<13.1	<13.1	<13.1	<13.1	<13.1	<13.1	<13.1	<13.1	<13.1	<13.1	<13.1	<13.1	<13.1	<13.1	<431
T8-SB3 (17)	03/12/2019	1.7 j	<11	<11	1.5 j	1.3 j	1.7 j	<11	<11	<11	<11	2 j	<11	<11	<11	2.3 j	<357
T9-SB1 (18)	03/13/2019	16.9	10 j	1.8 j	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	<11.1	7.6 j	<11.1	10.2 j	2.8 j	<379
T9-SB2 (19)	03/13/2019	4820	19700	10900	4900	3530	2870	1200	1450	3630	383 j	11300	15300	1020	39300	17300	4940
T9-SB2 (22)	03/13/2019	5.4 j	13.2	1.6 j	1.2 j	0.68 j	<10.5	<10.5	<10.5	0.72 j	<10.5	2.8 j	4.1 j	<10.5	6.1 j	6.9 j	<349
QC SAMPLE RESULTS	-			•	-			·					•			•	-
BLIND DUPLICATE_T13-SB2 (15)	03/20/2019	12.8	1.1 j	<11.4	<11.4	<11.4	<11.4	<11.4	<11.4	<11.4	<11.4	<11.4	<11.4	<11.4	<11.4	<11.4	<384
BLIND DUPLICATE_T9-SB1 (18)	03/13/2019	19.7	37.1	13.6	4.8 j	3.3 j	2.7 ј	<11.4	1 j	3.3 j	<11.4	12.8	26.4	<11.4	58.7	21.4	<375

Notes:

Bold type indicates that the compound was detected above the adjusted method detection limit.

Yellow shading indicates that the compound was detected above a potentially applicable screening level listed in Section 4.8 of the RIWP-A

% - Percent

< - concentration not detected at or above the adjusted reporting limit.

B - Target analyte detected in method blank at or above the reporting limit. Target analyte concentration in sample is less than 10X the concentration in the method blank. Analyte concentration in sample could be due to blank contamination.

BC - The same analyte was detected in an associated blank at a concentration above 1/2 the reporting limit but below the aboratory reporting limit.

D6 - The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

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

L1 - Analyte recovery in the laboratory control sample (LCS) was above quality control (QC) limits. Results may be biased high.

M1 - Matrix spike recovery was high: the associated Laboratory Control Spike (LCS) was acceptable.

NE - No screening level established at this time. A site-specific risk-based screening level may be established as part of the risk assessment process outlined in Section 5.0 of the RIWP-A.

R1 - Relative Percent Difference (RPD) value was outside control limits. µg/kg - Micrograms per kilogram

Prepared by: <u>MSM</u> Checked by: <u>TDP</u>

TABLE 3-8 ANALYTICAL RESULTS SUMMARY - SHEEN FORMER BRAMLETTE MGP SITE DUKE ENERGY CAROLINAS, LLC, GREEVILLE, SC

Analyte	Reporting Units	SS-01_SS_20190424	SS-02_SS_20190424	SS-03_SS_20190424
1-Methylnaphthalene	mg/kg	27.8	15.9	24.1
2,6,10-Trimethyldodecane (1380)	mg/kg	<781	<833	<694
2,6,10-1rimetnyitridecane (1470)	mg/kg ma/ka	61 7	<833	<694
Acenaphthene	mg/kg	58.2	13	19.9
Acenaphthylene	mg/kg	17.6	2.63 j	<10.4
Anthracene	mg/kg	26.7	9.4 j	7.58 j
Benz(a)anthracene	mg/kg	65.7	11 j	2.54 j
Benzo(a)fluoranthene	mg/kg	18.7	<12.5	<10.4
Benzo(b)fluoranthene	ma/ka	74	24.4	4.32 J 3.41 i
Benzo(e)pyrene	mg/kg	66.7	18.8	3.18 j
Benzo(g,h,i)perylene	mg/kg	58.1	13.7	3.5 j
Benzo(j) + (k)fluoranthene	mg/kg	81.7	21	3.6 ј
Benzothiophene	mg/kg	<11.7	<12.5	<10.4
C1-Benzo(b)thionhenes	mg/kg	25.8	8 69 i	12.5
C1-Chrysenes	mg/kg	36.3	7.69 j	2.23 j
C1-Decalins	mg/kg	<11.7	<12.5	<10.4
C1-Dibenzothiophenes BS	mg/kg	8.41 j	<12.5	4.91 j
C1-Fluoranthenes/Pyrenes	mg/kg	55.8	9.92 j	4.82 j
C1-Fluorenes	mg/kg	15.9	5.16 j	8.9 j
	mg/kg mg/kg	81.1 8.09 i	33.9	<10.4
C1-Phenanthrenes/Anthracenes	mg/kg	53.6	16.1	22.9
C2-Benzo(b)thiophenes	mg/kg	5.8 j	<12.5	3.8 ј
C2-Chrysenes BS	mg/kg	17.5	6.32 j	<10.4
C2-Decalins	mg/kg	5.38 j	7.06 j	<10.4
C2-Dibenzothiophenes	mg/kg	12.9	5.01 j	7.33 j
C2-Fluoranthenes/Pyrenes	mg/kg mg/kg	28.5	12.4 j	3.76]
C2-Naphthalenes	mg/kg	78.7	35.2	63.8
C2-Naphthobenzothiophenes	mg/kg	11.1 j	11.5 ј	<10.4
C2-Phenanthrenes/Anthr BS	mg/kg	26.7	6.51 j	6.67 j
C3-Benzo(b)thiophenes	mg/kg	7.73 ј	4.67 j	6.08 j
C3-Chrysenes	mg/kg	20.5	<12.5	<10.4
C3-Decalins	mg/kg mg/kg	8.12 J	7.26 J 5.82 i	< 10.4 4 96 i
C3-Fluoranthenes/Pyrenes	mg/kg	19	6 j	<10.4
C3-Fluorenes	mg/kg	26.6	14.8	16.4
C3-Naphthalenes	mg/kg	47.6	17.6	33.7
C3-Naphthobenzothiophenes	mg/kg	7.4 j	4.47 j	<10.4
C3-Phenanthrenes/Anthracenes	mg/kg	16.1	4.6 j	3.52 j
C4-Benzo(b)thiophenes	mg/kg mg/kg	4.39 J <11 7	<12.5	<10.4
C4-Decalins	mg/kg	15.3	14.6	10.7
C4-Dibenzothiophenes	mg/kg	<11.7	<12.5	<10.4
C4-Fluoranthenes/Pyrenes	mg/kg	12.1	9.56 j	3.09 ј
C4-Naphthalenes	mg/kg	23.8	9.9 j	17
C4-Naphthobenzothiophenes	mg/kg	<11./	<12.5	<10.4
Chrvsene	ma/ka	85.6	33.6	3.84 j
cis/trans-Decalin	mg/kg	<5.86	<6.25	<5.21
Dibenz(a,h)+(a,c)anthracene	mg/kg	15.9	4.28 j	<10.4
Dibenzofuran	mg/kg	103	45.4	95.6
Dibenzothiophene	mg/kg	17.4	6.94 j	12.1
Eluoranthene	mg/Kg	133	36.2	401UU 28
Fluorene	mg/kg	36.4	16.8	28.1
Indeno(1,2,3-cd)pyrene	mg/kg	48.1	11.8 j	2.89 j
Naphthalene	mg/kg	33.8	24.1	29.4
Naphthobenzothiophenes	mg/kg	11.5 j	5.66 j	<10.4
n-Decane (C10)	mg/kg	< /81	<833	<694
n-Dotosane (C22)	mg/kg	<781	<833	<694
n-Dotriacontane (C32)	mg/kg	1270	3310	2130
n-Eicosane (C20)	mg/kg	162 j	<833	109 j
n-Heneicosane (C21)	mg/kg	152 j	169 j	<694
n-Hentriacontane (C31)	mg/kg 	2760	9390	2480
n-Heptatriacontane (C37)	mg/kg	1250 702 i	1860	1260
n-Hexadecane (C16)	mg/kg	202 i	<833	199 i
n-Hexatriacontane (C36)	mg/kg	658 j	2210	1910
n-Nonacosane (C29)	mg/kg	2710	7620	3440
n-Nonadecane (C19)	mg/kg	<781	<833	<694
n-Nonane (C9)	mg/kg "	<781	<833	<694
n-Nonatriacontane (C39)	mg/kg	397 j	1130	978
n-Octadecane (C18)	mg/kg	919	928	835
n-Octatriacontane (C38)	mg/kg	471 j	1280	903
Norpristane (1650)	mg/kg	<781	<833	<694
n-Pentacosane (C25)	mg/kg	1110	2240	1260
n-Tetracontane (C40)	mg/kg	294 j	958	820

TABLE 3-8 ANALYTICAL RESULTS SUMMARY - SHEEN FORMER BRAMLETTE MGP SITE DUKE ENERGY CAROLINAS, LLC, GREEVILLE, SC

Analyte	Reporting Units	SS-01_SS_20190424	SS-02_SS_20190424	SS-03_SS_20190424
n-Tetracosane (C24)	mg/kg	262 j	533 j	447 ј
n-Tetradecane (C14)	mg/kg	187 j	<833	203 ј
n-Tetratriacontane (C34)	mg/kg	1360	3040	1920
n-Triacontane (C30)	mg/kg	1500	3100	2140
n-Tridecane (C13)	mg/kg	<781	<833	<694
n-Tritriacontane (C33)	mg/kg	1780	5320	2050
n-Undecane (C11)	mg/kg	<781	<833	<694
Perylene	mg/kg	24.6	6.45 j	3.22 ј
Phenanthrene	mg/kg	233	114	195
Phytane	mg/kg	<781	<833	<694
Pristane	mg/kg	<781	<833	<694
Pyrene	mg/kg	2.9 i	23	<10.4
Total Petroleum Hydrocarbons (C9-C44)	mg/kg	173000	236000	119000
Total Saturated Hydrocarbons	mg/kg	26000 j	60500 j	32800 j
1,1,4-Trimethylcyclohexane	µg/kg	<357000	<192000	<250000
1,1-Dimethylcyclopentane	µg/kg	<357000	<192000	<250000
1,2,3,4-Tetramethylbenzene	µg/kg	< 357000	<192000	<250000
1,2,3,5-Tetramethylbenzene	µg/kg	<357000	<192000	<250000
1,2,3-Trimethylbenzene	µg/kg	< 357000	<192000	<250000
1.2.4-Triethylbenzene	µg/kg	<357000	<192000	<250000
1,2,4-Trimethylbenzene	µg/kg	<357000	<192000	<250000
1,2-Dichloroethane	µg/kg	< 357000	<192000	<250000
1,2-Diethylbenzene	µg/kg	<357000	<192000	<250000
1,2-Dimethyl-3-Ethylbenzene	µg/kg	< 357000	<192000	<250000
1,2-Dimethyl-4-ethylbenzene	µg/kg	<357000	<192000	<250000
1,2-Dimethylcyclohexane (cis)	μg/kg	<357000	<192000	<250000
1,2-Dimethylcyclonexane (trans)	µg/kg	< 357000	< 192000	<250000
1,3,5-Trimethylbenzene	µg/kg	<357000	<192000	<250000
1,3-Diethylbenzene	μg/kg	<357000	<192000	<250000
1,3-Dimethyl-2-Ethylbenzene	µg/kg	<357000	<192000	<250000
1,3-Dimethyl-4-ethylbenzene	µg/kg	<357000	<192000	<250000
1,3-Dimethyl-5-Ethylbenzene	µg/kg	<357000	<192000	<250000
1,3-Dimethyl-5-tert-Butylbenzene	µg/kg	<357000	<192000	<250000
1,3-Dimethylcyclopentane (cis)	µg/kg	< 357000	< 192000	< 50000
1.4-Dimethyl-2-Ethylbenzene	ua/ka	<357000	<192000	<250000
1,4-Dimethylcyclohexane (trans)	μg/kg	<357000	<192000	<250000
1-Decene	µg/kg	<357000	<192000	<250000
1-Heptene/1,2-DMCP (trans)	µg/kg	<714000	<385000	< 500000
1-Hexene	µg/kg	< 357000	<192000	<250000
1-Methyl-2-ethylbenzene	μg/kg	<357000	<192000	<250000
1-Methyl-2-isopropyibenzene	µg/kg	< 357000	< 192000	<250000
1-Methyl-3-ethylbenzene	ua/ka	<357000	<192000	<250000
1-Methyl-3-isopropylbenzene	μg/kg	<357000	<192000	<250000
1-Methyl-3-n-propylbenzene	µg/kg	<357000	<192000	<250000
1-Methyl-4-Ethylbenzene	µg/kg	<357000	<192000	<250000
1-Methyl-4-Isopropylbenzene	µg/kg	< 357000	<192000	<250000
1-Methyl-4-N-Propylbenzene	µg/kg	<357000	<192000	<250000
	µg/kg	< 893000	<481000	< 625000
1-Pentene	µg/kg	<357000	<192000	<250000
2,2,3-Trimethylbutane	μg/kg	<357000	<192000	<250000
2,2,3-Trimethylpentane	μg/kg	<357000	<192000	<250000
2,2-Dimethylbutane	µg/kg	<357000	<192000	<250000
2,2-Dimethylhexane	µg/kg	<357000	<192000	<250000
2,2-Dimethylpentane	μg/kg	<357000	<192000	<250000
2,3,4-Trimethylpentane	ua/ka	<357000	<192000	<250000
2,3-Dimethylbutane	μg/kg	<357000	<192000	<250000
2,3-Dimethylheptane	µg/kg	<357000	<192000	<250000
2,3-Dimethylhexane	µg/kg	<357000	<192000	<250000
2,3-Dimethylpentane	µg/kg	< 357000	<192000	<250000
2,4-Dimethylhexane	μg/kg	< 357000	< 192000	<250000
2,4-Dimethylpentane	µg/kg	< 357000	< 192000	<250000
2,5-Dimethylhexane	µa/ka	<357000	<192000	<250000
2-Ethylthiophene	μg/kg	<357000	<192000	<250000
2-Methyl-1-Butene	µg/kg	<357000	<192000	< 250000
2-Methyl-2-pentene	μg/kg	<357000	<192000	<250000
2-Methylheptane	µg/kg	<357000	<192000	<250000
2-Methylhexane	μg/kg	<357000	<192000	<250000
2-Methyloctape	µg/kg	<35/000	<192000	<250000
2-Methylpentane	µg∕ry µa/ka	<357000	<192000	<250000
2-Methylthiophene	μg/kg	<357000	<192000	<250000
2-Nonene	µg/kg	<893000	<481000	<625000
3,3-Diethylpentane	µg/kg	<357000	<192000	<250000
3,3-Dimethylheptane	µg/kg	<357000	<192000	<250000

TABLE 3-8 ANALYTICAL RESULTS SUMMARY - SHEEN FORMER BRAMLETTE MGP SITE DUKE ENERGY CAROLINAS, LLC, GREEVILLE, SC

Analyte	Reporting Units	SS-01_SS_20190424	SS-02_SS_20190424	SS-03_SS_20190424
3,3-Dimethyloctane	µg/kg	<357000	<192000	<250000
3,3-Dimethylpentane	μg/kg	<357000	<192000	<250000
3,4-Dimethylheptane	μg/kg	<357000	<192000	<250000
3,5-Dimethylheptane	µg/kg	<357000	<192000	<250000
3-Ethylhexane	μg/kg	<357000	<192000	<250000
3-Ethylpentane	μg/kg	<357000	<192000	<250000
3-Methyl-1-butene	µg/kg	<357000	<192000	<250000
3-Methylheptane	µg/kg	<357000	<192000	<250000
3-Methylnopape	µg/kg	< 357000	< 192000	<250000
3-Methyliotiane	µg/kg	<357000	<192000	<250000
3-Methylpentane	μg/kg	<357000	<192000	<250000
3-Methylthiophene	µg/kg	<357000	<192000	<250000
4-Methyl-1-pentene	µg/kg	<357000	< 192000	<250000
4-Methylheptane	µg/kg	<357000	< 192000	<250000
4-Methyloctane	µg/kg	<357000	<192000	<250000
Benzene	µg/kg	<357000	<192000	<250000
Benzothiophene	µg/kg	<357000	<192000	<250000
cis-2-Heptene	µg/kg	<357000	<192000	<250000
cis-2-Hexene	µg/kg	<357000	<192000	<250000
cis-2-Octene	µg/kg	<357000	<192000	<250000
cis-2-Pentene	µg/kg	<357000	<192000	<250000
cis-3-Nonene	μg/kg	<357000	<192000	<250000
Cyclonentane	μγ/κγ	< 357000	< 172000 <192000	< 250000
Decane (C10)	µg/kg	<357000	<192000	<250000
Dodecane (C12)	ug/kg	<893000	<481000	<625000
Ethylbenzene	μg/kg	<357000	<192000	<250000
Ethylcyclopentane	μg/kg	<357000	<192000	<250000
Ethylene dibromide	µg/kg	<357000	<192000	<250000
Ethyl-Tert-Butyl-Ether	µg/kg	<357000	<192000	<250000
Heptane	μg/kg	<357000	<192000	<250000
Hexylbenzene	µg/kg	<357000	<192000	<250000
Indane	µg/kg	<357000	<192000	<250000
Indene	µg/kg	<357000	< 192000	<250000
Isobutylbenzene	μg/kg	<357000	<192000	<250000
Isobutylcyclohexane	µg/kg	<357000	<192000	<250000
Isopentane	µg/kg	<357000	< 192000	< 250000
Isoprene	µg/kg	<357000	< 192000	< 250000
Isopropyl Ether	ug/kg	<357000	<192000	<250000
Isopropylbenzene	μg/kg	<357000	<192000	<250000
Isopropylcyclohexane	μg/kg	<357000	<192000	<250000
Isopropylcyclopentane	µg/kg	<357000	<192000	<250000
Methylcyclohexane	µg/kg	<357000	<192000	<250000
Methylcyclopentane	µg/kg	<357000	<192000	<250000
Methyl-tert-butyl ether	µg/kg	<357000	<192000	<250000
MMT	µg/kg	<893000	<481000	<625000
n-Butylbenzene	μg/kg	<357000	<192000	<250000
n-Hexane	µg/kg	<357000	<192000	<250000
N Pontylbonzono	µg/kg	<357000	<192000	<250000
n-Propylbenzene	μg/kg	<357000	<192000	<250000
Octane	µg/ka	<357000	<192000	<250000
o-Xylene	µg/kg	<357000	<192000	<250000
p/m-Xylene	μg/kg	<714000	<385000	<500000
Pentadecane	µg/kg	<893000	<481000	<625000
Pentane	µg/kg	<357000	<192000	<250000
sec-Butylbenzene	µg/kg	<357000	<192000	<250000
Styrene	µg/kg	<357000	<192000	<250000
tert-Butylbenzene	µg/kg	<357000	<192000	<250000
Tertiary Butanol	µg/kg	<4460000	<2400000	<3120000
Totrodocare (C14)	μg/kg	<357000	<192000	<250000
	μg/kg	< 873000	<48 IUUU <102000	< 025000
Тошере	Hairea	< 357000	< 192000	< 250000
trans-2-Heptene	µg/ka	<357000	<192000	<250000
trans-2-Hexene	μg/kg	<357000	<192000	<250000
trans-2-Pentene	μg/kg	<357000	<192000	<250000
trans-3-Heptene	μg/kg	< 357000	<192000	<250000
trans-3-Nonene	μg/kg	<357000	<192000	<250000
Tridecane	μg/kg	<893000	<481000	<625000
Undecane	µg/kg	<357000	<192000	< 250000
Xylene (Total)	μg/kg	<357000	<192000	<250000

Notes:

Prepared by: <u>MSM</u> Checked by: <u>TDP</u>

Sheen samples collected on 4/24/19.

% - percent

< - concentration not detected at or above the adjusted reporting limit.

µg/kg - Micrograms per liter

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

mg/kg - Milligrams per kilogram

NA - Not analyzed

TABLE 4-1 PROPOSED MONITORING WELL INSTALLATION DETAILS REMEDIAL INVESTIGATION WORK PLAN ADDENDUM FORMER BRAMLETTE MGP SITE DUKE ENERGY CAROLINAS, LLC, GREENVILLE, SC

Location	Well ID	Approximate Surface Casing Depth (feet bls)	Approximate To (screened inte	tal Depth of Well erval - feet bls)	Approximate Total Depth of Boring to Facilitate Geophysics (feet bls)		
	MW-37S		5	20			
	MW-37TZ		40	45		Provide monitoring at property I	
	MW-37BR	50	60	65	100		
Source area (Parcer T)	MW-36S		10	25			
	MW-36TZ		35	40		Characterize groundwater cond	
	MW-36BR	45	55	60	145		
	MW-35S		5	20			
	MW-35TZ		30	35		Provide additional resolution of a	
	MW-35BR	40	50	55	90	downgradient of the source dree	
Downgradient of source area (Parcel 2)	MW-29BR	40	50	55	90		
	MW-34S		5	20		Provide horizontal and vertical of	
	MW-34TZ		35	40		proundwater monitoring result	
	MW-34BR	45	55	60	95		
West of Veurshin Landfill (Densel 2)	MW-02TZ		25	30		Provide horizontal and vertical of	
West of Vaughn Landhii (Parcel 3)	MW-02BR	35	45	50	85	groundwater monitoring results	
	MW-03BRL	70	80	85	140	Provide vertical delineation of g	
Vaughn Landfill (Parcel 3)	MW-21TZ		20	25		Provide vertical delineation of g	
	MW-21BR	30	40	45	130	21.	
	MW-32S		5	20			
	MW-32TZ		35	40			
	MW-33S		5	20			
Adjacent to Reedy River (Swamp Rabbit Trail)	MW-33TZ		35	40		Increase data resolution and ve surface water	
i diy	MW-40S		5	20			
	MW-40TZ		40	45			
	MW-40BR	50	60	65	100		
	MW-38S		5	20			
South of Vaughn landfill (Parcel 4 - near property line adjacent to private properties)	MW-39S		5	20		and adjacent private properties.	
	MW-39TZ		35	40		seasonally inundated or saturate	
	MW-41S		5	20			
Behind Legacy Charter Elementary School	MW-41TZ		30	35		Provide verification of no constit	
	MW-41BR	40	50	55	90		

Notes:

All depths are approximate. Total depths are subject to change based on field conditions.

bls - below land surface

Purpose

line east from source area.

entrations beneath former MGP process areas.

groundwater concentration (horizontal and vertical) a between Parcel 2 and Legacy Charter Elementary.

delineation of groundwater COIs based on MW-29TZ

delineation of groundwater COIs based on MW-02 and MW-29TZ

roundwater COIs based on MW-03BR monitoring results.

roundwater COIs based on observations at MW-06A and MW-

rify current conclusion that groundwater COIs are not affecting

tuent migration toward property line between Vaughn Landfill . Wells are located hydraulically upgradient from Parcel 3; bected toward this area. Access in this area is difficult and ed conditions will factor into final well location.

tuent migration onto neighboring property and long term

Prepared By: <u>TCK</u> Checked By: <u>TDP</u>

TABLE 4-2 APPLICABLE REGULATORY STANDARDS AND SCREENING LEVELS REMEDIAL INVESTIGATION WORK PLAN ADDENDUM FORMER BRAMLETTE MGP SITE DUKE ENERGY CAROLINAS, LLC, GREENVILLE, SC

Gro	oundwater	Sur	face Water	Se	diment		Soil
Analytical Parameter	Regulatory Standard (µg/L) ¹	Analytical Parameter	Regulatory Standard (µg/L) ¹	Analytical Parameter	Regulatory Standard (µg/kg) ²	Analytical Parameter	Regulatory Standard (µg/L) ²
Benzene	5	Benzene	5	Benzene	5,100	Benzene	5,100
Ethylbenzene	700	Ethylbenzene	700	Ethylbenzene	25,000	Ethylbenzene	25,000
Toluene	1,000	Toluene	1,000	Toluene	47,000,000	Toluene	47,000,000
m&p-Xylene	NE	m&p-Xylene	NE	m&p-Xylene	2,400,000	m&p-Xylene	2,400,000
o-Xylene	NE	o-Xylene	NE	o-Xylene	2,800,000	o-Xylene	2,800,000
Total Xylene	10,000	Total Xylene	10000	Xylene (Total)	2,500,000	Xylene (Total)	2,500,000
MTBE	40	MTBE	40	MTBE	210,000	MTBE	210,000
2-Butanone (MEK)	NE	Chloromethane	NE	2-Butanone (MEK)	190,000,000	1,2,4-Trimethylbenzene	1,800,000
2-Hexanone	NE	Naphthalene	25	4-Methyl-2-pentanone (MIBK)	140,000,000	1,3,5-Trimethylbenzene	1,500,000
Acetone	NE	1-Methylnaphthalene	NE	Acetone	670,000,000	Chloroform	1,400
Trichloroethene	NE	2-Methylnaphthalene	NE	Chloroform	1,400	Acetone	670,000,000
Naphthalene	25	Acenaphthene	NE	Methylene chloride	1,000,000	Chloromethane	460,000
1-Methylnaphthalene	NE	Acenaphthylene	NE	Naphthalene	17,000	Isopropylbenzene (Cumene)	9,900,000
2-Methylnaphthalene	NE	Anthracene	NE	1-Methylnaphthalene	73,000	Methylene chloride	1,000,000
Acenaphthene	NE	Benzo(a)anthracene	10	2-Methylnaphthalene	3,000,000	Naphthalene	17,000
Acenaphthylene	NE	Benzo(a)pyrene	0.2	Acenaphthene	45,000,000	1-Methylnaphthalene	73,000
Anthracene	NE	Benzo(b)fluoranthene	10	Acenaphthylene	NE	2-Methylnaphthalene	3,000,000
Benzo(a)anthracene	10	Benzo(g,h,i)perylene	NE	Anthracene	230,000,000	Acenaphthene	45,000,000
Benzo(a)pyrene	0.2	Benzo(k)fluoranthene	10	Benzo(a)anthracene	21,000	Acenaphthylene	NE
Benzo(b)fluoranthene	10	Chrysene	10	Benzo(a)pyrene	2,100	Anthracene	230,000,000
Benzo(g,h,i)perylene	NE	Dibenz(a,h)anthracene	10	Benzo(b)fluoranthene	21,000	Benzo(a)anthracene	21,000
Benzo(k)fluoranthene	10	Fluoranthene	NE	Benzo(g,h,i)perylene	NE	Benzo(a)pyrene	2,100
Chrysene	10	Fluorene	NE	Benzo(k)fluoranthene	210,000	Benzo(b)fluoranthene	21,000
Dibenz(a,h)anthracene	10	Indeno(1,2,3-cd)pyrene	NE	Chrysene	2,100,000	Benzo(g,h,i)perylene	NE
Fluoranthene	NE	Phenanthrene	NE	Dibenz(a,h)anthracene	2,100	Benzo(k)fluoranthene	210,000
Fluorene	NE	Pyrene	NE	Fluoranthene	30,000,000	Chrysene	2,100,000
Indeno(1,2,3-cd)pyrene	NE			Fluorene	30,000,000	Dibenz(a,h)anthracene	2,100
Phenanthrene	NE			Indeno(1,2,3-cd)pyrene	21,000	Fluoranthene	30,000,000
Pyrene	NE			Phenanthrene	NE	Fluorene	30,000,000
2,4-Dimethylphenol	NE			Pyrene	Pyrene 23,000,000		21,000
2,4-Dinitrotoluene	NE					Phenanthrene	NE
2-Methylphenol(o-Cresol)	NE					Pyrene	23,000,000
Dibenzofuran	NE					Dibenzofuran	1,000,000
Phenol	NE						

Prepared by: TCK Checke by: MSM

Notes:

¹SCDHEC R.61-68 Human Health MCL values

²EPA RSLs for Industrial Soils.

NE - No regulatory standard established at this time. A site-specific target level may be established as part of the risk assessment outlined in Section 5.0 of the RIWP-A.

µg/L - Micrograms per liter

µg/kg - Micrograms per kilogram

APPENDIX A

Project Timeline







APPENDIX B

Monitoring Well and Soil Boring Logs, Construction Forms, and Abandonment Forms

PROJECT: Former Bramlette Road MGP Site	ECT: Former Bramlette Road MGP Site WELL / BORING NO: MW-03BR				
PROJECT NO: 1026.800	STARTED:	3/2	27/19	COMPLETED:	4/1/19
DRILLING COMPANY: Cascade Drilling	NORTHING	: 1	104216.352	EASTING:	1574138.038
DRILLING METHOD: Rotary Sonic	G.S. ELEV:	9:	35.87 ft	M.P. ELEV:	935.87 ft
BOREHOLE DIAMETER: 9.25, 6 IN	DEPTH TO	WATER: f	t TOC	TOTAL DEPTH:	64.5 ft BGS
NOTES: Well Permit #MW-11615	LOGGED B	Y: J. Conz	elmann/T. King	CHECKED BY: M	. Mastbaum/A. Brey
H L J S S DESCRIPTION		SAMPLE RECOV. (FT)	VISUAL IMPACTS PID (ppm)	COM	WELL ISTRUCTION
 FILL; Lean clay with some silt; low plasticity; moi micaceous coarse sand; trace rootlets, bric concrete debris; wet above 0.9'. No odor, no visual impacts. FILL; Wood debris; wet; dark gray; trace plastic of Light sheen, faint hydrocarbon odor. SAND; Gray, micaceous; fine-medium; poorly grad dense; moist; interlayered with stiff lean cla graded coarse sand to gravel. 10.5 - 11' - Trace NAPL coated seams (cn hydrocarbon odors. 12' - 14.3' - Seams of NAPL saturation, str hydrocarbon odor. 14.3' - 16.2' - NAPL coated seams, hydroc SAPROLITE; Sandy; dark purple-gray, light gray banding cohesive/brittle; micaceous; slightly moist. Faint hydrocarbon odor, no visual impacts. 	st; few fine k, asphalt, and debris. ded, medium ay, silt, and well n scale), strong ong arbon odor.	5.5 8.1 4.5	3.8 51.8 25-35 41.8		
25 30 30 30 30 30 30 30 30 30 30	;	8.0		 Grout (b 6.25" Sc casing 2 inch s 	pentonite cement) ch 40 PVC surface ch 40 PVC riser
40 BWR; Dark gray/purple-gray, trace garnet, wet. Fractures observed at 43'. No odor, no visual impacts.		2.4			
45 GNEISS; Granitic; light gray with some garnet and tr hue; interlayered weak to very strong rock. Fractures observed at 47' (iron oxide staini 57.5' (green staining, rounded edges on fra (pyrite on fracture face).	ace greenish ng), 50', 52', acture face), 63'	2.2 2.4			
No odor, no visual impacts.					
SynTerra					
Synteria Greenville, South Carolina 29601 Phone: 864-421-9999					PAGE 1 OF 2

PROJECT: Former Bramlette Road MGP Site	WELL / BORING NO: MW-03BR					
PROJECT NO: 1026.800	STARTED:		3/2	27/19		COMPLETED: 4/1/19
DRILLING COMPANY: Cascade Drilling	NORTHING	G:	1	104216	6.352	EASTING: 1574138.038
DRILLING METHOD: Rotary Sonic	G.S. ELEV	:	9	35.87 fl	t	M.P. ELEV: 935.87 ft
BOREHOLE DIAMETER: 9.25, 6 IN	DEPTH TO WATER: ft TOC			t TOC	TOTAL DEPTH: 64.5 ft BGS	
NOTES: Well Permit #MW-11615	LOGGED E	3Y: ,	J. Conz	elmann	/T. King	CHECKED BY: M. Mastbaum/A. Brey
HLdad DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL IMPACTS	(mqq)	WELL CONSTRUCTION
55- GREISS; Granitic; light gray with some garnet and trac hue; interlayered weak to very strong rock. Fractures observed at 47' (iron oxide staining 57.5' (green staining, rounded edges on fract (pyrite on fracture face). No odor, no visual impacts. (continued)	e greenish), 50', 52', ure face), 63'		4.0			Bentonite seal Silica sand filter pack (#2 Sand) O.010 slot, 2-inch, Sch. 40 PVC well screen
65 - Bottom of boring 64.5 feet.						
SynTerra						CLIENT: Duke Energy Carolinas, LLC.
148 River Street, Suite 220						PROJECT LOCATION: Greenville, SC
Synlerra Greenville, South Carolina 29601 Phone: 864-421-9999						PAGE 2 OF 2



PROJECT: Bramlette Road MGP Site WELL / BORING NO: MW-29TZ						
PROJECT NO:	1026.800	STARTED:	2/21/19	COMPLETED:	2/22/19	
DRILLING COMP	PANY: Cascade Drilling	NORTHING:		EASTING:		
DRILLING METH	IOD: Rotary Sonic	G.S. ELEV:	TBD ft	M.P. ELEV:	TBD ft	
BOREHOLE DIA	METER: 6 IN	DEPTH TO WA	TER: 6.50 ft TOC	TOTAL DEPTH:	31.0 ft BGS	
NOTES: Well P	ermit #MW-11615	LOGGED BY:	T. King	CHECKED BY:	T. Plating	
는 우,	o	Ľ	TS Sc.		WELL	
DEP1 (ft) (ft) (ft) LOG		SAMP	RECC (%) (%) COUN		NSTRUCTION	
	SAND, silty, brown organic material (FILL)					
	SAND, silty, orange-red, bricks and gravel si (FILL)	zed debris		0.0		
	CL CLAY, silty, grey, flakes of mica present, we ML high plasticity (RESIDUUM)	t, cohesive,	C	0.0	bentonite cement)	
	SAND, coarse, grey, moist (RESIDUUM)		C	0.0 • 2 inch s	sch 40 PVC riser	
	SAND, silty, foiliation present with extremely rock, wet (SAPROLITE)	weathered				
20	SAND, silty, grey-black with white (weathere foiliation present, extremely weathered, dry a (SAPROLITE)	ed quartz), at end of run	C	0.3 Entoni	ite seal	
	SAND, silty, PWR fragments, grey-black, br weathered mica, highly weathered, foiliation slightly moist at end of run ~ 29' (SAPROLI	own present, rE)	C	0.0	and filter pack (#2 lot. 2-inch. Sch. 40	
30	RK Partially weathered rock to weak rock (gneis (TRANSITION ZONE)	sic granite)		PVC we	ell screen	
	GNEISS, granitic, competent, weak to mediu partially pulverized by sonic drilling method in (BEDROCK)	um strong, n sections	C	0.0 — Bentoni	ite backfill	
35-	Bottom of boring 34 feet					
0 A4 ASTM LAB.GDT 3/8/1						
WITETTE GPU GINT STD						
CBR	CLIENT: Duke Energy Carolinas, LLC.					
	148 River Street, Suite 220			PROJECT LOCATI	ON: Greenville, SC	
<pre>synlerra</pre>	Phone: 864-421-9999				PAGE 1 OF 1	





PROJECT: Bramlette Road MGP Site	WELL / BORING NO: MW-31TZ							
DRILLING COMPANY: Cascade Drilling	NORTHING:							
DRILLING COMPANY. Cascade Drining	NORTHING. EASTING:							
	G.S. ELEV. II M.P. ELEV. II							
	DEPTH TO WATER. 12.75 IT TOC TOTAL DEPTH: 39.0 IT BGS							
NOTES: Well Permit #WW-11615	LOGGED BY: I. King CHECKED BY: H. Frank							
HLAND SS DESCRIPTION								
E B CL TOPSOIL, brown silt with clay, loose, organic (FILL) ML SM SILT, sandy, light grey, loose, dry (FILL) SM SILT, sandy, redish-orange, loose, dry (FILL) SM SILT, sandy, redish-orange, loose, dry (FILL) SM SILT, sandy, redish-orange, loose, dry (FILL) SM SAND, silty, black, loose, dry (FILL) CL CL 47, silty, very stiff, slight moisture. Note: L caused from the core barrel plugging off due cohesiveness of the soil. (FILL) 10 SC SM SAND, with clay and silt, yellow to light brown cohesive, low plasticity (RESIDUUM) 15 SC SM SAND, silty with clay, light grey to light brown weathered gravel sized parent material, wet (resthered rock, moist (SAPROLITE) 20 CL CL CLAY, silty, light brown, mostly comprised of weathered rock, moist (SAPROLITE) 25 RK GNEISS, granitic, slightly weathered, light grey (TRANSITION ZONE) 30 RK 31 GNEISS, granitic, interlayered fresh and mod weathered rock, oxidized minerals present, w (TRANSITION ZONE) 35 RK 40 Bottom of boring 39 feet	s material, dry cow recovery to the and a second s							
SynTerra 148 River Street, Suite 220 Greenville, South Carolina 29601 Phone: 864-421-9999	SynTerra 148 River Street, Suite 220 Greenville, South Carolina 29601 Phone: 864-421-9999 PAGE 1 OF 1							

PROJECT: Former Bramlette Road MGP Site WELL / BORING NO:				g NO:	F	RI-SB	1			
PROJEC	CT NO:	102	26.800	STARTED:		3/	26/19		COMPLETED:	3/26/19
DRILLIN	IG COI	MPAN	Y: Cascade Drilling	NORTHING	G:	1	104357	.88	EASTING:	1574056.359
DRILLIN	IG MET	[HOD:	Rotary Sonic	G.S. ELEV	:	9	34.17 fl	t MSL	M.P. ELEV:	934.17 ft MSL
BOREHO	OLE DI	AMET	TER: 6 IN	DEPTH TC	WA	TER: N	I/A ft TC	C	TOTAL DEPTH:	24.0 ft BGS
NOTES:				LOGGED I	3Y:	J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Brey
DEPTH (ft)	GRAPHIC LOG	NSCS	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL	(mqq)	CON	WELL ISTRUCTION
5-			FILL; Various shades of brown, reddish brown, dar silt with some clay; little well graded sand; me moist (wet above 1.3'); sporadic brick, concre and wood debris. No odor, No visible impact.	'k gray; mostly edium dense; ete, asphalt,		5.0				
10-			FILL; Same as above Abundant wood debris below 10.4', dark gray No odor, No visible impact.	//black			-			
T 5/15/19		CL	CLAY, lean; Grades from dark gray to brown-gray with oli mottling; low to medium plasticity; medium m rootlets; fine micaceous sand; few silt. No odor, No visible impact.	ve brown noist; trace		8.8				
44 ASTM LAB.GD		SP	SAND; White-gray-black color; fine to medium grain. graded, little sand; trace micaceous grains; n moist.	, poorly nedium dense;	•					
J GINT STD	· · · · · · · · · · · · · · · · · · ·	SW	SAND; Fine to coarse grain, well graded, silt grades	out.				100.0		
ETTE NAPL V2.GI		SW	SAND; Fine to coarse grain, well-graded, NAPL coat hydrocarbon odor, light sheen with dark brow	ted, /n staining. — — — — — —				109.2		
RAMLI		SW	SAND: Same as above:							
							CLIENT: Duke Fner	gy Carolinas, LLC		
۲ ۲	SynTerra								PROJECT LOCATIO	ON: Greenville, SC
S	err		reenville, South Carolina 29601							
9 - 7		~ Pi	10116. 004-421-9999							PAGE 1 OF 2

PROJECT: Former Bramlette Road MGP Site	WELL / BC	RIN	G NO:	F	RI-SB	1	
PROJECT NO: 1026.800	STARTED:		3/2	26/19		COMPLETED:	3/26/19
DRILLING COMPANY: Cascade Drilling	NORTHING	G:	1	104357	.88	EASTING:	1574056.359
DRILLING METHOD: Rotary Sonic	G.S. ELEV		93	34.17 ft	MSL	M.P. ELEV:	934.17 ft MSL
BOREHOLE DIAMETER: 6 IN	DEPTH TC	WA	TER: N	/A ft TC	C	TOTAL DEPTH:	24.0 ft BGS
NOTES:	LOGGED I	3Y:	J. Conz	elmann	/T. King	CHECKED BY: M	Mastbaum/A. Brey
HL (1) SS DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL	(udd) DId	CON	WELL ISTRUCTION
SW Fine to coarse grain, well-graded; hydrocarbo throughout; light sheen in spots; 20.4'-20.7' w coated seams, NAPL staining throughout; da staining and hydrocarbon odor. (<i>continued</i>) SAPROLITE; Dark purplish gray with lighter gray banding; cohesive/britte; micaceous and sandy structu- moist; pulverized via drilling @ 20.7'-21.0' wet clayey structure with hydro sheen, and brown staining; some sand mixed @ 21.0'-21.8' half above sand and half above saprolite; hydrocarbon odor and brown staining @ 22.8-23.3' more lighter grays with trace gra and trace light pink specks; faint hydrocarbon 22.3. End of Boring @ 24' below ground surface Backfilled with bentonite chips to ground surface Backfilled with bentonite chips to ground surface Backfilled with Specks; faint hydrocarbon 23.3 End of Boring @ 24' below ground surface Backfilled with bentonite chips to ground surface Backfilled with Specks; faint hydrocarbon 24.3 End of Boring @ 24' below ground surface Backfilled with bentonite chips to ground surface Backfilled with bentonite chi	n odor vith NAPL rk brown ure; slightly carbon odor, in. • clayey g. eenish hue • odor above ace		10.2			CLIENT: Duke Ener PROJECT LOCATIO	gy Carolinas, LLC. DN: Greenville, SC
Greenville, South Carolina 29601 Phone: 864-421-9999							PAGE 2 OF 2

PROJECT:	For	mer Bramlette Road MGP Site	WELL / BC	RIN	G NO:	F	RI-SB2	2	
PROJECT NO:	102	6.800	STARTED: 3/26/19					COMPLETED:	3/26/19
DRILLING COM	(IPAN)	2: Cascade Drilling	NORTHING	G:	1	104429	.315	EASTING:	1574094.712
DRILLING MET	HOD:	Rotary Sonic	G.S. ELEV	:	9	31.94 ft	MSL	M.P. ELEV:	931.94 ft MSL
BOREHOLE DI	AMET	ER: 6 IN	DEPTH TC	WA	TER: N	I/A ft TC	C	TOTAL DEPTH:	19.0 ft BGS
NOTES:			LOGGED E	3Y: .	J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Brey
DEPTH (ft) GRAPHIC LOG	nscs	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL IMPACTS	(mqq) DIA	CON	WELL ISTRUCTION
		FILL; Various shades of brown, reddish brown, dar lean clay with some silt, medium moist; few f micaceous to coarse sand; trace rootlets; spc brick, and concrete debris; wood debris belov No odor, No visible impact.	k gray; mostly ine vradic gravel, v 4.9'.		5.3				
10-		FILL; Same as above Mostly clayey; more wet; low to medium plast to lean clay. No odor, No visible impact.	ticity; grading						
6/15/19	CL	CLAY, lean; Brown to 11.1' then gray with olive brown mo medium to stiff to 11.1' then stiff; moist; trace micaceous sand, silt, rootlets. @ 13.4'-13.7' sandy clay; no mottling. Faint hydrocarbon odor; No visible impact.	ttling; e fine		11.3				
L00	SW	SAND;					105		
PL V2.GPJ GINT STD A4 ASTM LAB.		 white-gray-black color; trace micaceous fine well-graded sand; medium dense; moist; trac seams; NAPL coated; dark brown staining, stong hydodor. SAPROLITE; Dark purplish gray with lighter gray banding; pink specks, cohesive/brittle; micaceous and structure; mostly pulverized by drilling; moist structure above 15.5. @ 17.0'-17.4' dark brown NAPL staining; structure by droll context. 	to coarse e clayey Irocarbon trace light sandy and clayey ong				125		
BRAMLETTE NA		 @ 17.8'-18.1' trace NAPL staining; hydrocark @ 18.8'-19.0' NAPL coated; strong hydrocar (field team suspect drilling dragdown from ab End of Boring @ 19' below ground surface Backfilled with bentonite chips to ground surface 	bon odor. bon odor; ove interval),— ace				350		
	Sv	nTerra						CLIENT: Duke Ener	gy Carolinas, LLC.
synTerra						PROJECT LOCATIO	DN: Greenville, SC		
ĭ	- 10	1010. JUT TEI 0000							THOLIDEZ

PROJECT NO: 1026.800 STARTED: 322419 COMPLETED: 322419 DERLING COMPANY: Cascede Drilling NORTHING: 1103722.066 EASTING: 1574337.708 DORELING COMPANY: Cascede Drilling NORTHING: 1103722.066 EASTING: 1574337.708 DORELING DETINIC: Reduct Solid Gascede Drilling NORTHING: 1103722.066 EASTING: 1574337.708 DORELING DETINIC: Reduct Solid DESCRIPTION Gasceder Drilling NORTHING: 10072.0178 TES: Head Auger 0.2* LOCGED BY: J. Contrainment? King CHECKED BY: Minitian Mathematical Distance Drilling: CHECKED BY: Minitian Mathematical Distance Drilling: CHECKED BY: Minitian Mathematical Distance Drilling: Startes: Startes: DESCRIPTION Startes: Startes: CHECKED BY: Minitian Mathematical Distance Drilling: CHECKED BY: Minitian Mathematical Distance Drilling: Startes: Startes: DESCRIPTION Startes: Startes: CHECKED BY: Minitian Mathematical Distance Drilling: Startes: DESCRIPTION Startes: Startes: Startes: Startes: Startes: Startes: Startes: Startes: Startes: Startes: Startes: Startes: Startes: Startes: Startes: S	PROJECT NO: 10.26.860 STARTED: 3.28/19 COMPLETE: 3.28/19 DRILLING COMPLATE: 10.0727.065 EASTING: 157.4372.768 DRILLING COMPLATE: 10.0727.065 EASTING: 157.4382.778 DRILLING COMPLETE: 10.0727.065 EASTING: 157.4382.778 DRILLING COMPLETE: 10.0727.078 EASTING: 10.0727.078 DRILLING COMPLETE: 10.0727.078 EASTING: 10.0727.078 DRILLING COMPLETE: 10.0727.078 EASTING: 10.0717.078 DRILLING COMPLETE: 10.0717.078 EASTING: 10.0717.078 DRILLING COMPLETE: 10.0717.0787.0787.0787.0787.0778 EASTING:	PROJECT:	Forr	ner Bramlette Road MGP Site	WELL / BC	RING	S NO:	F	RI-SB3			
DPRILLING COMPARY: Cascade Drilling NORTHINIS: 1103727.066 EASTING: 1173727.066 BOREHLUE DARFER: 61N DEPHH IND: 1103727.066 M.P. ELEV: 328.61 ft MSL BOREHLUE DARFER: 61N DEPHH IND: 1007427 M.P. ELEV: 328.61 ft MSL DOTES: Hund Auger C-2 LOCGED BY: J. Converting mT. King CHECKED BY: 10.0 MIREBuardSL State State State State State State CHECKED BY: J. Converting mT. King State State State State State State CHECKED BY: J. Converting mT. King State State State State State State CHECKED BY: J. Converting mT. King State State State State State State Converting mt. King Converting mt. King <td< td=""><td>DRILLING COMPANY: Caecado Delling NORTHINO: 1103727.056 EASTING: 1973337.708 BOREHOLE DAMETER: 6 IN 0.5. ELEV: 92.61 ft MSL MP FLEV: 92.81 ft MSL BOREHOLE DAMETER: 6 IN DEPTH TO WATER: NA ft TOC TOTAL DEPTH: 17.4 ft DSS MOTE: Hand Auger 6-2 LOCACED BY: J. Concentinant'T. King CHECKED BY: M. MathiamA: Bis MOTE: Hand Auger 6-2 DESCRIPTION B B B CHECKED BY: M. MathiamA: Bis MOTE: Hand Auger 6-2 DESCRIPTION B B B CHECKED BY: M. MathiamA: Bis Mote: B B DESCRIPTION B B B CHECKED BY: M. MathiamA: Bis Mote: B B DESCRIPTION B B B CHECKED BY: M. MathiamA: Bis Mote: FILL: Site Ministration and auger of these data: B B B CONSTRUCTION B B B DESCRIPTION B B B B CHECKED BY: M. MathiamA: B B B B DESCRIPTION B B B CHECKED BY: M. MathiamA: B B B B DESCRIPTION B B B B <td< td=""><td>PROJECT NO:</td><td>1020</td><td>6.800</td><td>STARTED:</td><td></td><td>3/</td><td>28/19</td><td></td><td>COMPLETED:</td><td>3/28/19</td></td<></td></td<>	DRILLING COMPANY: Caecado Delling NORTHINO: 1103727.056 EASTING: 1973337.708 BOREHOLE DAMETER: 6 IN 0.5. ELEV: 92.61 ft MSL MP FLEV: 92.81 ft MSL BOREHOLE DAMETER: 6 IN DEPTH TO WATER: NA ft TOC TOTAL DEPTH: 17.4 ft DSS MOTE: Hand Auger 6-2 LOCACED BY: J. Concentinant'T. King CHECKED BY: M. MathiamA: Bis MOTE: Hand Auger 6-2 DESCRIPTION B B B CHECKED BY: M. MathiamA: Bis MOTE: Hand Auger 6-2 DESCRIPTION B B B CHECKED BY: M. MathiamA: Bis Mote: B B DESCRIPTION B B B CHECKED BY: M. MathiamA: Bis Mote: B B DESCRIPTION B B B CHECKED BY: M. MathiamA: Bis Mote: FILL: Site Ministration and auger of these data: B B B CONSTRUCTION B B B DESCRIPTION B B B B CHECKED BY: M. MathiamA: B B B B DESCRIPTION B B B CHECKED BY: M. MathiamA: B B B B DESCRIPTION B B B B <td< td=""><td>PROJECT NO:</td><td>1020</td><td>6.800</td><td>STARTED:</td><td></td><td>3/</td><td>28/19</td><td></td><td>COMPLETED:</td><td>3/28/19</td></td<>	PROJECT NO:	1020	6.800	STARTED:		3/	28/19		COMPLETED:	3/28/19	
DPRILLING METHOD: Rolary Sonic G.S. ELEV. 928.01 M.MS. M.P. ELEV. 928.01 M.S. BORREHOLE DIAMETER IN DEPTH TO WATER. NIA IT TOC TOTAL DEPTH: TO	DRILLING METHOD: Rolany Sonie G.S. ELEV. 928.01 ft Ms. MP. ELEV. 928.01 ft Ms. DEPTHOLE DAME THAT DEPTHOW TO WATER NA FLOC TOTAL DEPTH.	DRILLING CON	MPANY	Cascade Drilling	NORTHING	HING: 1103727.056				EASTING:	1574337.708	
BORENCIE DUMETER 0 IN DEPTH TO WATER: NA 10 TOC TOTAL DEPTH TO WATER: NA 10 TOC OPECK DESCRIPTION UDGGED BY: J. CONSTRUCTION OPECKED BY. Massbaum/A. B OPECKED BY: J. CONSTRUCTION UDGGED BY: J. CONSTRUCTION OPECKED BY. Massbaum/A. B OPECKED BY: J. CONSTRUCTION UDGGED BY: J. CONSTRUCTION OPECKED BY. Massbaum/A. B OPECKED BY: J. CONSTRUCTION UDGGED BY: J. CONSTRUCTION OPECKED BY. Massbaum/A. B OPECKED BY: J. CONSTRUCTION UDGGED BY: J. CONSTRUCTION OPECKED BY. Massbaum/A. B OPECKED BY: J. CONSTRUCTION UDGGED BY: J. CONSTRUCTION OPECKED BY. Massbaum/A. B OPECKED BY: J. CONSTRUCTION UDGGED BY: J. CONSTRUCTION OPECKED BY. Massbaum/A. B OPECKED BY: J. CONSTRUCTION State and a state	BOREINCE ELIMINETE: 01N DEPTH TO WATER: NA R TOC DORES: Hand Auger 0.2 T LOCGED BY: J COMMINIMUM TRANK TO A DEPTH TO WATER NA R TOC CHECKED BY: J COMMINIMUM TRANK TO TOTAL DEPTH TO WATER NA R TOC CHECKED BY: J COMMINIMUM TRANK TO TOTAL DEPTH TO TABLESS CHECKED BY: J COMMINIMUM TRANK TO TOTAL DEPTH TO TABLESS CHECKED BY: J COMMINIMUM TRANK TO TOTAL DEPTH TO TABLESS CHECKED BY: J COMMINIMUM TRANK TO TOTAL DEPTH TO TABLESS T THE STANDARD AND TOTAL TO TABLESS T THE STANDARD AND TOTAL DEPTH TO TABLESS T THE STANDARD AND TABLESS T T T T T T T T T T T T T T T T T T T	DRILLING MET	THOD:	Rotary Sonic	G.S. ELEV	:	9	28.61 fi	MSL	M.P. ELEV:	928.61 ft MSL	
NOTES Hand Auger 0-2 LOGGED BY: J. Coccelmann/T. King CHECKED BY: M Methaum/A B Set Set Set Set Set Coccelmann/T. King CHECKED BY: M Methaum/A B Set Set Set Set Set Set Set Set Set Coccelmann/T. King CHECKED BY: M Methaum/A B Set Set Set Set Set Set Set Set Coccelmann/T. King CHECKED BY: M Methaum/A B Set Set Set Set Set Set Set Set Coccelmann/T. King Checked By: M Methaum/A B Set Filt Set Set Set Set Coccelmann/T. King Checked By: M Methaum/A B Set Set Set Set Set Set Coccelmann/T. King Coccelmannn/T. King Coccelmann/T. King Coccelma	NOTES: Hand Auger 0-2* LOGGED BY: J. Concentration T. King CHECKED BY: M. MetabaurA, B Set Set Set B DESCRIPTION B Set B CONSTRUCTION Set Set Set B DESCRIPTION B Set B CONSTRUCTION Set Set Set Set B CONSTRUCTION Set B CONSTRUCTION Set Set Set Set Set B CONSTRUCTION Set B CONSTRUCTION Set Fill Set Set Set Set Set Set Construction Construction Set CLAY lear: CLAY lear: Set Set <td< td=""><td>BOREHOLE D</td><td>IAMETE</td><td>ER: 6 IN</td><td>DEPTH TC</td><td>WAT</td><td>ER: N</td><td>I/A ft TC</td><td>DC</td><td colspan="3">TOTAL DEPTH: 17.0 ft BGS</td></td<>	BOREHOLE D	IAMETE	ER: 6 IN	DEPTH TC	WAT	ER: N	I/A ft TC	DC	TOTAL DEPTH: 17.0 ft BGS		
End Image: Second Sec	Table Solution	NOTES: Han	d Auger	0-2'	LOGGED E	3Y: J	J. Conz	elmann	/T. King	CHECKED BY: M	Mastbaum/A. E	
5 5.8 6 CLAY, lear: (9.5-2-45.0 Dark gray, low plasticity, some sill, organic matter/notes, some slag and coal ranging from coarse said to gravel, most, no dor, no visual impact. 5.8 7 CLAY, lear: (9.5-2-45.0 Dark gray, low plasticity, some sill, organic matter/notes, some slag and coal ranging from coarse said to gravel, most, no dor, no visual impact. 5.8 10 CLAY, lear: (9.5-3-0.0 gray, these micaceous grains with orrange-twom moting, sift, motiling); Same as above (gray with motiling); Gates from lean day to clayey sand, trace in codes sole-case is low plasticity, to dor, no visual impact. 10.0 10 CLAY, lear: (9.5-9-00 gray, trace matter/notes); Same as above (gray with motiling); Gates from lean day to clayey sand, trace in codes sole-case is low plasticity, to dor, no visual impact. 10.0 10 SAPPOLITE: Dark gray with an and purplete-gray interlayered, trace prist specks, slightly most, cohereite/brite, micaceous prist specks, slightly most, cohereite/brite, specks, slightly most, cohereite/brite, micaceous prist	Image: Second	DEPTH (ff) GRAPHIC LOG	nscs	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL	(mqq) DIA	CON	WELL ISTRUCTION	
0 0 8.5*9.0 gray, trace micaceous grains with orange-brown motifing, sift, most, trace sit, medium plasticity, no odor, no visual impact; 10 CLAY, lean; Same as above (gray with mottling); Grades from lean clay to clayey sand, trace rootlets/decaying organics, grades to low plasticity; fine-medium sand, poorly graded, mottling grades out by 10.0 10.0 15 SAPROLITE: Dark gray with an and purplish-gray interlayered, trace pink specks, slightly moist, cohesive/brittle, micaceous sandy structure, pulverized by drilling; No odor, no visual impact. 10.0 16 End of Boring @ 17 below ground surface. Backfilled with bentonite chips to ground surface. 10.0 Version End of Boring @ 17 below ground surface. Ind provide the structure pulker is the structure pulke is the stru	10- CLAY, lean; Same as above (gray with motting); Grades from lean clay to clayey sand, trace rootelexidecaying organics, grades to low plasticity; fine-medium sand, poorly graded, motting grades out by 10.0 10.0 10- CL SAPROLITE: Dark gray with tan and purplish-gray interlayered, trace pink specks, slightly motsi, cohesive/brittle, micaceous sandy structure, pulverized by drilling; No odor, no visual impact. 10.0 15- SAPROLITE: Dark gray with tan and purplish-gray interlayered, trace pink specks, slightly motsi, cohesive/brittle, micaceous sandy structure, pulverized by drilling; No odor, no visual impact. 10.0 16- SAPROLITE: Dark gray with tan and purplish-gray interlayered, trace pink specks, slightly motsi, cohesive/brittle, micaceous sandy structure, pulverized by drilling; No odor, no visual impact. 10.0 16- End of Boring @ 17' below ground surface. Backfilled with bentonite chips to ground surface. 10.0 17- SynTerra 148 River Street, Suite 220 Greenville, South Carolina 29601 Phome: 844 21-9999 CLIENT: Duke Energy Carolinas, LL PROJECT LOCATION: Greenville, S	5-	CL	 FILL; Silt with some clay, various shades of brown, gray; Micaceous, coarse well-graded sand, sporad asphalt-like, brick, concrete, and fabric debris dense, moist; Hand auger refusal at 2'. No odor, no visual impact. CLAY, lean; @ 5.2'-6.5' Dark gray, low plasticity, some sil matter/rootlets, some slag and coal ranging f sand to gravel, moist, no odor; @ 6.5'-8.5' SAA with no slag or coal, grades medium, moist, no odor, no visual impact; 	, red-brown, ic gravel, s, medium It, organic rom coarse from soft to		5.8					
15 SAPROLITE: Dark gray with tan and purplish-gray interlayered, trace pink specks, slightly moist, cohesive/brittle, micaceous sandy structure, pulverized by dilling; No odor, no visual impact. 10.0 15 Dark gray with tan and purplish-gray interlayered, trace pink specks, slightly moist, cohesive/brittle, micaceous sandy structure, pulverized by dilling; No odor, no visual impact. 10.0 16 End of Boring @ 17' below ground surface. Backfilled with bentonite chips to ground surface. End of Boring @ 17' below ground surface. Backfilled with bentonite chips to ground surface. CLIENT: Duke Energy Carolinas, LI PROJECT LOCATION: Greenville, State	SAPROLITE: 10.0 Dark gray with tan and purplish-gray interlayered, trace pink specks, slightly moist, cohesive/brittle, micaceous sandy structure, pulverized by drilling; No odor, no visual impact. 10.0 15- End of Boring @ 17' below ground surface. End of Boring @ 17' below ground surface. Image: SynTerra 148 River Street, Suite 220 Greenville, Suith Carolina 29601 Greenville, Sed-421-9999 CLIENT: Duke Energy Carolinas, LL PROJECT LOCATION: Greenville, Side 21 OF	10-	CL	 @ 8.5'-9.0' gray, trace micaceous grains with orange-brown mottling, stiff, moist, trace silt, plasticity, no odor, no visual impact; CLAY, lean; Same as above (gray with mottling); Grades from lean clay to clayey sand, trace rootlets/decaving organics, grades to low play 	1 medium							
15- SAPROLITE; Dark gray with tan and purplish-gray interlayered, trace pink specks, slightly moist, cohesive/brittle, micaceous sandy structure, pulverized by drilling; No odor, no visual impact. Image: Comparison of the structure, pulverized by drilling; No odor, no visual impact. Image: Comparison of the structure, pulverized by drilling; No odor, no visual impact. Image: Comparison of the structure, pulverized by drilling; No odor, no visual impact. Image: Comparison of the structure, pulverized by drilling; No odor, no visual impact. Image: Comparison of the structure, pulverized by drilling; No odor, no visual impact. Image: Comparison of the structure, pulverized by drilling; No odor, no visual impact. Image: Comparison of the structure, pulverized by drilling; No odor, no visual impact. Image: Comparison of the structure, pulverized by drilling; No odor, no visual impact. Image: Comparison of the structure, pulverized by drilling; No odor, no visual impact. Image: Comparison of the structure, pulverized by drilling; No odor, no visual impact. Image: Comparison of the structure, pulverized by drilling; No odor, no visual impact. Image: Comparison of the structure, pulverized by drilling; No odor, no visual impact. Image: Comparison of the structure, pulverized by drilling; No odor, no visual impact. Image: SynTerra 148 River Street, Suite 220 Comparison of the structure, South Corroling 20601 Image: Comparison of the structure, pulverized by drilling; No odor, no visual impact.	15- SAPROLITE; Dark gray with tan and purplish-gray interlayered, trace pink specks, slightly moist, cohesive/brittle, micaceous sandy structure, pulverized by drilling; No odor, no visual impact. Image: Comparison of the speck structure, pulverized by drilling; No odor, no visual impact. Image: Comparison of the speck structure, pulverized by drilling; No odor, no visual impact. Image: Comparison of the speck structure, pulverized by drilling; No odor, no visual impact. Image: Comparison of the speck structure, pulverized by drilling; No odor, no visual impact. Image: Comparison of the speck structure, pulverized by drilling; No odor, no visual impact. Image: Comparison of the speck structure, pulverized by drilling; No odor, no visual impact. Image: Comparison of the speck structure, pulverized by drilling; No odor, no visual impact. Image: Comparison of the speck structure, pulverized by drilling; No odor, no visual impact. Image: Comparison of the speck structure, pulverized by drilling; No odor, no visual impact. Image: Comparison of the speck structure, pulverized by drilling; No odor, no visual impact. Image: Comparison of the speck structure, pulverized by drilling; No odor, no visual impact. Image: Comparison of the speck structure, pulverized by drilling; No odor, no visual impact. Image: Comparison of the speck structure, pulverized by drilling; No odor, no visual impact. Image: SynTerra 148 River Struct, South Carolina 29601 Phone: 864-421-9999 Cullent: Duble Energy Carolinas, LL PROJECT LOCATION: Greenville, Structure, pulverized by drilling; No odor, no visual impact.			fine-medium sand, poorly graded, mottling gr 10.0'. No odor, no visual impact.	ades out by		10.0					
End of Boring @ 17' below ground surface. Backfilled with bentonite chips to ground surface. Backfilled with bentonite chips to ground surface. CLIENT: Duke Energy Carolinas, LL Yes SynTerra 148 River Street, Suite 220 Greenville, South Carolina 20601	End of Boring @ 17' below ground surface. Backfilled with bentonite chips to ground surface. Backfilled with bentonite chips to ground surface. SynTerra 148 River Street, Suite 220 Greenville, South Carolina 29601 Phone: 864-421-9999 PAGE 1 OF			SAPROLITE; Dark gray with tan and purplish-gray interlayer pink specks, slightly moist, cohesive/brittle, n sandy structure, pulverized by drilling; No odor, no visual impact.	ered, trace nicaceous							
SynTerra 148 River Street, Suite 220 CLIENT: Duke Energy Carolinas, LI PROJECT LOCATION: Greenville, South Carolina 20601	SynTerra 148 River Street, Suite 220 Greenville, South Carolina 29601 Phone: 864-421-9999 PAGE 1 OF	-		End of Boring @ 17' below ground surface. Backfilled with bentonite chips to ground surf	face.							
SynTerra 148 River Street, Suite 220 Greenville, South Carolina 20601	SynTerra 148 River Street, Suite 220 PROJECT LOCATION: Greenville, S SynTerra Greenville, South Carolina 29601 PAGE 1 OF										av Carolinas II	
148 River Street, Suite 220 Creenville, South Carolina 20601	148 River Street, Suite 220 PROJECT LOCATION: Greenville, S Image: South Carolina 29601 Phone: 864-421-9999	5	Syr	nTerra							yy Carolinas, LL	
	Phone: 864-421-9999 PAGE 1 OF	Tom	148	8 River Street, Suite 220 eenville, South Carolina 29601					I	NUJECI LUCATI		

PROJECT: Former Bramlette Road MGP Site WELL / E						RIN	g NO:		Г10-S	B1	
PROJ	PROJECT NO: 1026.800					STARTED: 3/14/19				COMPLETED:	3/14/19
DRILL	ING CO	MPAN	IY:	Cascade Drilling	NORTHIN	G:	1	104294	.794	EASTING:	1574213.42
DRILL	ING ME	THOD	:	Rotary Sonic	G.S. ELEV	:	9	31.12 f	MSL	M.P. ELEV:	931.12 ft MSL
BORE	HOLE D	IAME	TER	: 6 IN	DEPTH TC	WA	TER: N	I/A ft TC	C	TOTAL DEPTH: 19.0 ft BGS	
NOTE	S:				LOGGED I	BY:	J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Brey
DEPTH (ft)	GRAPHIC LOG	NSCS		DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL IMPACTS	(mqq) DIG	CON	WELL ISTRUCTION
5-		GM		FILL; Lean Clay; Reddish brown; low plasticity; medium; moist sand; trace small gravel; and some silt and tra <u>No odor, No visible impact.</u> FILL; Various shades of brown, gray, reddish brown gray; mostly large and small gravel and grave (concrete and brick) in sandy silt matrix; med and moist. - @ 5.5'-5.7' Some wood debris; dark gray. No odor, No visible impact. TIMBER DEBRIS; Layered large wood debris within dark gray si some find sand; and moist.	; some fine / ⁻ ace rootlets. / / n, and dark I-sized debris ium dense; It matrix with		8.5				
-		CL		some find sand; and moist. Slight pine/woody odor, No visible impact. CLAY, lean; Grades from brown to dark gray to olive gray; plasticity; medium; moist; little fine sand and large gravel and rootlets; and trace micaceou No odor, No visible impact.	low-medium silt; trace s grains.						
10-		CL	_	CLAY, lean; Gray; micaceous; brown mottling from 9.0'-10 plasticity; stiff; moist; some fine sand and silt purplish millimeter scale discolorations. No odor, No visible impact.	0.9'; medium ; trace						
-		SP SC		SAND, clayey; White-gray-black; micaceous; fine-medium p medium dense; moist; trace silt; and grades t No odor, No visible impact.	oorly graded; o trace clay.		_		50		
BRAMLETTE NAPL V2.GPJ GINT STD A4 ASTM LAB.GDT 5/15/1 51 - 51		<u></u>		White-gray-black; micaceous; fine-medium p medium dense; and moist. No odor, No visible impact. SAND; Lighter gray (white-gray-black); micaceous; n coarse; well-graded; moist; brown NAPL disc some NAPL coated grains; and hydrocarbon SAPROLITE; Gray (white-gray-black); micaceous; dark gra and light gray banding; and cohesive/brittle st mostly pulverized. No odor, No visible impact. End of Boring @ 19' below ground surface Backfilled with bentonite chips to ground surf	oorly graded; nedium to oloration; odor. y, purplish, ructure		11.3				
	5 Terr		ynTe 48 F	erra tiver Street, Suite 220 iville, South Carolina 29601						CLIENT: Duke Ener PROJECT LOCATIO	gy Carolinas, LLC. DN: Greenville, SC
	Synteend Phone: 864-421-9999 PAGE 1 OF 1										

PROJECT: Form	WELL / BC	RING	NO:	-	Г10-S	B2			
PROJECT NO: 1026	3.800	STARTED:	ED: 3/13/19				COMPLETED: 3/13/19		
DRILLING COMPANY:	Cascade Drilling	NORTHING	G:	1	104280	.172	EASTING:	1574232.642	
DRILLING METHOD:	Rotary Sonic	G.S. ELEV	:	9	30.58 f	t MSL	M.P. ELEV:	930.58 ft MSL	
BOREHOLE DIAMETE	R: 6 IN	DEPTH TC	WAT	ER: N	I/A ft TC	C	TOTAL DEPTH: 24.0 ft BGS		
NOTES:		LOGGED E	3Y: J	. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Brey	
DEPTH (ff) (ff) (ff) USCS	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL IMPACTS	(mqq)	CON	WELL ISTRUCTION	
5- SW SM	 FILL; Various shades of brown and gray; moist; me mostly well-graded sand and gravel with piec and concrete; and little silt. - @ 2.2'-4.7' More silty/clayey. - @ 2.8' Trace glass and seam of cohesive/re sealant. No odor, No visible impact. TIMBER DEBRIS; Layered large wood debris within dark gray si trace find sand; and moist. No odor, No visible impact. CLAY, lean; White-gray-black; with trace micaceous grain seams of olive and brown shades mixed in; n plasticity; medium dense; moist; and trace ro.	edium dense; es of asphalt ubbery asphalt ilt matrix with// ns, fine sands; nedium otlets and silt. ams (black):		11.0					
10-	and faint hydrocarbon odor.						-@ 10' - sample (11': Geotechnical collected	
CL	CLAY, lean; Same as above; and stiff.	eter scale tar; _/							
sc	 And faint hydrocarbon odor. SAND, clayey; White-gray-black; micaceous; fine-medium; predium dense; trace rootlets; and medium n 	/ poorly graded; _ noist. /							
SW SW SW	 <u>No odor, No visible impact.</u> <u>SAND;</u> White-gray-black; micaceous; medium-coars graded; moist; loose; and some small gravel. <u>No odor, No visible impact.</u> 	/ e; well / [_]		11.8					
RAMLETTE NAPL V2.GPJ GINT STD A4	SAPROLITE; White-gray-black; micaceous; dark gray, ligh dark purplish banding; trace pink specks; and brittle structure mostly pulverized by drilling. - @ 16.0'-17.7' Lighter gray color. No odor, No visible impact.	t gray, and d cohesive,							
						1	CLIENT: Duke Ener	gy Carolinas, LLC.	
Syn Syn 148	SynTerra 148 River Street, Suite 220						PROJECT LOCATIO	ON: Greenville, SC	
svnTerra Gre	Greenville, South Carolina 29601								
	Phone: 864-421-9999							FAGE I UF 2	

PROJECT:	WELL / BO	RIN	G NO:	-	Г10-S	B2			
PROJECT NO:	: 10	26.800	STARTED:	STARTED: 3/13/19				COMPLETED:	3/13/19
DRILLING CO	MPAN	Y: Cascade Drilling	NORTHIN	G:	1	104280	.172	EASTING:	1574232.642
DRILLING ME	THOD	Rotary Sonic	G.S. ELEV	:	9	30.58 f	t MSL	M.P. ELEV:	930.58 ft MSL
BOREHOLE D	IAME	rer: 6 in	DEPTH TO	WA	TER: N	I/A ft TC	C	TOTAL DEPTH: 24.0 ft BGS	
NOTES:			LOGGED	3Y:	J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Brey
DEPTH (ft) GRAPHIC LOG	NSCS	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL	(mqq) DIG	CON	WELL ISTRUCTION
		Partially weathered bedrock (pulverized by dr Light gray; and gneiss-like. End of Boring @ 24' below ground surface Backfilled with bentonite to ground surface	illing)		5.9				
		Backfilled with bentonite to ground surface							
35-								CI IENT: Duke Ener	ay Carolinas 11 C
	S <u>1</u> 4	ynTerra 18 River Street, Suite 220						PROJECT LOCATIO	ON: Greenville, SC
synTerr	SynTerra Greenville, South Carolina 29601 Phone: 864-421-9999 PAGE 2 OF 2								

PROJ	WELL / BO	ORINO	G NO:	-	T10-S	B3				
PROJ	ECT NO	102	26.800	STARTED: 3/14/19					COMPLETED:	3/14/19
DRILL	ING CO	MPAN	Y: Cascade Drilling	NORTHIN	G:	1	104265	5.807	EASTING:	1574249.447
DRILL	ING ME	THOD:	Rotary Sonic	G.S. ELE\	/:	9	30.46 f	t MSL	M.P. ELEV:	930.46 ft MSL
BORE	HOLE D	IAMET	ER: 6 IN	DEPTH TO	D WA	TER: N	I/A ft TC	C	TOTAL DEPTH:	19.0 ft BGS
NOTE	S:			LOGGED	BY:	J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Brey
DEPTH (ft)	GRAPHIC LOG	uscs	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL IMPACTS	(mqq)	CON	WELL STRUCTION
-		ML	FILL; Various shades of brown, reddish brown, gra gray; silt or low plasticity clay with some grav gravel-sized debris (concrete, brick, and aspl rootlets; and trace find sand. No odor, No visible impact.	y, and dark el and halt); trace						
5-			FILL; Wood and carpet-like material; and some sm debris, mostly layered olive-colored carpet m gray silty matrix. No odor, No visible impact.	all wood aterial in dark	-	8.8				
-		CL	CLAY, lean; Gray; trace micaceous grains; brown and ligh mottling; moist; low plasticity; few silt; and tra and rootlets. No odor, No visible impact.	nt brown ace fine sand						
- 10		CL	CLAY, lean; Gray; micaceous; brown mottling; medium pl moist; and trace fine sand and silt. - @ 9.0'-10.2' Occasional seams of dark gray millimeter scale lenses. No odor, No visible impact.	asticity; stiff; //purplish			-			
112B.GDT 5/15/19 		sw	SAND; White-gray-black; micaceous; fine-medium w medium dense; moist; increasing amounts of grains and small gravel @ 13.3'; and some c 14.0'-14.2'. No odor, No visible impact.	vell graded; f coarse lay @		11.2			∑@ 14' sample o @ 14.5':	15': Geotechnical collected VOC/SVOC
LETTE NAPL V2.GPJ GINT STD A4 ASTT			SAPROLITE; White-gray-black; micaceous; dark gray, purj gray banding; cohesive/brittle structure partia and slightly moist. No odor, No visible impact. End of Boring @ 19' below ground surface	blish, and light Ily pulverized;			-		sample o	XNIECTED
RAML			Backfilled with bentonite to ground surface							
EC BI										ny Carolinas LLC
	SynTerra 148 River Street Suite 220								PROJECT LOCATIO	DN: Greenville. SC
an	148 River Street, Suite 220 Greenville, South Carolina 29601									_,
Phone: 864-421-9999										PAGE 1 OF 1

PROJECT NO:	1026.8								
		300	STARTED: 3/14/19					COMPLETED:	3/14/19
DRILLING COM	IPANY:	Cascade Drilling	NORTHING	G:	1	104218	.121	EASTING:	1574182.329
DRILLING METH	HOD:	Rotary Sonic	G.S. ELEV		9	33.33 fl	MSL	M.P. ELEV:	933.33 ft MSL
BOREHOLE DIA	AMETER	:: 6 IN	DEPTH TO	WA	TER: N	I/A ft TC	C	TOTAL DEPTH:	19.0 ft BGS
NOTES:			LOGGED E	3Y: .	J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Brey
DEPTH (ft) GRAPHIC LOG	nscs	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL	(mqq)	CON	WELL ISTRUCTION
		FILL; Various shades of brown, reddish brown, and mostly silt matrix with trace fine micaceous sa dense; and some gravel and gravel-sized frag asphalt, brick, concrete. - @ 3" - 18" Lean clayey layers - @ 54" - 57" Concrete - @ 57" - 66" Lean clayey layers - @ 85" - 100" Dark gray; and some woody fr - @ 89" Black tubing and white connector - @ 97" Glass shard No odor, No visible impact.	dark gray; and; medium gments of		9.1				
		FILL; Woody debris in dark gray silt matrix with trac - @ 8.4' Brick fragment. - @ 8.5' White plastic shards. No odor, No visible impact.							
10	sw	Woody debris; same as above including brick No odor, No visible impact. SILT; Brownish gray with some well graded fine-coa	arse sand;						
61/		soft and wet; includes small piece of concrete No odor, No visible impact. SAND; Grayish brown, white-gray-black; micaceous fine-medium well graded; little silt; medium de No odor, No visible impact. CLAY, lean; Grades from brownish gray to gray with brow then olive mottling; trace fine micaceous sand	grains; ense; moist. 						
112 International 112	sw	medium to stiff; moist. No odor, No visible impact. SAND; Light gray, white-gray-black; trace micaceous fine-coarse; well graded; medium dense; moi No odor, No visible impact. SAND:	/ s grains; st.		10.6				
GPJ GINT STD A44	SP SC	Gray; micaceous grains; fine poorly graded; s trace silt; trace rootlets. - @ 16.6' - 16.9' Sand; same as above; medii well graded. - @ 17.1' - 17.4' Sand; same as above; medii well graded.	ome clay; um to coarse um to coarse /						
SRAMLETTE NAPL V2.		No odor, No visible impact. SAND; White-gray-black; trace micaceous grains; mic coarse and small gravel; well graded; medium moist. <u>No odor, No visible impact.</u> Hard rock (quartz) with trace micaceous spect	edium to					-@18.5': sample (: VOC/SVOC collected
	SynTe	erra	·					CLIENT: Duke Ener	gy Carolinas, LLC.
synTerra	Synteria Greenville, South Carolina 29601 Phone: 864-421-9999								PAGE 1 OF 2

PROJE	ECT:	For	mer Bramlette Road MGP Site	WELL / BO	RIN	G NO:	-	Г11-S	B1	
PROJ	ECT NO:	: 102	26.800	STARTED:		3/	14/19		COMPLETED:	3/14/19
DRILL	ING COI	MPAN	Y: Cascade Drilling	NORTHIN	G:	1	104218	8.121	EASTING:	1574182.329
DRILL	ING ME	THOD:	Rotary Sonic	G.S. ELEV	:	9	33.33 f	t MSL	M.P. ELEV:	933.33 ft MSL
BORE	HOLE D	IAMET	ER: 6 IN	DEPTH TO) WA	TER: N	I/A ft TC	C	TOTAL DEPTH:	19.0 ft BGS
NOTE	S:			LOGGED	BY:	J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Brey
DEPTH (ft)	GRAPHIC LOG	NSCS	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL	(mqq)	CON	WELL STRUCTION
		S	SAPROLITE; Light gray/tan with sporadic dark gray and da banding; cohesive, brittle/sandy structure par pulverized; moist. No odor, No visible impact. End of Boring @ 19' below ground surface Backfilled with bentonite chips to ground surf	rk greenish tially 'ace.					CLIENT: Duke Energ	y Carolinas, LLC.
	148 River Street, Suite 220 Greenville, South Carolina 29601									
syn	Synteria Greenville, South Carolina 29601 Phone: 864-421-9999 PAGE 2 OF 2									

PROJ	PROJECT: Former Bramlette Road MGP Site					RIN	G NO:	-	Г11-S	B2	
PROJ	JECT NO:	300	STARTED: 3/14/19					COMPLETED:	3/14/19		
DRILI	LING COI	MPAN	Y:	Cascade Drilling	NORTHIN	G:	1	104212	2.883	EASTING:	1574219.44
DRILI	LING ME	THOD	:	Rotary Sonic	G.S. ELEV	:	9	33.04 f	t MSL	M.P. ELEV:	933.04 ft MSL
BORE	EHOLE D	IAMET	TER	8: 6 IN	DEPTH TC	WA	TER: N	I/A ft TO	C	TOTAL DEPTH: 39.0 ft BGS	
NOTE	ES: Drille	er estir	mat	es hard rock ~35' below ground surface	LOGGED I	BY:	J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Brey
DEPTH (ft)	GRAPHIC LOG	NSCS		DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL MPACTS	(mqq)	CON	WELL ISTRUCTION
5-		ML ML		FILL; Mostly reddish brown with grayish brown laye some fine sand (trace micaceous); small/larg fragments of brick, concrete, and asphalt; me moist. No odor, No visible impact. FILL; Pulverized concrete; light gray with some silty fine sand. <u>No odor, No visible impact.</u> SILT; Reddish brown, then dark gray with trace we sand; stiff; moist. <u>No odor, No visible impact.</u> FILL; Wood debris in dark gray silty matrix with ~2' pink/red plastic/cardboard layered sheets; tra <u>No odor, No visible impact.</u>	ers; silt with le gravel and edium dense; y dark gray ll-graded		8.8				
- 10 - -		ML CL		FILL; Same as above; light gray pulverized concret reddish brown silt; same as above. <u>No odor, No visible impact.</u> FILL; Layered wood debris within dark gray silty ma starts in last inch. <u>No odor, No visible impact.</u> SILT; Dark gray; some well graded sand; small gra debris; loose; wet. <u>No odor, No visible impact.</u> CLAY, lean; Gray with brown mottling; low-medium plastic moist; and trace find sand and silt (micaceou - @ 9.7' - 10.9' Sporadic seams of black tar (scale); faint hydrocarbon odor.	e chunks then						
rm LAB.GDT 5/15/19 - 51		SP SC		SAND, clayey; Gray; micaceous grains; low plasticity; fine-n graded; dense; moist; grades to trace clay. No odor, No visible impact.	nedium; poorly		10.8				
T STD A4 AS1		sw		SAND; White-gray-black; micaceous grains; well-gra fine/coarse; medium dense; moist. <u>No odor, No visible impact.</u>	aded; 					-@ 16.5':	VOC & SVOC
BRAMLETTE NAPL V2.GPJ GIN				SAPROLITE; Light gray/tan; trace micaceous; gray banding dark greenish seams; brittle/sandy cohesive s pulverized; slightly moist. No odor, No visible impact.	g and trace structure					sample (
DEC									. 1	CLIENT: Duke Ener	gy Carolinas, LLC.
>	148 River Street, Suite 220									PROJECT LOCATIO	ON: Greenville, SC
Syr	Greenville, South Carolina 29601										PAGE 1 OF 2
	YIICITA Phone: 864-421-9999 PAGE 1 OF 2										

PROJECT: Former Bramlette Road MGP Site	WELL / BO	ORINO	G NO:	-	T11-S	B2		
PROJECT NO: 1026.800	STARTED: 3/14/19					COMPLETED:	3/14/19	
DRILLING COMPANY: Cascade Drilling	NORTHIN	G:	1	104212	.883	EASTING:	1574219.44	
DRILLING METHOD: Rotary Sonic	G.S. ELEV	:	9	33.04 f	t MSL	M.P. ELEV:	933.04 ft MSL	
BOREHOLE DIAMETER: 6 IN	DEPTH TO	D WA	FER: N	I/A ft TC	C	TOTAL DEPTH: 39.0 ft BGS		
NOTES: Driller estimates hard rock ~35' below ground surface	LOGGED	BY: 、	J. Conz	elmann	/T. King	CHECKED BY: M	Mastbaum/A. Brey	
HL (L) SS DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL IMPACTS	(mqq) DIA	CON	WELL	
SAPROLITE; Same as above with less gray banding; high No odor, No visible impact. Weathered Bedrock; Highly pulverized; light gray/white; can be br silty material with trace micaceous fine sand No odor, No visible impact.	ly pulverized. oken apart to l; dry.	-	6.9					
25 – No recovery; switched from dry to wet drillin interval.	g in this		0.0					
BEDROCK; Gneissic granite; light gray with darker gray spots; white-gray-black coloring with some li pink; trace pyrite and mica. - Top 15" with dark gray purplish micaceous sporadic garnet (light pink). No odor, No visible impact.	bands in ight green and layers;		4.4					
End of Boring @ 39' below ground surface Backfilled with bentonite chips to ground sur	face.							
SynTerra 148 River Street, Suite 220					·I	CLIENT: Duke Ener PROJECT LOCATIO	gy Carolinas, LLC. ON: Greenville, SC	
Greenville, South Carolina 29601 Phone: 864-421-9999 PAGE 2 OF 2								

PROJECT: Fo	WELL / BC	ORING	NO:		Г11-S	B3			
PROJECT NO: 10	26.800	STARTED:		3/	14/19		COMPLETED:	3/14/19	
DRILLING COMPAN	NY: Cascade Drilling	NORTHIN	G:	1	104209	.432	EASTING:	1574257.526	
DRILLING METHOD): Rotary Sonic	G.S. ELEV	:	9	30.68 fl	MSL	M.P. ELEV:	930.68 ft MSL	
BOREHOLE DIAME	TER: 6 IN	DEPTH TO) WAT	ER: N	/A ft TC	C	TOTAL DEPTH: 19.0 ft BGS		
NOTES:		LOGGED	BY: J	. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Brey	
DEPTH (ft) (ft) LOG USCS	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL IMPACTS	(mqq)	CON	WELL ISTRUCTION	
	 FILL; Various shades of dark brown, reddish brown gray; mostly silt with trace fine sand; trace ro surface; moist; loose-medium. - @ 0.8' - 2.5' Mostly gravel-sized grains and (asphalt); and well-graded. - @ 2.8' - 5.3' Some brick fragments and woo some large rounded gravel; @ 3' light blue, hi shard. No odor, No visible impact. FILL; Woody debris with some silt layered; dark gradense; moist; trace fine sand and small angu - @ 7.2' - 7.5' Large brick fragments; and ~4' plastic (hard). No odor, No visible impact. CLAY, lean; Gray with some brown mottling and trace dar low plasticity; soft-medium; moist; trace fine sit and off. No visible impact. CLAY, lean; Gray with brown mottling from 9' - 9.7'; micaa low-medium plasticity; stiff; little fine micaceous grains. No odor, No visible impact. CLAY, lean; Gray with brown mottling from 9' - 9.7'; micaa low-medium plasticity; stiff; little fine micaceous trace silt; moist. No odor, No visible impact. SAND; White-gray-black; trace micaceous grains; mand moist. @ 10.2' - 10.5' Medium; and poorly graded. @ 10.2' - 10.5' Medium; and poorly graded. @ 10.2' - 10.5' Medium; and poorly graded. @ 10.2' - 10.5' Medium; and well graded wit graded gravel; trace clayey sand seams. No odor, No visible impact. 	n, and dark otlets near debris ad debris; ard plastic 		9.1			-@12'- sample d -@13.5' sample d	13': Geotechnical collected : VOC/SVOC collected gy Carolinas, LLC.	
SynTerra								gy Carolinas, LLC.	
Image: Second State 148 River Street, Suite 220 Image: Second State Grappille South Coroling 20601							PROJECT LOCATIO	ON: Greenville, SC	
synlerra B	Synleria Greenville, South Carolina 29601 Phone: 864-421-9999 PAGE 1 OF 1								

PROJECT: Former Bramlette Road MGP Site WELL						G NO:	-	Г12-S	B1	
PRO	JECT NO:	STARTED:	ED: 3/20/19 COMPLET					3/20/19		
DRILI	LING CO	MPANY	Cascade Drilling	NORTHIN	G:	1	104124	.908	EASTING:	1574203.356
DRILI	LING ME	THOD:	Rotary Sonic	G.S. ELEV	:	9	31.37 f	t MSL	M.P. ELEV:	931.37 ft MSL
BORE	EHOLE D	IAMETI	ER: 6 IN	DEPTH TO	WA	TER: N	I/A ft TC	C	TOTAL DEPTH:	19.0 ft BGS
NOTE	S:			LOGGED	BY:	J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Brey
DEPTH (ft)	GRAPHIC LOG	nscs	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL	(mqq)	CON	WELL ISTRUCTION
5-		ML	FILL; Various shades of brown, gray, and reddish b silty with some clay; low plasticity; medium-st sand and fine micaceous-coarse; trace rootle gravel, asphalt, and brick debris. Poor recove unit. - @ 3.5' Curved, flat (thin) metal piece. - @ 4' Light gray concrete. No odor, No visible impact.	prown; mostly iff; moist; few ts; sporadic ry through fill		4.3				
	-		No recovery.							
10-		CL	 CLAY, lean; Trace micaceous grains; medium plasticity; n fine sand, silt, and rootlets. - @ 9' - 10.3' Mostly brown and dark gray; so plasticity. - @ 10.3' - 11.1' Gray with low plasticity; clay medium dense. - @ 11.1' - 11.7' Gray; stiff. No odor, No visible impact. 	noist; trace ft; low rey sand;						
		SP	SAND; White-gray-black; trace micaceous grains; fir poorly graded with some clay and trace claye seams; medium dense; moist. No odor, No visible impact.	ne-medium y sand						
VT STD A4 ASTM LAB.GDT 5/15/19 - 5L		SW	SAND; White-gray-black; trace micaceous grains; ta fine-coarse; well graded with trace small and below 16'; trace clayey sand blebs/seams; me moist. No odor, No visible impact.	nnish gray; large gravel edium dense;		9.8			-@ 16.5' sample (VOC/SVOC
RAMLETTE NAPL V2.GPJ GII			SAPROLITE; Gray purplish with lighter gray banding; coher micaceous, sandy structure; trace faint green slightly moist. No odor, No visible impact. End of Boring @ 19' below ground surface Backfiled with bentonite ships to ground surface	sive, brittle, hish banding; 					Sampo	
ECB									CLIENT [.] Duke Free	gy Carolinas II C
SynTerra 148 River Street, Suite 220									PROJECT LOCATIO	ON: Greenville, SC
Greenville, South Carolina 29601 Phone: 864-421-9999									PAGE 1 OF 1	

PROJECT:	WELL / BORING NO: T12-SB2								
PROJECT NO	STARTED:	STARTED: 3/20/19				COMPLETED:	3/20/19		
DRILLING CO	DRILLING COMPANY: Cascade Drilling					104112	.742	EASTING:	1574243.743
DRILLING ME	DRILLING METHOD: Rotary Sonic					32.52 fl	MSL	M.P. ELEV:	932.52 ft MSL
BOREHOLE D	BOREHOLE DIAMETER: 6 IN				TER: N	I/A ft TC	C	TOTAL DEPTH:	19.0 ft BGS
NOTES:	NOTES:				J. Conz	elmann	/T. King	CHECKED BY: M	Mastbaum/A. Brey
DEPTH (ft) GRAPHIC LOG	E DESCRIPTION				RECOV. (FT)	VISUAL IMPACTS	(mqq)	COM	WELL ISTRUCTION
5-	5- CL FILL; Mostly clay with some silt; low plasticity; med moist; few sand; fine micaceous-coarse; trac sporadic brick, concrete, rock, and wood deb from gravel-sized 5" layers; various shades o and reddish brown. - @ 1.2' Circular plastic piece - @ 9.2' - 9.4' Plastic sheeting (black) fragme Pine/woody odor with wood, No visible impac				10.3				
10-	ML	FILL, sandy silt; Dark brownish gray; low plasticity with fine m sand; coarse and small gravel; trace rootlets; - @ 11.4' - 11.9' Tar coated with tar-saturate 11.8'; highly viscous; slightly sticky; strong hy odor; black.	iicaceous moist. d from 11.5' - /drocarbon						
5TM LAB.GDT 5/15/19	CL	CLAY, lean; Gray; trace micaceous with olive mottling that below 14'; medium plasticity; stiff; moist; trac silt, and rootlets. - @ 15' - 15.6' Stiffness decreases and grade clay. Faint hydrocarbon odor above 12.6', No visib	t grades out e fine sand, es to sandy le impact.	11.2	11.2		80.5		
GPJ GINT STD A4 AK	SW	SAND; White-gray-black; trace micaceous grains; fir well-graded with fine trace clayey seam @ 16 medium dense; moist; trace wood debris. No odor, No visible impact.	ne-coarse 6.5' - 16.8';						
BRAMLETTE NAPL V2		SAPROLITE; Dark gray purplish with lighter gray banding; brittle, micaceous, sandy structure; slightly m No odor, No visible impact. End of Boring @ 19' below ground surface Backfilled with bentonite chips to ground surf	cohesive, noist. 						
		_					ı – I	CLIENT: Duke Ener	gy Carolinas, LLC.
> 7	S 14	yn i erra 18 River Street, Suite 220						PROJECT LOCATIO	ON: Greenville, SC
svnTerr	a G	reenville, South Carolina 29601							
		10110.004-421-3333							FAGE I UF I

PROJ	PROJECT: Former Bramlette Road MGP Site				WELL / BORING NO: T12-SB3					
PROJ	PROJECT NO: 1026.800 STAR						20/19		COMPLETED:	3/20/19
DRILI	DRILLING COMPANY: Cascade Drilling NO					1104106.736			EASTING:	1574266.294
DRILI	DRILLING METHOD: Rotary Sonic G					932.58 ft MSL			M.P. ELEV:	932.58 ft MSL
BORE	BOREHOLE DIAMETER: 6 IN					TER: N	I/A ft TC	C	TOTAL DEPTH:	19.0 ft BGS
NOTE	NOTES:					J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Brey
DEPTH (ft)	GRAPHIC LOG	NSCS	DESCRIPTION		SAMPLE	RECOV. (FT) VISUAL IMPACTS PID (ppm)			WELL CONSTRUCTION	
5-		ML	FILL; Various shades of brown, reddish brown, an silt with some clay; most low-plasticity; mediu above 6"); few sand (fine micaceous-coarse) and rootlets; sporadic brick, concrete, and wc - @ 5' - 6.5' Concrete layer; light gray; and broken/pulverized (some at 7'). - @ 8' Brittle cap with top of plastic. No odor, No visible impact.	d gray; mostly ım; moist (wet ; trace gravel xod debris.		8.3				
		sw	FILL, sand; Dark brown silt matrix with tan, brown, reddis black grains comprised of primarily slag and medium-coarse including small gravel; well-g	— — — — — — — sh brown, and coal; µraded; little	-					
10-		CL	silt; coarse; wet. - @ 9' - 9.3' Light gray concrete block. <u>Faint hydrocarbon odor, No visible impact.</u> CLAY, lean; Gray; trace micaceous grains with white-brow medium plasticity; stiff; moist; trace fine sanc rootlets. No odor, No visible impact.	// / vn mottling; l, silt, and						
1LAB.GDT 5/15/19 - 51		SP SC	SAND, clayey; White-gray-black; micaceous grains; fine-me poorly-graded; medium dense; moist. No odor, No visible impact.	dium		11.0				
STD A4 ASTM		sw	SAND; White-gray-black; some light brown; trace mi grains; fine-coarse well-graded; medium den: - @90" - 95" Clayey seam; and same as abc	caceous se; moist. ove 7					-@16': V collected	OC/SVOC sample
TE NAPL V2.GPJ GINT 5			<u>No odor, No visible impact.</u> SAPROLITE; Gray and purplish gray with lighter gray band brittle, micaceous, and sandy structure; sligh No odor, No visible impact.	/ ing; cohesive, tly moist.						
<u>BRAMLET</u>			End of Boring @ 19' below ground surface Backfilled with bentonite chips to ground surf							
DEC									CLIENT: Duke Ener	gy Carolinas, LLC.
ş		14	48 River Street, Suite 220						PROJECT LOCATIO	ON: Greenville, SC
syr	Terr	a ^G	reenville, South Carolina 29601 none: 864-421-9999							PAGE 1 OF 1

PROJ	PROJECT: Former Bramlette Road MGP Site				WELL / BORING NO: T13-SB1						
PROJECT NO: 1026.800					STARTED:	TED: 3/20/19				COMPLETED:	3/20/19
DRILL	DRILLING COMPANY: Cascade Drilling					G:	1104010.593			EASTING:	1574198.055
DRILL	DRILLING METHOD: Rotary Sonic					:	9	30.86 f	t MSL	M.P. ELEV:	930.86 ft MSL
BORE	BOREHOLE DIAMETER: 6 IN						TER: N	I/A ft TC	C	TOTAL DEPTH:	19.0 ft BGS
NOTE	NOTES:						J. Conz	elmann	/T. King	CHECKED BY: M	. Mastbaum/A. Brey
DEPTH (ft)	SUPERATE SUPERATION DESCRIPTION				SAMPLE	RECOV. (FT)	VISUAL IMPACTS	(mqq)	COM	WELL NSTRUCTION	
		CL		ILL; arious shades of brown, reddish brown, and ay with some silt; medium moist; trace fine ootlets; little gravel and coarse grains; wet al boradic brick/concrete debris and glass shar o odor, No visible Impact. ILL, wood debris; ark gray; layered with trace fill matrix above ine/woody odor, No visible impact.	d gray; mostly sand and bove 0.8'; rd @ 4.5'.		5.4				
BRAMLETTE NAPL V2.GPJ GINT STD A4 ASTM LAB.GDT 5/15/19		ML CL SP		ILT; rownish gray; low plasticity; soft; wet; trace o dor, No visible impact. LAY, lean; ray; micaceous; low-medium plasticity; med ome fine poorly-graded sand; trace rootlets. o odor, No visible impact. AND; /hite-gray-black; trace micaceous grains; m oist. @ 10.6' - 11.6' Fine-medium poorly-graded. @ 11.6' - 13' Fine-coarse well-graded with 1 unded gravel @ 12.8' - 13'. o odor, No visible impact. APROLITE; urplish gray with lighter gray banding; cohes nd micaceous structure mostly pulverized b ightly moist. o odor, No visible impact. EDROCK; ard rock @ 15.5'; dry; quartz-feldspar biotite @ 15.3' - 15.5' Moist clayey material filling f iostly pulverized. o odor, No visible impact.	fine sand.		10.2			-@13':\ collected	/OC/SVOC sample
DEC		0	nTorr	2						CLIENT: Duke Ener	gy Carolinas, LLC.
	Terr		48 Rive reenvil	er Street, Suite 220 Ile, South Carolina 29601						PROJECT LOCATIO	ON: Greenville, SC
9 ~ "		- P	none:	004-421-9999							PAGE 1 OF 1

PROJ	PROJECT: Former Bramlette Road MGP Site			WELL / BORING NO: T13-SB2						
PROJ	PROJECT NO: 1026.800 START					3/	/20/19		COMPLETED:	3/20/19
DRILL	DRILLING COMPANY: Cascade Drilling NORTHI					1104000.938			EASTING:	1574226.664
DRILL	DRILLING METHOD: Rotary Sonic G.S. ELE					930.52 ft MSL			M.P. ELEV:	930.52 ft MSL
BORE	BOREHOLE DIAMETER: 6 IN DEPTH T					WATER: N/A ft TOC			TOTAL DEPTH:	19.0 ft BGS
NOTE	NOTES: LOGO					J. Conzelmann/T. King			CHECKED BY: M.	Mastbaum/A. Brey
DEPTH (ft)	HL DESCRIPTION				SAMPLE	RECOV. (FT)	VISUAL IMPACTS	(mqq)	CON	WELL ISTRUCTION
- - 5 -		CL	 FILL; Various shades of brown, gray, and reddish t clay with some silt; low plasticity; soft-mediur sand (fine-coarse); trace rootlets; sporadic w debris (~1-3"). No odor, No visible impact. FILL; Mostly wood and some brick debris in fill mat Pine/woody odor, No visible impact. SAND; Dark gray and black; medium-coarse with gra well-graded; loose; moist; some silt; few woo many grains comprise of coal and slag. - @ 6' - 6.2' Clayey seams; gray; and micace - @ 7' - 7.5' Tar-coated grains; sticky, cohesi viscous, and black; and strong hydrocarbon of Hydrocarbon odor throughout layer. 	prown; mostly n; moist; trace ood and brick 		6.7		9.7		
- 10		SW	SAND; Same as above; fine-coarse; less gravel and debris; 3" x 2" brick piece. Hydrocarbon odor, No visible impact. CLAY, lean; Gray; trace micaceous grains with olive brow medium plasticity; medium then grades to sti trace fine sand silt. Faint hydrocarbon odor, No visible impact.	no wood n mottling; ff; moist;	-					
1 LAB.GDT 5/15/19 - 12		SW	SAND; White-gray-black; micaceous grains; fine-me well-graded; medium dense; moist; trace clay - @ 14.5' - 15.2' Fine-coarse well-graded No odor, No visible impact.	dium / in seams.		10.3			-@ 15': \ collecter	/OC/SVOC sample
ETTE NAPL V2.GPJ GINT STD A4 ASTI	$\sum_{i=1}^{N} (i) (i) (i) (i) (i) (i) (i) (i) (i) (i)$		SAPROLITE; Dark purplish gray with lighter gray banding; micaceous structure partially pulverized by dr 17'. No odor, No visible impact.	cohesive, illing below			-		Consuler	
RAMLE			End of Boring @ 19' below ground surface Backfilled with bentonite chips to ground surf	ace.						
EC BF	/									av Carolinea, LLC
	5	Sy	n Terra							N Greenville SC
	Torr	GI	reenville, South Carolina 29601							
S S S		C Pr	none: 864-421-9999							PAGE 1 OF 1
PROJECT:	WELL / BORING NO: T13-SB3									
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PROJECT NO:	102	6.800	STARTED: 3/20/19					COMPLETED:	3/20/19	
DRILLING COM	MPAN	/: Cascade Drilling	NORTHIN	G:	1	103989	9.468	EASTING:	1574264.903	
DRILLING MET	THOD:	Rotary Sonic	G.S. ELEV	:	9	30.86 f	t MSL	M.P. ELEV:	930.86 ft MSL	
BOREHOLE DI	AMET	ER: 6 IN	DEPTH TO) WA	TER: N	I/A ft TO	C	TOTAL DEPTH: 19.0 ft BGS		
NOTES:			LOGGED	BY:	J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Br	
DEPTH (ft) GRAPHIC LOG	nscs	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL	(mqq)	CON	WELL ISTRUCTION	
	CL	 FILL; Various shades of brown, gray, and reddish blean clay with some silt; low plasticity; mediur from 10.5" - 16"); few sand (fine-coarse); trac sporadic brick debris and glass shards. - @ 2' - 2.2' Layer of asphalt-like debris. No odor, No visible impact. FILL, wood debris; Dark gray; mostly wood debris in fill matrix ab 	prown; mostly m; moist (wet ce rootlets;							
5-		Pine/woody odor, No visible impact.			3.7					
10-	CL SP SC	CLAY, lean; Gray; trace micaceous grains with olive mottl plasticity; medium then grades to stiff; moist; sand, silt, and rootlets. No odor, No visible impact. SAND, clayey; White-gray-black; trace micaceous grains; low fine poorly-graded; medium dense; moist. No odor, No visible impact.	ing; medium trace fine w plasticity;			_				
15 —	sw	SAND; White-gray-black; trace micaceous grains; fin well-graded; medium dense; moist; trace root clayey seams; more coarse and less fine as o increases. No odor, No visible impact.	ne-coarse ilets and depth		9.9					
		SAPROLITE; Gray with lighter gray banding; cohesive, britt micaceous, and sandy structure; partially puly drilling; slightly moist. No odor, No visible impact. End of Boring @ 19' below ground surface	le, verized by			-				
		Backfilled with bentonite chips to ground surf	ace.							
1-				I	1	1	I	CLIENT: Duke Frier	gy Carolinas 11	
	Sy	nTerra							ON: Greenville	
	14 — Gr	8 River Street, Suite 220 eenville, South Carolina 29601						TRODEOTEOOATR		
synierra		one: 864-421-9999							PAGE 1 OF	

PROJECT:	WELL / BORING NO: T14-SB1								
PROJECT NO:	: 10	26.800	STARTED:		3/	19/19		COMPLETED:	3/19/19
DRILLING CO	MPAN	Y: Cascade Drilling	NORTHIN	G:	1	103895	5.608	EASTING:	1574267.799
DRILLING ME	THOD	: Rotary Sonic	G.S. ELEV	:	9	31.77 f	t MSL	M.P. ELEV:	931.77 ft MSL
BOREHOLE D	IAME	TER: 6 IN	DEPTH TC	WA	TER: N	I/A ft TC	C	TOTAL DEPTH:	19.0 ft BGS
NOTES:			LOGGED	BY:	J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Brey
DEPTH (ft) GRAPHIC LOG	NSCS	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL	(mqq) DIG	CON	WELL ISTRUCTION
	CL ML	 FILL; Various shades of brown, reddish brown, and lean clay with some silt; low plasticity; moist; sand and rootlets; sporadic coarse grained ar gravel-sized concrete and brick debris; a few (~12"). @ 1.5' - 1.7' Concrete light gray. @ 2.5' - 2.7' Concrete light gray. @ 5.8' - 6' Fabric piece (~6" by 6"). No odor, No visible impact. FILL, silt; Dark gray and brown; nonplastic - low plastic some coarse and gravel-sized slag/coal; few decaying organics; trace fine sand. Kaint hydrocarbon odor, No visible impact. No recovery.	d gray; mostly trace fine nd larger chunks ity; soft; wet; wood debris;		6.8				
10-	CL	CLAY, lean; Gray; trace micaceous grains with brown and mottling that grades out medium plasticity; m trace fine sand; silt; rootlets. - @ 9' - 9.7' Darker gray; and low plasticity. No odor, No visible impact.	l olive brown edium; moist;						
	SP	 SAND; White-gray-black; trace micaceous grains; m moist. @ 11.4' - 13' Fine-medium; poorly graded. @ 13' - 13.3' Sandy clay seam. @ 13.3' - 15.4' Medium poorly graded; trace seams. @ 15.4' - 16.1' Fine-medium; poorly graded @ 16.1' - 16.8' Fine-coarse; well-graded wit rounded gravel. No odor, No visible impact. 	edium dense; e clayey l; trace clay. h few		9.9				
		SAPROLITE; Dark purplish gray with lighter gray banding; cohesive/brittle, micaceous, and sandy struct No odor, No visible impact. End of Boring @ 19' below ground surface Backfilled with bentonite chips to ground surf	ure. 						
						-	- I	CLIENT: Duke Ener	gy Carolinas, LLC.
	5 14	48 River Street, Suite 220						PROJECT LOCATIO	ON: Greenville, SC
synTerr	Synleria Greenville, South Carolina 29601 Phone: 864-421-9999 PAGE 1 OF 1								

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PROJ	ECT:	For	mer Bramlette Road MGP Site	WELL / BO	ORIN	G NO:	-	Г14-S	B2	
PROJ	ECT NO	: 102	26.800	STARTED	:	3/	19/19		COMPLETED:	3/19/19
DRILL	ING CO	MPAN	Y: Cascade Drilling	NORTHIN	G:	1	103902	.653	EASTING:	1574290.858
DRILL	ING ME	THOD	Rotary Sonic	G.S. ELEV	' :	9	32.26 f	MSL	M.P. ELEV:	932.26 ft MSL
BORE	HOLE D	IAMET	ER: 6 IN	DEPTH TO) WA	TER: N	I/A ft TC	C	TOTAL DEPTH:	19.0 ft BGS
NOTE	S:			LOGGED	BY:	J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Brey
DEPTH (ft)	GRAPHIC LOG	nscs	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL IMPACTS	(mqq) DIA	CON	WELL ISTRUCTION
- - 5		CL	FILL; Various shades of dark brown, reddish browr mostly lean clay with some silt; low plasticity; moist; trace fine sand and rootlets; sporadic l wood/timber, and concrete debris. - @ 5' Wood debris. Pine/woody odor, No visible impact.	n, and gray; medium-stiff; prick,		5.3				
-			No recovery.							
- 10		CL	CLAY, lean; Gray; trace micaceous grains with brown mo plasticity; stiff then soft from 10' - 12.5'; mois sand, silt, and rootlets. No odor, No visible impact.	ttling; medium t; trace fine					-@9':Ge collected	eotechnical sample
- V2.GPJ GINT STD A4 ASTM LAB.GDT 5/15/19		SW	SAND; White-gray-black; trace micaceous grains; fir well-graded; medium-dense; moist. No odor, No visible impact. SAPROLITE; Gray; trace micaceous grains with some light banding; cohesive, brittle structure. No odor, No visible impact. BEDROCK; Quartz-feldspar granite with trace biotite; roct during drilling; trace light pink garnet; dry. - @ 14.5' - 15.5' Slightly moist clay filling bed (sandy clay; and low plasticity). No odor, No visible impact.	he-coarse;		10.3				
DEC BRAMLETTE NAPL			End of Boring @ 19' below ground surface Backfilled with bentonite chips to ground surf						CLIENT: Duke Ener	gy Carolinas, LLC.
	2	Sy 14	/nTerra l8 River Street, Suite 220						PROJECT LOCATIO	ON: Greenville, SC
g SynTerra Greenville, South Carolina 29601 Phone: 864-421-9999 PAGE 1 OF 1							PAGE 1 OF 1			

PROJ	ECT:	For	mer Bramlette Road MGP Site	WELL / BO	ORINO	G NO:	-	Г14-S	B3	
PROJ	ECT NO:	102	26.800	STARTED: 3/19/19					COMPLETED:	3/19/19
DRILL	ING CO	MPAN	Y: Cascade Drilling	NORTHIN	G:	1	103906	6.182	EASTING:	1574308.827
DRILL	ING ME	THOD	Rotary Sonic	G.S. ELEV	:	9	34.59 f	t MSL	M.P. ELEV:	934.59 ft MSL
BORE	HOLE D	IAMET	TER: 6 IN	DEPTH TO	WA	TER: N	I/A ft TC	C	TOTAL DEPTH:	19.0 ft BGS
NOTE	S:			LOGGED	BY:	J. Conz	elmann	/T. King	CHECKED BY: M	Mastbaum/A. Brey
DEPTH (ft)	GRAPHIC LOG	NSCS	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL IMPACTS	(mqq)	CON	WELL ISTRUCTION
		CL	FILL; Various shades of dark brown, reddish browr mostly clay with some silt; low plasticity; med few fine sand; sporadic wood/timber, brick, a debris. No odor, No visible impact.	n, and gray; lium moist; nd concrete		8.4				
10-		ML	SILT; Brown; low plasticity; some clay; soft; wet; so timber/wood debris; trace fine sand. Pinet/woody odor. No visible impact	ome	-					
-		CL	CLAY, lean; Gray; trace micaceous grains; medium-high grades from soft-stiff; moist; trace fine sand. - @ 9.8' - 10.1' Some wood/timber debris; sa No odor, No visible impact.						-@ 11.5' sample	: Geotechnical collected
INT STD A4 ASTM LAB.GDT 5/15/19 			PWR/SAPROLITE; Highly disturbed/pulverized by drilling. - @ 12.4' - 13.7' Mostly hard rock with saprol gray with dark gray banding. - @ 13.9' - 17' Various shades of gray; highly saprolite with sporadic hard rock fragments. No odor, No visible impact.	lite seams; / pulverized		10.8			@ 12.5 sample	: VOC/SVOC collected
TTE NAPL V2.GPJ G.			BEDROCK; Granite, quartz, and felspar; dry; light gray, white-gray-black. - @ 18.6' - 19' Slightly moist clay/silt with trac No odor, No visible impact.	ce fine sand.						
SAMLET			End of Boring @ 19' below ground surface Backfilled with bentonite ships to ground surf	face.						
EC BF										av Carolinas II C
SynTerra									PROJECT I OCATIO	ON: Greenville SC
Greenville, South Carolina 29601										
ğ yı		P	none: 864-421-9999							PAGE 1 OF 1

PRO	PROJECT: Former Bramlette Road MGP Site				WELL / BORING NO: T15-SB1					
PRO	IECT NO:	10	26.800	STARTED: 3/19/19					COMPLETED:	3/19/19
DRILI	ING CO	MPAN	Y: Cascade Drilling	NORTHIN	G:	1	103781	.24	EASTING:	1574278.993
DRILI	LING ME	THOD	Rotary Sonic	G.S. ELEV	/ :	9	31.56 f	t MSL	M.P. ELEV:	931.56 ft MSL
BORE	HOLE D	IAME	TER: 6 IN	DEPTH TO	D WA	TER: 8	.32 ft T	ос	TOTAL DEPTH:	19.0 ft BGS
NOTE	S:			LOGGED	BY:	J. Conz	elmann	/T. King	CHECKED BY: M. Mastbaum/A. Brey	
DEPTH (ft)	GRAPHIC LOG	NSCS	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL IMPACTS	(mqq)	CON	WELL ISTRUCTION
5-		CL	 FILL; Various shades of brown and reddish brown; little silt; low plasticity; medium; moist; trace f micaceous sand; medium sand; rootlets. - @ 0.5 Brick debris; plastic shard. - @ 1' - 2' Mostly concrete, brick, and asphal - @ 3.5' Layered green plastic material. - @ 4' Asphalt-like debris (~4"). No odor, No visible impact. 	lean clay with fine t debris. and; some	-	6.2				
10-		ML	No recovery. SILT; Brown and dark brown with some dark gray; plasticity; soft; wet; trace fine-coarse well-gra little rootlet/wood debris. - @ 9' - 9.3' Concrete and brick chunks. - @ 9' Long rectangular metal piece (fill). Faint hydrocarbon odor, Light sheen. SAND; Dark gray silt matrix with tan, brown, reddish	nonplastic-low aded sand;					¥	
2 DRAMILETTE NAPE 12 JULY 4 ANT 10 LAR 201 10 10 10 10 10 10 10 10 10 10 10 10 1		CL SW	 bark gray sint matrix with tan, brown, reddish gray sand grains; fine-coarse well-graded with and large gravel; loose; wet; few silt; trace ro debris; gravel-sized pieces of slag with some fragments. Faint hydrocarbon odor, Light sheen. CLAY, lean; Gray; micaceous grains; medium plasticity; n fine-medium sand; stiff. Faint hydrocarbon odor, No visible impact. SAND; White-gray-black; micaceous grains; fine-me well-graded; medium-dense; moist. - @ 15' - 15.6' Additional coarse grains and s rounded gravel. No odor, No visible impact. SAPROLITE; Gray; micaceous grains with dark green, tan, gray mixed in; trace light pink specks; cohesi somewhat clayey structure; somewhat pulver 17.8'. No odor, No visible impact. 	h few small otlets/wood / coal / noist; few / and lighter ve, brittle, and rized below		10.7			-@15': \ collected	/OC/SVOC sample
			1		1	I	I	1	CLIENT: Duke Ener	gy Carolinas. LLC
SynTerra 148 River Street, Suite 220								PROJECT LOCATIO	DN: Greenville. SC	
Greenville, South Carolina 29601										
Synieria Phone: 864-421-9999							PAGE 1 OF 1			

PROJECT NO: 1026.800 DRILLING COMPANY: Cascade Drilling DRILLING METHOD: Rotary Sonic BOREHOLE DIAMETER: 6 IN NOTES: Harrow Sonic Example a structure DESCRIPTION	STARTED: NORTHIN G.S. ELEV DEPTH TO LOGGED	G: /: D WA ⁻ BY: BY:	3/ 1 9 FER: N J. Conz	19/19 103789 33.13 ft //A ft TC elmann SLOP	0.794 t MSL DC /T. King	COMPLETED: EASTING: M.P. ELEV: TOTAL DEPTH: CHECKED BY: M	3/19/19 1574296.229 933.13 ft MSL 29.0 ft BGS Mastbaum/A. Brey WELL
DRILLING COMPANY: Cascade Drilling DRILLING METHOD: Rotary Sonic BOREHOLE DIAMETER: 6 IN NOTES: Hear of the second	NORTHIN G.S. ELEV DEPTH TO LOGGED	G: /: D WA ⁻ BY: BY: SWHE	1 9 FER: N J. Conz VOJ L L J. L J. L J. Conz (L J.	103789 33.13 ft //A ft TC elmann SLOP	0.794 MSL DC /T. King	EASTING: M.P. ELEV: TOTAL DEPTH: CHECKED BY: M	1574296.229 933.13 ft MSL 29.0 ft BGS Mastbaum/A. Brey WELL
DRILLING METHOD: Rotary Sonic BOREHOLE DIAMETER: 6 IN NOTES: Herefore Sonic DESCRIPTION	G.S. ELEV DEPTH TC LOGGED	/: D WA ^T BY: BY: SWHLE	9 TER: N J. Conz VOJ LLJ)	33.13 ft //A ft TC elmann SLOV	T. King	M.P. ELEV: TOTAL DEPTH: CHECKED BY: M	933.13 ft MSL 29.0 ft BGS Mastbaum/A. Brey WELL
BOREHOLE DIAMETER: 6 IN NOTES: IN Harris SO Harris SO Harris SO SO SO Description	LOGGED	BY: BY: SAMPLE	IER: N J. Conz O U U U U U U U	A ft TC elmann SUAL	DC /T. King	TOTAL DEPTH: CHECKED BY: M	29.0 ft BGS Mastbaum/A. Brey WELL
NOTES: H (1) S S S DESCRIPTION	LOGGED	SAMPLE A	J. Conz (FT)	elmann SUAL	/T. King	CHECKED BY: M	Mastbaum/A. Brey
HLAD CLOSE SS DESCRIPTION		SAMPLE	RECOV. (FT)	SUAL	۵Ê	CON	WELL
				ΣĘ	Id d		ISTRUCTION
 FILL; Various shades of brown, gray, and reddish micaceous grains; mostly silt with some clay medium stiff; moist (wet 0" - 4"); trace rootle - @ 1.3' - 1.6' Brick fragments. - @ 1.8' - 2.4' Concrete; light gray. - @ 3.4' - 5.2' More clayey; trace decaying of large asphalt chunk near 46". - @ 5.2' - 5.3' Concrete; light gray. No odor, No visible impact. 	brown; trace y; low plasticity; ets. organics; and		5.5				
10 – ML SILT; Dark grayish brown; nonplastic; soft; wet wirrottets, wood debris, and decaying organics - @ 9' - 9.2' Concrete chunk. Faint odor, No visible impact.	th some s. / ⁻	_					
CLAY, lean; Dark brownish gray with brown and olive mo micaceous; low-medium plasticity; moist; litt and decaying organic matter. No odor, No visible impact.	ottling; trace le silt, rootlets,	-					
CLAY, lean; Gray; micaceous grains with olive brown mo plasticity; medium-stiff; moist; trace fine sar rootlets; mottling grades out at 13.9'. No odor, No visible impact.	ottling; medium nd, silt, and		11.2				
SAND; White-gray-black; micaceous grains; fine-m well-graded with trace coarse; medium-coar - @ 15.5' - 16.3' Some coarse and small an No odor, No visible impact.	edium se; moist. d large gravel.					-@15':0 collecter	Geotechnical sample
SAPROLITE; Mostly dark purplish gray; micaceous grains gray mixed in; slightly moist; cohesive, brittle and sandy structure; mostly pulverized by dr to partially weathered bedrock. - @ 20' - 22' Less purplish color. - @ 22.5' - 23' Harder rock chunks with trac specks. No odor, No visible impact.	e with lighter e, micaceous, rilling; grades ee light pink					-@17':\ collecter	/OC/SVOC sample
						CLIENT: Duke Ener	gy Carolinas, LLC.
Synterra 148 River Street, Suite 220						PROJECT LOCATIO	ON: Greenville, SC
Greenville, South Carolina 29601 Phone: 864-421-9999							PAGE 1 OF 2

PROJECT:	WELL / BO	ORIN	G NO:	-	T15-S	B2			
PROJECT NO	: 10	26.800	STARTED: 3/19/19					COMPLETED:	3/19/19
DRILLING CO	MPAN	Y: Cascade Drilling	NORTHIN	G:	1	103789	.794	EASTING:	1574296.229
DRILLING ME	THOD	: Rotary Sonic	G.S. ELEV	' :	9	33.13 f	t MSL	M.P. ELEV:	933.13 ft MSL
BOREHOLE D	IAME	TER: 6 IN	DEPTH TO) WA	TER: N	I/A ft TC	C	TOTAL DEPTH:	29.0 ft BGS
NOTES:			LOGGED	BY:	J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Brey
DEPTH (ft) GRAPHIC LOG	nscs	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL	(mqq) DIA	CON	WELL
Participanti de la construction de la const construction de la construction de la const		SAPROLITE; Mostly dark purplish gray; micaceous grains gray mixed in; slightly moist; cohesive, brittle, and sandy structure; mostly pulverized by dri to partially weathered bedrock. - @ 20' - 22' Less purplish color. - @ 22.5' - 23' Harder rock chunks with trace specks. No odor, No visible impact. (continued)	with lighter , micaceous, lling; grades e light pink		7.0				
		BEDROCK; Gneiss, quartz, feldspar, and biotite; some lig garnet; trace pyrite. Fractured. Note: Driller estimates hard rock depth at app 25'. RQD = 43% (poor).	ght pink proximately		3.8				
30-		End of Boring @ 29' below ground surface Backfilled with bentonite chips to ground surf	face.						
6	S	ynTerra						CLIENT: Duke Ener	gy Carolinas, LLC.
	14 - G	48 River Street, Suite 220 reenville. South Carolina 29601						PROJECT LOCATIO	JIN: Greenville, SC
synierr	d _P	hone: 864-421-9999							PAGE 2 OF 2

PRO	JECT:	Fo	rmer Bramlette Road MGP Site	WELL / BORING NO: T15-SB3						
PRO	JECT NO	: 10	26.800	STARTED:		3/	19/19		COMPLETED:	3/19/19
DRIL	LING CO	MPAN	Y: Cascade Drilling	NORTHIN	G:	1	103800	.163	EASTING:	1574314.031
DRIL	LING ME	THOD	: Rotary Sonic	G.S. ELEV	:	9	34.15 fi	t MSL	M.P. ELEV:	934.15 ft MSL
BOR	EHOLE D	IAME	rer: 6 IN	DEPTH TO	WA	TER: N	I/A ft TC	C	TOTAL DEPTH:	19.0 ft BGS
NOT	ES:			LOGGED	BY:	J. Conz	elmann	/T. King	CHECKED BY: M	. Mastbaum/A. Brey
DEPTH (ft)	RAPHIC LOG	uscs	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL	DID (mdd)	CO	WELL NSTRUCTION
5-		CL	FILL; Various shades of brown, gray, and reddish I lean clay with some silt; low plasticity; mediu trace fine micaceous sand and rootlets; trace gravel-sized brick and concrete debris. - @ 1.8' - 2.3' Concrete; light gray. - @ 5.1' Flat debris resembling shingles or a - @ 5.4' - 6.3' Mostly broken concrete debris No odor, No visible impact.	prown; mostly m-stiff; moist; e glass shards; sphalt.		6.3				
10-		ML CL	SILT; Dark gravish brown; nonplastic with some m and gravel-sized grains (mostly slag & coal); trace rootlets; woody debris. - @ 9' - 9.3' Concrete block. Faint odor, No visible impact. CLAY, lean; Gray; trace micaceous grains with brown mo plasticity; medium-stiff; moist; trace fine same rootlets. No odor. No visible impact	edium-coarse soft; wet; 						
TM LAB.GDT 5/15/19 - 51		SP	SAND; White-gray-black: micaceous grains: fine-me	dium poorly		10.4				
A4 AS			graded; medium dense; moist.		ļ					
/2.GPJ GINT STD ,		SP	SAND; White-gray-black; trace micaceous grains; fir little fine to coarse gravel (round); few silt; m moist. No odor, No visible impact.	/ ne-coarse with edium dense; /					-@ 16.5 sample	': Geotechnical collected
BRAMLETTE NAPL			Dark purplish gray with lighter gray banding, brown/brown banding additionaly below 18.4' brittle, micaceous, and sandy structure; som pieces near transition to saprolite (1" - 3"). No odor, No visible impact. End of Boring @ 19' below ground surface	then olive ; cohesive, e larger rock						
SynTerra									CLIENT: Duke Ene	rgy Carolinas, LLC.
148 River Street, Suite 220 Greenville South Carolina 29601									PROJECT LOCATI	ON: Greenville, SC
Greenville, South Carolina 29601 Phone: 864-421-9999										PAGE 1 OF 2

PROJECT: Former Bramlette Road MGP Site WELL / BORING NO: T15-S						B3				
PROJ	ECT NO	102	26.800	STARTED: 3/19/19					COMPLETED:	3/19/19
DRILL	ING CO	MPAN	Y: Cascade Drilling	NORTHIN	G:	1	103800	.163	EASTING:	1574314.031
DRILL	ING ME	THOD	Rotary Sonic	G.S. ELEV	:	9	34.15 ft	MSL	M.P. ELEV:	934.15 ft MSL
BORE	HOLE D	IAMET	ER: 6 IN	DEPTH TO	WA	TER: N	/A ft TC	C	TOTAL DEPTH: 19.0 ft BGS	
NOTE	S:			LOGGED	BY:	J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Brey
DEPTH (ft)	3RAPHIC LOG	nscs	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL MPACTS	(mdd)	CON	WELL STRUCTION
			Backfilled with bentonite chips to ground sur	face.						
_										
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25-										
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5 35										
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					1	1		II	CLIENT: Duke Ener	gy Carolinas, LLC.
	2	Sy 14	River Street, Suite 220						PROJECT LOCATIO	N: Greenville, SC
syn	lerr	a _{Pl}	reenville, South Carolina 29601 none: 864-421-9999							PAGE 2 OF 2

PROJECT:	Fo	rmer Bramlette Road MGP Site	WELL / BORING NO: T17-SB1						
PROJECT NO	: 102	26.800	STARTED	STARTED: 3/29/19				COMPLETED:	3/29/19
DRILLING CO	MPAN	Y: Cascade Drilling	NORTHIN	G:	1	104351	.438	EASTING:	1573980.625
DRILLING ME	THOD	Rotary Sonic	G.S. ELEV	/ :	9	30.92 f	MSL	M.P. ELEV:	930.92 ft MSL
BOREHOLE D	IAME	TER: 6 IN	DEPTH TO	D WA	TER: N	I/A ft TC	C	TOTAL DEPTH:	19.0 ft BGS
NOTES: Han	d Auge	er 0-4.5'	LOGGED	BY:	J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Brey
DEPTH (ft) GRAPHIC LOG	nscs	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL	(mqq)	CON	WELL ISTRUCTION
		FILL; Hand auger to 4.5'. Fill (see below). Refusal @ 4.5' due to large debris.			0.0				
5-	 CL	FILL; @ 4.5' - 6.8' Large boulder partially pulverize tannish-gray covered with silt; wet. @ 6.8' - 7.5' Lean clay with some silt and sat plasticity; soft; moist. No odor, No visual impact. CLAY, lean; Brown/grayish-brown to gray with olive brown below 8.7'; medium plasticity; medium then s	d; light nd; brown; low		5.2	-			
10-	CL	Faint hydrocarbon odor, Trace gravel size co CLAY, lean; Gray; trace micaceous grains with olive-brow medium plasticity; stiff; moist; trace fine sand rootlets. No odor, No visual impact.	n mottling; d, silt, and						
	SP	SAND; Trace micaceous grains; white-gray-black; fin poorly graded; medium dense; moist; trace s rootlets; some clayey seams (3-5" thick). No odor, No visual impact.	ne-coarse; lit and		10.2				
15-	sw	SAND; Trace micaceous; white-gray-black; fine-coal small gravel; well graded; medium dense; an No odor, No visual impact.	rse with trace d moist.					-@ 15.5' sample (VOC/SVOC collected
		SAPROLITE; Grades from light tannish-gray to white-gray lighter gray banding; cohesive/brittle; sandy s mostly pulverized from drilling; moist; micace with color change below 18.3'. No odor, No visual impact.	to gray with structure; eous structure						
		End of Boring @ 19' below ground surface. Backfilled with bentonite chips to ground surf	face.						
		mTorra						CLIENT: Duke Ener	gy Carolinas, LLC.
148 River Street, Suite 220								PROJECT LOCATIO	ON: Greenville, SC
synTerr	a ^G	reenville, South Carolina 29601 hone: 864-421-9999							PAGE 1 OF 1

LOG D - VI DEC BRAMLETTE NAPL V2.GPJ GINT STD A4 ASTM LAB.GDT 5/15/19

PROJE	PROJECT: Former Bramlette Road MGP Site				WELL / BORING NO: T17-SB2				
PROJE	CT NO:	: 102	26.800	STARTED:		3/	29/19		COMPLETED: 3/29/19
DRILLI	NG CO	MPAN	Y: Cascade Drilling	NORTHIN	G:	1	104274	.307	EASTING: 1573995.887
DRILLI	NG ME	THOD	Rotary Sonic	G.S. ELEV	/ :	9	30.40 fi	MSL	M.P. ELEV: 930.40 ft MSL
BOREH	IOLE D	IAMET	TER: 6 IN	DEPTH TO) WA	TER: N	I/A ft TC	C	TOTAL DEPTH: 19.0 ft BGS
NOTES	: Han	d Auge	er 0-4.5'	LOGGED	BY:	J. Conz	elmann	/T. King	CHECKED BY: M. Mastbaum/A. Bre
DEPTH (ft)	GRAPHIC LOG	nscs	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL	PID (mdd)	WELL CONSTRUCTION
			Hand auger to 4.5' Sandy silt with sporadic rock/boulder-like deb Refusal @ 4.5'. No odor, No visual impact.	rris.		0.0			
5	FILL; Mostly sandy silt with some clay, gray with brown, med dense, moist, fine to coarse sand, micaceous, well gra some gravel and boulder debris; No odor, No visual impact.			rown, medium s, well graded,		1.6			
10-		CL	CLAY, lean; Trace micaceous grains, brownish-gray, low moist, few sand (fine-coarse, well-graded), so rootlets; No odor, No visual impact.	plasticity, soft, ome silt, trace					
0T 5/15/19 		sw	SAND; Gray, trace micaceous grains, white-gray-bla to coarse, well graded, trace clayey seams (1 silt @ 13.5' - 14.4', medium dense, moist; No odor, No visual impact.	ck color, fine -3" thick), few		10.0			
4 ASTM LAB.GI	YQI	sw	SAND; Same as above with >50% coarse grains, no contains trace fine to coarse gravel; <u>No odor, No visual impact.</u>	clay or silt,		-			-@ 15.5': VOC/SVOC sample collected
IE NAPL V2.GPJ GINT STD /			SAPROLITE; Dark purplish-gray with some lighter gray mix cohesive/brittle micaceous and sandy structu moist, mostly pulverized below 17.3'; No odor, No visual impact.	æd in, re, slightly					
	r	 -	End of Boring @ 19' below ground surface Backfilled with bentonite chips to ground surf	— — — — — — — ² ace.					
BEC		~						I	CLIENT: Duke Energy Carolinas, LLC.
148 River Street, Suite 220									PROJECT LOCATION: Greenville, SC
ู ปร ุ งกไ	err	aG	reenville, South Carolina 29601	ſ					
		"							FAGE I UF I

PROJEC	mer Bramlette Road MGP Site	WELL / BORING NO: T17-SB3								
PROJEC	CT NO:	10	26.800	STARTED		3/	29/19		COMPLETED:	3/29/19
DRILLIN	IG CON	ЛРАN	Y: Cascade Drilling	NORTHIN	G:	1	104181	.882	EASTING:	1574008.175
DRILLIN	IG MET	THOD	Rotary Sonic	G.S. ELEV	' :	9	29.48 f	t MSL	M.P. ELEV:	929.48 ft MSL
BOREH	OLE DI	AME	TER: 6 IN	DEPTH TO) WA	TER: N	I/A ft TC	C	TOTAL DEPTH:	19.0 ft BGS
NOTES:	Hand	d Auge	er 0-	LOGGED	BY:	J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Brey
DEPTH (ft)	GRAPHIC LOG	NSCS	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL	(mqq)	CON	WELL ISTRUCTION
			FILL; Hand auger to 5'. Sandy silt with some clay. Sporadic rock/gravel debris. No odor, No visual impact.			0.0				
			FILL; Various shades of brown, redish-brown, gray sandy silt with some clay; sporadic gravel, co asphalt-like debris, medium dense, moist. No odor, No visual impact.	/, mostly oncrete, and		5.0				
		CL	CLAY, lean; Gray, trace micaceous grains with orange-br medium plasticity, stiff, moist, trace fine sand rootlets. No odor, No visual impact.	own mottling, d, silt and	-	5.3				
		5P	Gray, trace micaceous grains, white-gray-bla poorly graded, trace silt, medium dense, moi No odor, No visual impact.	st.			-			
		SW	SAND; Trace micaceous grains, white-gray-black co coarse, well graded, medium dense, moist, ti between 11.7' - 13.1', trace clayey seams (~ coarse grains grade into gravel below 14.8'; No odor, No visual impact.	lor, fine to race silt 1" thick);		9.8				
	JAN									
LE NAPL V2.6PJ GINT STD A4.			SAPROLITE; Dark purplish gray with lighter gray mixed in, cohesive/brittle micaceous and sandy structu moist. No odor, No visual impact.	ıre, slightly						
BRAMLETT	<u>4 A Chi-li S</u>		End of Boring @ 19' below ground surface Backfilled with bentonite chips to ground surf	— — — — — — — face.						
DEC		¢.	un Terra					· 1	CLIENT: Duke Ener	gy Carolinas, LLC.
		14	18 River Street, Suite 220						PROJECT LOCATIO	ON: Greenville, SC
synl	Greenville, South Carolina 29601 Phone: 864-421-9999 PAGE 1 OF 1									

PROJECT: F	Former Bramlette Road MGP Site	WELL / BORING NO: T1-SB1						
PROJECT NO: 1	1026.800	STARTED:		3/	21/19		COMPLETED:	3/21/19
DRILLING COMPA	ANY: Cascade Drilling	NORTHIN	G:	1	104740	.513	EASTING:	1574296.71
DRILLING METHO	DD: Rotary Sonic	G.S. ELEV	:	9	31.97 fi	MSL	M.P. ELEV:	931.97 ft MSL
BOREHOLE DIAM	ETER: 6 IN	DEPTH TC	WAT	FER: N	/A ft TC	C	TOTAL DEPTH:	19.0 ft BGS
NOTES: Hand Au	uger 0-4'	LOGGED I	BY: 、	J. Conz	elmann	/T. King	CHECKED BY: M	. Mastbaum/A. Brey
⊥ ≌ "			щ	>	1S TS			WELL
(ff) (ff) (ff) LOG USCS	DESCRIPTION		SAMPL	RECO (FT)	VISUA IMPAC ⁻	(mqq) DIA	CO	NSTRUCTION
	FILL; Brown and reddish brown; sandy silt with spo gravel, and concrete debris; Hand auger refusal ~4' No odor, No visible impact.	oradic brick,						
5-	 FILL; Brown to dark brown; mostly sandy silt with b debris; @ 4.7'-5.0' plastic and metal pieces. @ 5.3'-5.7' layer of solid wood. @ 5.7'-6.2' mostly wood debris with trace bla discoloration and faint odor (organic). 	orick and wood ck		5.0				
CLAY, lean; Brown from 6.2'-6.4', dark gray from 6.4'-8.0'; gray with orangish brown mottling from 8.0'-9.0'; grades from low medium plasticity; grades from little to trace silt; soft; moist; medium below 8.0'; trace fine micaceous sand; trace rootlets. No odor, No visible impact.				5.3				
10- - CL	CLAY, lean; Gray with a trace of orangish brown mottling trace micaceous; grades from medium plastic plasticity sandy clay to clayey sand to sand w Sand fine to medium grain, poorly graded; sti to medium/medium dense; moist. No odor, No visible impact.	above 10.4', city to low ith trace clay; ff then grades						
VB GDT 5/15/19	SAND; Tan, white-gray-black color; trace micaceous to medium grain, well-graded; medium dense @ 13.8'-14.0' gray. @ 14.0'-14.2' orangish brown discoloration. @ 14.4'-14.7' dark orangish brown/reddish b	grains; fine ; moist.		10.8				
E STREET SV								
ETTE NAPL V2.GPU GINT STD A4 AS1	Tan, white-gray-black color with slight orangi discoloration throughout; trace micaceous; fil grain including fine gravel, well-graded; medii moist. No odor, No visible impact. SAPROLITE; Dark purplish gray with lighter gray banding; cohesive/brittle; micaceous and sandy structu pulverized below 18.0'; slightly moist. @ 16.2'-17.0' orange/reddish brown discolora No odor, No visible impact. End of Boring @ 19' below ground surface	sh ne to coarse um dense; ure; partially ation.					- 16.5' VC collecte area wit discolor - 17' VOC collecte change	DC/SVOC sample d (sampled from h orange ation) C/SVOC sample d (distinct color)
RAMI	Backfilled with bentonite chips to ground surf	ace						
	SynTerra 148 River Street, Suite 220 Greenville, South Carolina 29601 Phone: 864-421-9999						CLIENT: Duke Ener	rgy Carolinas, LLC. ON: Greenville, SC PAGE 1_OF_1

PROJECT:	WELL / BO	ORINO	g NO:	-	T1-SE	32			
PROJECT NO:	102	6.800	STARTED	:	3/	21/19		COMPLETED:	3/21/19
DRILLING COM	PANY	2: Cascade Drilling	NORTHIN	G:	1	104723	8.946	EASTING:	1574305.009
DRILLING MET	HOD:	Rotary Sonic	G.S. ELE\	/:	9	32.02 f	t MSL	M.P. ELEV:	932.02 ft MSL
BOREHOLE DIA	AMETI	ER: 6 IN	DEPTH TO	D WA	TER: N	I/A ft TC	C	TOTAL DEPTH:	39.0 ft BGS
NOTES: Hand	Auge	- 0-4'	LOGGED	BY:	J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Bre
DEPTH (ft) GRAPHIC LOG	nscs	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL IMPACTS	(mqq) DIG	CON	WELL
		FILL; Hand auger refusal @ ~4'; Mostly sandy silt v brick, concrete, gravel and wood debris. No odor, No visible impact.	with sporadic		4.0				
5-		FILL; Brown to dark brown; brick, concrete, gravel, debris in sandy silt matrix (gravel size debris) dense; wet; trace black discoloration on wood @ 5.5' faint odor (organic).	and wood medium I debris.						
	CL	CLAY, lean; Grades from brown to gray with olive brown r 8.3'; trace micaceous grains; medium plastici grades to medium dense; moist; few silts, tra sand and rootlets. No odor, No visible impact.	nottling below ty; soft then ce fine grain		5.3				
10-	CL	CLAY, lean; Gray with sporadic orange brown mottling; tra micaceous grains; low to medium plasticity; s some fine to medium poorly-graded sand, tra rootlets; No odor, No visible impact.	ace tiff; moist; ce silt and						
	sw	 SAND; Trace micaceous grains and white-gray-black medium, well-graded; dense; moist. @ 12.0'-12.2' dark orange brown discoloratio @ 12.2'-13.0' gray. @ 13.0'-15.8' various shades of orange and I gray. @ 13.5'-15.8' with trace to some coarse s fine to coarse gravel; No odor, No visible impact. 	c color; fine to n. orownish and and trace		11.0			-VOC/SV	OC sample
		SAPROLITE; Cohesive/brittle; micaceous and sandy struct moist; mostly pulverized below 17.3'. @ 15.8'-16.2' orange/orangish brown with gra purplish banding. @ 16.2'-19.0' dark purplish gray with lighter of trace light pink specks. No odor, No visible impact.	ure; slighly ay and dark gray banding;			_		collected - VOC/SV collected	l OC sample I
		_		1	1		1	CLIENT: Duke Ener	gy Carolinas, LLC
•	Syı 14	nTerra 3 River Street, Suite 220						PROJECT LOCATIO	DN: Greenville, SC
SynTerra	Gr	eenville, South Carolina 29601							
	Ph	one: 864-421-9999							PAGE 1 OF 2

PROJECT:	For	rmer Bramlette Road MGP Site	WELL / B	ORIN	g NO:	-	Г1-SB	2	
PROJECT NO:	102	26.800	STARTED		3/	21/19		COMPLETED:	3/21/19
DRILLING COM	/IPAN	Y: Cascade Drilling	NORTHIN	G:	1	104723	.946	EASTING:	1574305.009
DRILLING MET	HOD:	Rotary Sonic	G.S. ELE\	/:	9	32.02 f	MSL	M.P. ELEV:	932.02 ft MSL
BOREHOLE DI	AMET	rer: 6 IN	DEPTH TO	D WA	TER: N	I/A ft TC	C	TOTAL DEPTH:	39.0 ft BGS
NOTES: Hand	l Auge	er 0-4'	LOGGED	BY:	J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Brey
DEPTH (ft) GRAPHIC LOG	nscs	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL	(mqq) DIA	CON	WELL ISTRUCTION
$\sum_{i=1}^{n} \sum_{j=1}^{n} \sum_{i=1}^{n} \sum_{i=1}^{n} \sum_{i=1}^{n} \sum_{j=1}^{n} \sum_{i=1}^{n} \sum_{i=1}^{n} \sum_{i=1}^{n} \sum_{i=1}^{n} \sum_{i$	SAPROLITE, Same as above; Gray with darker, lighter, and purplish gray banding, greenish grays and light pink specks; mostly pulveriz @ 20.0'-21.0' lighter gray color. No odor, No visible impact. (continued)								
25-		Partially weathered bedrock; Easily broken with hands with harder zone fr 26.0'-27.3', similar coloration to above saprol No odor, no visible impact.	om ite.		3.0				
30-		Partially weathered bedrock (gneiss structure above; Easily broken with hands; harder from 29.0'-/ No odor, No visible impact.	e), Same as 29.5'.		2.2				
35-		Partially weathered bedrock (gneiss structure above; Highly fractured; moderately weathered; Pool (~30%), easily broken with hands; No odor, No visible impact.	e), Same as r RQD		3.0				
		End of Boring @ 39' below ground surface Backfilled with bentonite chips to ground surf	ace						
		·····							
	S۱	ynTerra						CLIENT: Duke Ener	gy Carolinas, LLC.
	14 C	48 River Street, Suite 220 reenville, South Carolina 29601						PROJECT LOCATIO	JN: Greenville, SC
synierra	Ynlerra Greenville, South Carolina 29601 Phone: 864-421-9999 PAGE 2 OF 2								

OF L FIL

PROJECT: Former Bramlette Ro	WELL / BC	RING N	NO:	٦	1-SE	33		
PROJECT NO: 1026.800		STARTED:	TARTED: 3/21/19				COMPLETED:	3/21/19
DRILLING COMPANY: Cascade	Drilling	NORTHING	G:	11	04711	.051	EASTING:	1574314.174
DRILLING METHOD: Rotary So	nic	G.S. ELEV	:	93	1.47 ft	MSL	M.P. ELEV:	931.47 ft MSL
BOREHOLE DIAMETER: 6 IN		DEPTH TC	WATE	R: N//	A ft TC	C	TOTAL DEPTH:	19.0 ft BGS
NOTES: Hand Auger 0-4'		LOGGED E	3Y: J.(Conze	lmann	T. King	CHECKED BY: M.	Mastbaum/A. Brey
DEPTH (ft) (ft) GRAPHIC LOG USCS	DESCRIPTION		SAMPLE	(FT)	VISUAL IMPACTS	(mqq) CIId	CON	WELL STRUCTION
FILL; Brown and re concrete, grav Hand auger re No odor, No v	ddish brown sandy silt with spor vel and wood debris. efusal at ~4'. isible impact.	radic brick,						
5- - ML FILL; Brown, reddis brick, gravel, v well-graded; r No odor, No v	sporadic n sand,	-	7.4					
CLAY, lean; Brown from 7 CL medium plast medium sand debris.	.5' to 8.6' then gray; trace mica icity; soft to medium; few silts; I ; trace rootlets and decaying roo	ceous grains, ittle fine to ots/wood						
10 CL CL CL CL CL CL CL CL CL CL	isible impact icaceous; medium plasticity dec medium; moist; trace to little fin isible impact.	/ creasing with le sand, trace						
61 61 61 61 61 61 61 61 61 61	ous grains; white-gray-black col ; well-graded with trace coarse m dense; moist. 1' clayey. 9' faint olive brown/orange disco ', and 12': 0.25" to 0.5" seams of ight sheen and hydrocarbon od 5' faint tan discoloration.	lor; fine to and fine oloration. of black NAPL or.	1	11.1		0.5		
SAND; SAND; Same colorati to 15.3'; fine t gravel; mediu @15.3' - 15.4 No odor, No v	on as above with tan/orangish o o coarse grain, well-graded with m dense; moist. ' fine clayey seam. isible impact.	discoloration						
SAPROLITE; Dark purplish cohesive/brittl pulverized by @ 15.8' - 16.5 No odor, No v	gray with lighter banding; slight e; micaceous and sandy structu drilling. 5' orange/reddish brown discolo isible impact	tly moist; ure; mostly ration						
End of Boring Backfilled with	 @ 19' below ground surface bentonite chips to ground surf 	ace						
			I				CLIENT: Duke Energy	gy Carolinas, LLC.
148 River Street, Suite 220							PROJECT LOCATIO	DN: Greenville, SC
SynTerra Greenville, South Ca Phone: 864-421-999							PAGE 1 OF 1	

PROJECT No. 1028.800 STATED. 322/19 COMPLETE: 322/19 DRILING COMPANY: Casade Drilling NORTHING: 1104445722 EASTING: 157/180.008 DRILING WITHOD: Retary Sonie G.S. ELEV: 90/121 MSI. BATTON: 107/180.008 BOREHOLD: DAMATTER: NARTED. 1004445722 EASTING: 157/180.008 DOTES: Hand Ager 0-2.8* LOGGED DY: JCOMETER: NARTED. 20/16 Comparison DEG BoreHold: DESCRIPTION BU CONSTRUCTION CONSTRUCTION USG E BoreHold: DESCRIPTION BU CONSTRUCTION CONSTRUCTION USG E BoreHold: DESCRIPTION BU CONSTRUCTION CONSTRUCTION USG E BoreHold: DESCRIPTION BU CONSTRUCTION CONSTRUCTION CLAY (star): FILL: Stard, all with layers of brick and brick/gravel Construction Construction Grave the provide brick down: Stard (stard): Stard (stard): Construction Construction Grave the provide brick down: Stard (stard): Stard (stard): Total Def Hold: Construction Grave the provide brick down: Stard (stard): Stard (stard): Total Def Hold: Construction	PROJECT:	ner Bramlette Road MGP Site	ORINO	G NO:	-	r2-se	81			
DRILLING COMPANY: Celescide Drilling NORTHING: 1104045.72 EASTING: 157456.68 BORENUNG EDIAMETER: 0 M DEPTH TO WATER: NA IT NCL MP ELEX: 950.121 MSL BOREHOLE DIAMETER: 0 M DEPTH TO WATER: NA IT NCL MP ELEX: 950.121 MSL BOREHOLE DIAMETER: 0 M DEPTH TO WATER: NA IT NCL MM BRBAUMA BI NOTES: Hand Auge 0-2.8 LOGGED EY: J. Conzentment T. King CHECKED BY: MM BRBBAUMA BI Log E BOR B DESCRIPTION B B DESCRIPTION DESCRIPTION B DESCRIPTION B DESCRIPTION DESC	PROJECT NO:	102	6.800	STARTED:		3/	22/19		COMPLETED:	3/22/19
DRILLING METHOD: Refers Sonie G.S. ELEV: 930.121 MSX M.P. ELEV: 930.121 MSX DROTEX: Hand Auger 0-2.8" LOGGED BY: J. Concentration T. King CHECKED BY: M. Mastissan/A. B NOTES: Hand Auger 0-2.8" LOGGED BY: J. Concentration T. King CHECKED BY: M. Mastissan/A. B Mastissan/A. B DESCRIPTION WELL BV CONSTRUCTION Image: Social Constraints Big Social Constraints Big Social Constraints Big Social Constraints Image: Social Constraints DESCRIPTION Big Social Constraints Big Social Constraints Big Social Constraints Image: Social Constraints DESCRIPTION Big Social Constraints Big Social Constraints Big Social Constraints Image: Social Constraints DESCRIPTION Big Social Constraints Big Social Constraints Big Social Constraints Image: Social Constraints DESCRIPTION Big Social Constraints Big Social Constraints Big Social Constraints Image: Social Constraints DESCRIPTION Big Social Constraints Big Social Constraints Big Social Constraints Image: Social Constraints Big Social Constraints Big Social Constraints Big Social Constraints Big Social Constraints Image: Social Constraints Big Social Constraints Big Social Constran	DRILLING COM	1PANY	Cascade Drilling	NORTHIN	G:	1	104645	.792	EASTING:	1574166.698
BOREHOLE DUMETER: 61N DEPTH TO WATER: NA A TOC TOTAL DEPTH: TOTAL DEPTH: TOTAL DEPTH: CHECKED BY: M Methatum/K Bit CHECKED BY: COUNTER: High ope 0.28 UCOGED BY: J. COUNTER: CHECKED BY: M Methatum/K Bit Edge Edge Bit DESCRIPTION Bit Structure COUNTER:	DRILLING MET	HOD:	Rotary Sonic	G.S. ELEV	:	9	30.12 f	MSL	M.P. ELEV:	930.12 ft MSL
NOTE: Hand Auger 0.2.8 LOGGED BY: J. Concetment/T. Ring CHECKED BY: M. Mastbaum, A. B. E CONSTRUCTION E E CONSTRUCTION E E CONSTRUCTION E E CONSTRUCTION E E CONSTRUCTION E E E E E E E CONSTRUCTION E E E CONSTRUCTION E E E E E E E E E E E E E E </td <td>BOREHOLE DIA</td> <td>AMETE</td> <td>ER: 6 IN</td> <td>DEPTH TO</td> <td>) WA</td> <td>TER: N</td> <td>I/A ft TC</td> <td>C</td> <td>TOTAL DEPTH:</td> <td>19.0 ft BGS</td>	BOREHOLE DIA	AMETE	ER: 6 IN	DEPTH TO) WA	TER: N	I/A ft TC	C	TOTAL DEPTH:	19.0 ft BGS
Edge Box Box DESCRIPTION Box Box CONSTRUCTION Image: State of the state	NOTES: Hand	Auger	r 0-2.8'	LOGGED	BY:	J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Br
FILL: Brown sandy all with layers of brick and brick/gravel debris. No dot, No visible impact. Image: Control of the sand brick/gravel debris.	DEPTH (ft) GRAPHIC LOG	nscs	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL IMPACT	(mqq) DIG	CON	WELL ISTRUCTION
5- CLAY, lean: Gray, trace micacous grains; varies from soft to medium and silt blow 8.5; mouth plasticity that increases slightly with depth; motil; trace fine sand, silt cotlets; trace olive brown motiling. 7.6 0. CLAY, lean; Gray, trace micacous grains; varies from soft to medium and silt blow 8.5; mouth plasticity that increases slightly with depth; motil; @ above 7.0 increasing silt content. 7.6 10- CLAY, lean, Same as above; @ 9.0.9.7 wet; soft, silty with trace fine gravel and large fitnous phase. No odor, No visible impact. 7.6 10- CLAY, lean, Same as above; @ 9.0.9.7 wet; soft, silty with trace fine gravel and large fitnous phase. No odor, No visible impact. 10.3 10- CLAY, lean, Same as above; @ 10.1 f grave grav and tannish gray with orange hue, while-gray-black color; trace micacous grains. @ 11.3 large brick fragment (-3' by 3') No odor, No visible impact. 10.3 15- SAMD; Waricus shades of gray and tannish gray with orange hue, while-gray-black color; trace micacous grains. @ 11.3.13 of segment dickotration. @ 11.3.13 of segment dickotration. @ 11.3.13 of segment dickotration. @ 11.3.13 of segment dickotration. No odor, No visible impact. 10.3 16- SAPROLITE: Gray with darker and lighter gray banding; slightly moist; co rise (16.7 or micacous and and ys) structure. @ 16.16 of micacous and and ys structure. @ 16.16 of micacous and and ys structure. @ 16.16 of micacous and and ys structure. @ 16.16 of m			FILL; Brown sandy silt with layers of brick and brick debris. No odor, No visible impact. FILL;	<pre> digravel</pre>						
5 CLAY, lean: Gray, trace micaceous grains; varies from soft to medium and silt below 35; medium plasticity that increases slightly with depti; most; trace investing silt content. @ 15*-8.0' few coarse sand/file gravel. @ 10*-9.7' wet; soft, silty with trace fine gravel and large fibrous pieces: Wo door, No visible impact. 7.6 10- CLAY, lean, Same as above; @ 0.0*-9.7' wet; soft, silty with trave fine gravel and large fibrous pieces: @ 10.1' grave issize brick debtis 7.6 10- CLAY, lean, Same as above; @ 0.0*-9.7' wet; soft, silty with trave fine gravel and large fibrous pieces 1 10- CLAY, lean, Same as above; @ 0.0*-9.7' wet; soft, silty with trave fine gravel and large fibrous pieces 1 10- CLAY, lean, Same as above; @ 0.0*-9.7' wet; soft, silty with trave fine gravel and large fibrous pieces 1 10- Somo: Somo: 1 10-			brick debris @ 3.5'-4.0'; Fain hydrocarbon odor; light sheen.							
10 CLAY, lean, Same as above; @ 9.0*9.7' wet; soft; sifty with trave fine gravel and large fibrous pieces 0 0.1 of gravel size brick debris @ 10.1' gravel size brick debris 0 10 fibrous pieces @ 11.8' large brick fragment (~3" by 3") No odor, No visible impact No odor, No visible impact 10 Various shades of gray and tannish gray with orange hue, white-gray-black color; trace micaceous grains; fine to coarse grain with trace fine to coarse rounded gravel, well-graded, medium dense, moist. 10.3 15 SAPROLITE: Gray with drafter and lighter gray banding; slightly moist; cohesive/brittle; micaceous and sandy structure. 10.3 16 SAPROLITE: Gray with darker and lighter gray banding; slightly moist; cohesive/brittle; micaceous and sandy structure. 10.3 15 SAPROLITE: Gray with darker and lighter gray banding; slightly moist; cohesive/brittle; micaceous and sandy structure. 10.3 16 End of Boring @ 19' below ground surface Image: Culture for gray commitsed surface 17 End of Boring @ 19' below ground surface Image: Culture for gray commitsed surface 18 End of Boring @ 19' below ground surface Image: Culture for gray commitsed surface 18 End of Boring @ 19' below ground surface Image: Culture for gray commitsed surface	5- CLAY, lean; Gray, trace micaceous grains; varies from soft to medium and silt below 8.5'; medium plasticity that increases sligh with depth; moist; trace fine sand, silt, rootlets; trace oliv brown mottling. @ above 7.0' increasing silt content. @ 7.9'-8.0' few coarse sand/fine gravel. @ 9.0' wet; soft; silty with trace fine gravel and large fibrous pieces. No odor, No visible impact.					7.6				
SAND; SAND; Various shades of gray and tannish gray with orange hue, white-gray-black color; trace micaceous grains; fine to coarse grain with trace fine to coarse rounded gravel, well-gradet; medium dense; moist. 10.3 SW SW SW SW gentalized; medium dense; moist. 10.3 15 Gray with darker and lighter gray. No odor, No visible impact. 10.3 15 SAPROLITE; Gray with darker and lighter gray banding; slightly moist; cohesive/brittle; micaceous and sandy structure. 10.3 16 End of Boring @ 19' below ground surface Backfilled with bentonite chips to ground surface CLIENT: Duke Energy Carolinas, LL PROJECT LICCATION; Greenville	10-	CL	CLAY, lean, Same as above; @ 9.0'-9.7' wet; soft; silty with trave fine grav fibrous pieces @ 10.1' gravel size brick debris @ 10.6'-11.8' sandy clay with fine to coarse v sand @ 11.8' large brick fragment (~3" by 3") No odor, No visible impact	el and large well-graded						
SAPROLITE; Gray with darker and lighter gray banding; slightly moist; Gray with darker and lighter gray banding; slightly moist; Gray with darker and lighter gray banding; slightly moist; Gray with darker and lighter gray banding; slightly moist; Gray with darker and lighter gray banding; slightly moist; Gray with darker and lighter gray banding; slightly moist; Gray with darker and lighter gray banding; slightly moist; Gray with darker and lighter gray banding; slightly moist; Gray with darker and lighter gray banding; slightly moist; Gray with darker and lighter gray banding; slightly moist; Gray with darker and lighter gray banding; slightly moist; Gray with darker and lighter gray banding; slightly moist; Gray with darker and lighter gray banding; slightly moist; Gray with darker and lighter gray banding; slightly moist; Gray with darker and lighter gray banding; slightly moist; Gray with darker and lighter gray banding; slightly moist; Gray with darker and lighter gray banding; slightly moist; Model End of Boring @ 19' below ground surface End of Boring @ 19' below ground surface CLIENT: Duke Energy Carolinas, LL SynTerra SynTerra CLIENT: Octat Octat Dots Greenville State		SW	SAND; Various shades of gray and tannish gray with white-gray-black color; trace micaceous grain coarse grain with trace fine to coarse rounder well-graded; medium dense; moist. @ 13.0'-13.1' orange/reddish brown discolora @ 13.3'-13.6' seam with less coarse grains. @ 14.3'-15.0' lighter gray. No odor, No visible impact.	orange hue, is; fine to d gravel, ation.		10.3				
End of Boring @ 19' below ground surface Backfilled with bentonite chips to ground surface CLIENT: Duke Energy Carolinas, LL SynTerra CLIENT: Duke Energy Carolinas, LL PROJECT L OCATION: Greenville S	SAPROLITE; Gray with darker and lighter gray banding; slightly moist; cohesive/brittle; micaceous and sandy structure. @ 15.0'-15.3' orange/reddish brown/tan discoloration. No odor, No visible impact.									
SynTerra MARCHICK LOCATION: Greenville, S PROJECT LOCATION: Greenville, S			End of Boring @ 19' below ground surface Backfilled with bentonite chips to ground surf	ace						
SynTerra CLIENT: Duke Energy Carolinas, LL PROJECT L OCATION: Greenville, S										
PROJECT LOCATION: Greenville S	6	Svi	nTerra						CLIENT: Duke Ener	gy Carolinas, LL
148 River Street, Suite 220		148	8 River Street, Suite 220						PROJECT LOCATIO	ON: Greenville, S
Phone: 864-421-9999 PAGE 1 OF										

PRO	IECT:	For	mer Bramlette Road MGP Site	WELL / BORING NO: T2-SB2						
PRO.	IECT NO:	102	26.800	STARTED		3/	22/19		COMPLETED:	3/22/19
DRILI	LING COI	MPAN	Y: Cascade Drilling	NORTHIN	G:	1	104658	.439	EASTING:	1574189.008
DRILI	LING ME	THOD:	Rotary Sonic	G.S. ELEV	/ :	9	31.03 f	MSL	M.P. ELEV:	931.03 ft MSL
BORE	EHOLE D	IAMET	ER: 6 IN	DEPTH TO) WA	TER: N	I/A ft TC	C	TOTAL DEPTH:	19.0 ft BGS
NOTE	ES: Han	d Auge	r 0-3.5'	LOGGED	BY:	J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Brey
DEPTH (ft)	GRAPHIC LOG	nscs	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL	(mdd)	CON	WELL ISTRUCTION
5-			 FILL; Brown sandy silt; from 0.5' to 3.5' mostly bric including pieces up to 4"; Hand auger refusal at ~3.5'. No odor, No visible impact. FILL; Brown sandy silt; fine to coarse grain sand in and gravel size brick debris; trace rootlets; m wet. © 5.0'-5.5' dark gray primarily wood debris, f hydrocarbon odor. @ 5.7'-6.0' faint hydrocarbon odor, light shee @ 6.0'-6.3' layered wood debris; dark gray. 	k debris cluding gravel edium dense; aint m.		1.9				
10-		CL	CLAY, lean; Gray; trace micaceous grains with olive brow above 10.1'; medium plasticity; stiff; moist; tr silt, rootlets. @ 9.0'-9.25' light sheen; faint hydrocarbon o @ 11.2'-12.2' sandy clay then grades to clay fine to medium poorly-graded.	n mottling ace fine sand, dor. rey sand; sand						
SRAMLETTE NAPL V2.GPJ GINT STD A4 ASTM LAB.GDT 5/15/19 GL		SW	 SAND; Tan-gray, white-gray-black color; trace micad medium dense; moist. @12.8'-13.2' fine to medium well-graded. @ 13.2'-15.0' fine to coarse sand with trace fivell-graded. @ 13.5'-16.0' various shades of orange/reddi discoloration. @ 16.7' clayey seam. No odor, No visible impact. SAPROLITE; Dark purplish gray with lighter gray banding; cohesive/brittle; micaceous and sandy structur moist; partially pulverized. @ 16.8'-17.0' orange/reddish brown discoloration discoloration. Dark purplish gray with lighter gray banding; cohesive/brittle; micaceous and sandy structur moist; partially pulverized. @ 16.8'-17.0' orange/reddish brown discoloration discoloration discoloration. Dark odor, No visible impact. End of Boring @ 19' below ground surface Backfilled with bentonite chips to ground surface	eous grains; fine gravel, ish brown ure; slightly ation (distinct		11.3			- Geotech	Sample Collected
D - VI DEC B	5	Sy 14	nTerra 8 River Street, Suite 220 reenville, South Carolina 29601		1	<u> </u>	<u> </u>	<u> </u>	CLIENT: Duke Ener	gy Carolinas, LLC. DN: Greenville, SC
g syr	Phone: 864-421-9999 PAGE 1 OF 1									

PROJ	WELL / BO	ORINO	G NO:	-	Γ2-SB	3				
PROJ	IECT NO:	102	26.800	STARTED:		3/	21/19		COMPLETED:	3/21/19
DRILI	LING COI	MPAN	Y: Cascade Drilling	NORTHIN	G:	1	104671	.162	EASTING:	1574209.143
DRILI	LING ME	THOD	Rotary Sonic	G.S. ELEV	' :	9	31.21 fi	MSL	M.P. ELEV:	931.21 ft MSL
BORE	EHOLE D	IAMET	ER: 6 IN	DEPTH TO) WA	TER: N	I/A ft TC	C	TOTAL DEPTH:	19.0 ft BGS
NOTE	ES: Han	d Auge	er 0-5'	LOGGED	BY:	J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Brey
DEPTH (ft)	GRAPHIC LOG	NSCS	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL IMPACTS	(mqq) DIA	CON	WELL ISTRUCTION
			FILL; Brown sandy silt with sporadic brick, concrete debris. No odor, No visible impact.	e, and wood						
5-		ML	FILL; Brown sandy silt with some gravel, brick and loose; wet. @ 6.4' to 6.6' black fibrous debris; No odor, No visible impact.	wood debris;	-					
	CLAY, lean; Brownish gray; grades to gray and trace olive mottling; low plasticity then grades to medium fine sand and rootlets; little silt then grades to No odor, No visible impact.					5.8		0.0		
10-		CL	CLAY, lean; Gray; trace micaceous grains with trace of ol mottling; medium plasticity; stiff; moist; trace silt, and rootlets. @ 10.9' to 11.4' grades to sandy clay. No odor, no visual impact.	ive brown fine sand,						
T 5/15/19		SP SC	Same as above, grades to clayey sand then t trace of clay at 13.8'. No odor, no visual impact. SAND; White-gray-black; trace micacous; medium d	o sand with a		10.8				
STD A4 ASTM LAB.GD - 51	15 SW (@ 13.8' to 14.4' fine to medium grain, well gravel. (@ 13.8' to 14.4' fine to medium grain, well gravel. (@ 14.4' to 16.4' fine to coarse grain, well gravel. () 14.4' to 16.4' fine to coarse grain, well gravel. () 14.4' to 16.4' fine to coarse grain, well gravel. () 14.4' to 16.4' fine to coarse grain, well gravel. () 14.4' to 16.4' fine to coarse grain, well gravel. () 15.7' with trace small gravel. () 15.7' with trace small gravel.								- VOC/SV collected	/OC sample I @ 15'
ETTE NAPL V2.GPJ GINT			SAPROLITE; Dark purplish gray with ligher gray banding; s cohesive/brittle; micaceous/sandy structure. @ 16.4' - 17' orange and reddish brown disco (distinct color change) No odor, No visible impact.	lightly moist; ploration						
RAML			Backfilled with bentonite chips to ground surface	ace						
	6	Sy	/nTerra						CLIENT: Duke Ener	gy Carolinas, LLC.
148 River Street, Suite 220 Greenville, South Carolina 29601										JN. GIEENVIIIE, SU
^g Syr	Phone: 864-421-9999 PAGE 1 OF 1									

PROJECT: Former Bramlette Road MGP Site					WELL / BORING NO: T3-SB1						
PROJ	JECT NO:	102	26.800	STARTED):	3/	/22/19		COMPLETED:	3/22/19	
DRILI	LING CO	MPAN'	Y: Cascade Drilling	NORTHIN	IG:	1	104634	.152	EASTING:	1574086.229	
DRILI	LING ME	THOD:	Rotary Sonic	G.S. ELE	V:	9	30.98 f	t MSL	M.P. ELEV:	930.98 ft MSL	
BORE	EHOLE D	AMET	ER: 6 IN	DEPTH T	O WA	TER: N	I∕A ft TC	C	TOTAL DEPTH:	19.0 ft BGS	
NOTE	S: Han	d Auge	er 0-2.5'	LOGGED	BY:	J. Conz	zelmann	/T. King	CHECKED BY: M	Mastbaum/A. Brey	
DEPTH (ft)	GRAPHIC LOG	nscs	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL	(mdd)	CON	WELL ISTRUCTION	
			FILL; Sandy silt with sporadic brick and wood debri pieces at 2.5' depth. Hand auger refusal ~2.5'. Probe through wood and soft material to appr ground surface.	is; large wood rox. 5' below			_				
			FILL; Dark brown and gray with trace black seams; with some brick and wood debris; soft; wet. No odor, No visible impact.	; sandy silt							
5-		CL	CLAY, lean; Gray; trace micaceous; low plasticity; soft; m sand and rootlets; little silt. @ 5.1'-5.5' clayey micaceous sand (fine to m @ 5.5'-7.2' predominantly brown. @ 8.5'-9.0' grades to stiff and medium plastic brown mottling. No odor, no visible impact.	oist; trace fine nedium grain). city with olive		7.0					
10-		CL	CLAY, lean, Same as above; Stiff; gray; medium plasticity. No odor, No visible impact.								
		SP	SAND; White-gray-black color; micaceous grains; fir poorly graded sand, medium dense; moist; tra Clayey from 9.3'-11.0' with sporadic clayey so No odor, No visible impact.	ne to medium ace rootlets; eams below.							
M LAB.GDT 5/15/19 - 91		sw	SAND; White-gray-black color, micaceous grains, fir grain, well-graded, including trace fine to coa gravel; trace seams of above clayey sand. @ 15.0'-15.1' slight orangish discoloration. No odor, No visible impact.	ne to coarse rse rounded	_	10.3					
ETTE NAPL V2.GPJ GINT STD A4 AS1			 SAPROLITE; Gray with darker and lighter gray banding, traspecks; cohesive/brittle; micaceous and sand slightly moist. @ 15.1'-17.3' mostly intact. @ 15.1'-15.4' orangish discoloration (distinct from orange). @ 17.3'-19.0' mostly pulverized by drilling an color. No odor, No visible impact. 	ace light pink dy structure; color change d lighter gray			-				
RAM			Backfilled with bentonite chips to ground surf	ace							
ECB						1	1	1	CLIENT: Duke Ener	gy Carolinas. LLC	
	5	Sy 14	/nTerra l8 River Street, Suite 220						PROJECT LOCATIO	ON: Greenville, SC	
ⁱ svr	SynTerra Breenville, South Carolina 29601 Phone: 864-421-9999										
2-7-	PAGE 1 OF 1										

PROJECT NO. 1028.800 STARTED: 325/19 COMMETER: 325/19 DRULING COMPANY: Cascade Drilling NORTHING: BASTING: 157/093.723 DRULING METHOD: Road young N DEPTH TO WATER: NAAT TOC NORTHING: BASTING: 157/093.723 DRULING METHOD: NA DEPTH TO WATER: NAAT TOC TOTAL DEPTH: TOTAL DEPTH	PROJECT: Former Bramlette Road MGP Site WELL					G NO:	-	T3-SB	2	
DRILLING COMPANY: Calcade Diffing NORTHING: 1104611.05 EASTING: 1574033.723 DRILLING METHOD: Retary Sonic G.S. ELEV: 930.29 ft MSL M.P. ELEV: 930.29 ft MSL NOTE: Hand Auger 0-4* LOGGED BY: J. ConstrainmuT. Hang CHECKED BY: M. Mathaum/A. Bre E.G. S. B.S. G.S. ELEV: 930.29 ft MSL G.S. ELEV: 930.29 ft MSL Motion: DESCRIPTION B.S. C.G. STRUCTION G.S. ELEV: 0.0005778.00000 FLL Motion: DESCRIPTION B.S. C.G. STRUCTION G.S. ELEV: 0.0005778.00000 FLL Motion: DESCRIPTION B.S. C.G. STRUCTION G.S. ELEV: 0.0005778.00000 FLL: DESCRIPTION B.S. C.G. STRUCTION G.S. ELEV: 0.0005778.00000 FLL: Description: DESCRIPTION B.S. C.G. STRUCTION G FLL: Description: Description: G.G. STRUCTION G FLL: Description: Description: G.G. STRUCTION G C.A.V. Issn: Description: G.G. Structure: G.G. Structure: G.G. C.A.V. Issn: C.A.V. Issn: Grades from date former date form incling: G.G. Structure: G.G. Structure: G.G. C.A.V. Issn: Grades from date former date form inc	PROJECT NO	D: 102	26.800	STARTED		3/	25/19		COMPLETED:	3/25/19
DRULING METHOD Rolary Sorie G.S. ELEV. 932.28 ft MSL MP ELEV. 932.28 ft MSL DORENCE DATA Augur C-4' LOGGED BY. J. Consentation IT Ming. CHECKED BY. M. MatabaamiA. Bra CHECKED BY. M. MatabaamiA. Bra The set of	DRILLING CO	OMPAN	Y: Cascade Drilling	NORTHIN	G:	1	104611	.05	EASTING:	1574093.723
BORENDLE DAMETER: IS NO DEPTH TO WATER: NA & TOC CHECKED BY, M Multisum/A Bra NOTE: Hand Agen 0-4" LOGGED BY: J CONSTRUCTION CHECKED BY, M Multisum/A Bra Logge By: J Constrained Training CHECKED BY: J Constrained Training CONSTRUCTION Line Bit By and gain 0-4: DESCRIPTION Bit By and gain 0-4: Constrained Training CONSTRUCTION Fill Mediation of the stand or concrete places. Hand agen 0-4: Fill Constrained Training Constrained Training 5 Fill Deriv forwing any with some dark/black seams. Bit Diate Training Bi	DRILLING MI	ETHOD	Rotary Sonic	G.S. ELEV	' :	9	30.29 f	t MSL	M.P. ELEV:	930.29 ft MSL
NOTE: Hand Auger 0-4* LOGGED BY: J Constrainment? Fing CHECKED BY: VIEX Edg. B B	BOREHOLE	DIAMET	TER: 6 IN	DEPTH TO	D WA	TER: N	I/A ft TC	C	TOTAL DEPTH:	19.0 ft BGS
Edge Point	NOTES: Ha	nd Auge	er 0-4'	LOGGED	BY:	J. Conz	elmann	/T. King	CHECKED BY: M. Mastbaum/A. B	
5- FilL Mostly and with Many large brick and concrete pieces. Here 1 auger roles at a -4" due to abundant wood debris. No doc, No visible impact. 60 5- FilL: Dark browning with some detroblack seams. Sandy at Unit Frace Jack, lock, wit, abundant wood debris. sporad b trick, glass, and concrete debris including large (3' - 4') concrete fragments. No doct, No visible impact. 60 0 CLAV, less: Concrete fragments. No doct, No visible impact. 60 0 CLAV, less: Concrete fragments. No doct, No visible impact. 60 0 CLAV less: Sams a store. CLAV less: Sams a store. Sams a store. Sams a store. CLAV less: Sams a store. Sams a store. CLAV less: Sams a store. Sams a store. CLAV less: Sams a store. Sams a store. Sams a store. Sams a store. CLAV less: Sams a store. Sams a store. Sams a store. CLAV less: Sams a store. Sams	DEPTH (ft) (ft) CRAPHIC LOG	nscs	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL IMPACTS	(mqq) DIA	CON	WELL ISTRUCTION
5- Fill.: 5- Fill.: 5- Fill.: 6.0 Grades from dark brown to brown to gray with orangish brown motiling: grades from dark brown to brown to gray with orangish brown motiling: grades from low plasticity to medium; moist: medium but soft from 2.4 feet to 7.7 feet and stiff below 9.7 feet; trace motiling: grades from dark brown to brown to gray with orangish brown motiling: grades from dark brown to brown to gray with orangish brown motiling: grades from dark brown motiling: quest show: 6.0 0 CL CLAV, lear: 6.0 10 CL CLAV, lear: Same as above: 6.0 10 SAND, clayer; White gray-black color, micacous; fine to medium grain; poorly gradet, medium dense; moist; trace of rootex with dark; grades to trace clay by 12.1'. No dor, No wisible impact. 8.0 10 SAND, Clayer; White gray-black color, trace micaceous grains, fine to coarse grain with trace shall and large graves. 9.0 11 SAND, Clayer; Bardy clay, grades to trace clay by 12.1'. No dor, No wisible impact. 8.0 13 SAND, Tamish gray to white gray-black color; trace micaceous grains, fine to coarse grain with trace small and large graves. 9.0 14 Weil gradet microareas and sandy structure, partially pubertized by diffing the drage by 13.1's most. 8.0 15 End of Boring @ 19' below ground surface 8.0	FILL No odor, No visible impact. FILL; Dark brown/gray with some dark/black seams.									
CLAY, lear: Grades from dark brown to brown to gray with erangish Grades from dark brown to brow plasticity to medium; Grades from dark to trace with depth; trace rootlets, sandy seam from 5.8 feet to 7 feet. 6.0 10 GL CLAY, lear: Same as above. Gray with crangish brown motting. No dor, No visible impact. 6.0 10 SAND, clayey: White-gray-black color, micaceous; fine to medium grain; poorly graded; medium dense; moist, trace of crootetis/decaying organic matter. 8.0 10 SAND, clayey: White-gray-black color, micaceous; fine to medium grain; poorly graded; medium dense; moist, trace of crootetis/decaying organic matter. 8.0 115 SAND, Gray up to white-gray-black color; trace micaceous grains; fine to coarse grain with trace small and large grains; fine to coarse grain with trace small and large grains; fine to coarse grain with trace small and large grains; fine to coarse grain with trace small and large grains; fine to coarse grain with trace small and large grains; fine to coarse grain with trace small and large grains; fine to coarse grain with trace small and large grains; fine to coarse grain with trace small and large grains; fine to coarse grain with trace small and large grains; fine to coarse grain with trace small and large grains; fine to coarse grain with trace small with trace small grain; the to coarse grain with trace small with trace small grain; the to coarse grain with trace small with trace small grain; the to coarse grain with trace small with trace small grain; the to coarse grain with trace small grain; the to coarse grain with trace small with trace small with trace small grain; the to coarse grain with trace small smang grain; the to coarse grain; the to coarse grain with trace smal	5- FILL; Dark brown/gray with some dark/black seams. Sandy silt with trace clay; loose; wet; abundant wood debris; sporadic brick, glass, and concrete debris incl large (3" - 4") concrete fragments. No odor, No visible impact. CLAY, lean;									
10 CL CLAY, lean: Same as above. Gray with orangish brown mottling. No dor, No visible impact. 10 SAND; diaye; White-gray-black color, micaceous; fine to medium grain; poorty gradet, medium dense; moist; trace of rootlets/decaying organic matter. @9 to 10.25' sandy clay, grades to trace clay by 12.1'. No dor, No visible impact. SAND; Tannish gray to white-gray-black color; trace micaceous grains; fine to coarse grain with trace small and large grave; well graded; medium dense; moist. @ 112.1' 13 to 12.4' slightly darker tan/orangish ten color. @ 13.2' to 13.6' bands of orangish brown discoloration anyt- more fine grains. No dodr, No visible impact. 8.0 15 SAPROLITE; Dark purplish gray with lighter gray banding; cohesive/britte; micaceous and sandy structure; partially pulverized by drilling below 14.6 feet; slightly moist. @ 14.9-15.2 corange/reddish brown discoloration (distinct color change). No odor, No visible impact. 8.0 SAPROLITE; Dark purplish gray with lighter gray banding; cohesive/britte; micaceous and sandy structure; partially pulverized by drilling below 14.6 feet; slightly moist. @ 14.9-15.2 corange/reddish brown discoloration (distinct color change). No odor, No visible impact. 8.0 SynTerra 148 River Street, Suite 220 Greenville, SCuth Carolina 28001 Prome: 864-421-999 CLIENT: Duke Energy Carolinas, LLC. PROJECT LOCATION: Greenville, SC Prome: 864-421-9999		CL	CLAY, lean; Grades from dark brown to brown to gray wit brown mottling; grades from low plasticity to moist; medium but soft from 7.4 feet to 7.7 fe below 9.7 feet; trace micaceous fine sand, si grades from some to trace with depth; trace i seam from 6.8 feet to 7 feet. No odor, No visible impact.	h orangish medium; eet and stiff It content; rootlets, sandy		6.0				
10 SAND, clayey; White-gray-black color, micaceous; fine to medium grain; poorly graded; medium dense; moist; trace of rootlets/decaying organic matter. SP 95 60° to 10.25° sandy clay, grades to trace clay by 12.1°. No odor, No visible impact. SAND; Tannish gray to white-gray-black color, trace micaceous grains; fine to coarse grain with trace small and large gravel; well gradet; medium dense; moist. 8.0 15 SAPROLITE; Dark purplish gray with lighter gray banding; cohesive/brittle; micaceous and sandy structure; partially pulverized by dilling below tal. 8 feet; slighty moist. 8.0 15 SAPROLITE; Dark purplish gray with lighter gray banding; cohesive/brittle; micaceous and sandy structure; partially pulverized by dilling below tal. 8 feet; slighty moist. 8.0 16 End of Boring @ 19' below ground surface Backfilled with bentonite chips to ground surface CLIENT: Duke Energy Carolinas, LLC. PROJECT LOCATION: Greenville, SC Greenville, Scuth Carolina 22901 Greenville, Scuth Carolina 22901 Prome: 864-421-9999		CL	CLAY, lean; Same as above. Gray with orangish brown mottling. No odor, No visible impact.		_					
SAND; Tanish gray to white-gray-black color; trace micaceous grains; fine to coarse grain with trace small and large gravel; well graded; medium dense; moist. 8.0 15 W SAPROLITE; Dark purplish gray with lighter gray banding; cohesive/brittle; micaceous and sandy structure; partially pulverized by drilling below 14.8 feet; slightly moist. 8.0 16 End of Boring @ 19' below ground surface Backfilled with bentonite chips to ground surface Backfilled with bentonite chips to ground surface Backfilled with bentonite chips to ground surface Backfilled with contain 29601 Project 854421-9999 CLIENT: Duke Energy Carolinas, LLC. PROJECT LOCATION: Greenville, SC PAGE 1 OE 1		SP SC	SAND, clayey; White-gray-black color, micaceous; fine to m poorly graded; medium dense; moist; trace of rootlets/decaying organic matter. @9' to 10.25' sandy clay, grades to trace clay No odor, No visible impact.	edium grain; f y by 12.1'.						
15 No odor, No visible impact. / 0.0 15 SAPROLITE; Dark purplish gray with lighter gray banding; cohesive/brittle; micaceous and sandy structure; partially pulverized by drilling below 14.8 feet; slightly moist. @ 14.9-15.2' orange/reddish brown discoloration (distinct color change). No odor, No visible impact. @ End of Boring @ 19' below ground surface Backfilled with bentonite chips to ground surface CLIENT: Duke Energy Carolinas, LLC. PROJECT LOCATION: Greenville, South Carolina 29601 Phone: 864-421-9999 SynTerra 148 River Street, Suite 220 Greenville, South Carolina 29601 Phone: 864-421-9999 CLIENT: Duke Energy Carolinas, LLC. PROJECT LOCATION: Greenville, SC		SW	SAND; Tannish gray to white-gray-black color; trace grains; fine to coarse grain with trace small a gravel; well graded; medium dense; moist. @ 12.3' to 12.4' slightly darker tan/orangish t @ 13.2' to 13.6' bands of orangish brown dis	micaceous and large tan color. scoloration ang	-	80				
End of Boring @ 19' below ground surface Backfilled with bentonite chips to ground surface CLIENT: Duke Energy Carolinas, LLC. SynTerra 148 River Street, Suite 220 Greenville, South Carolina 29601 Phone: 864-421-9999 CLIENT: Duke Energy Carolinas, LLC. PROJECT LOCATION: Greenville, SC PROJECT LOCATION: Greenville, SC		الاست الماركينيين عرفان ماريو المترسط موارية المعارية المحالية المحالية المحالية المحالية المحالية المحالية ال المحالية	More fine grains. No odor, No visible impact. SAPROLITE; Dark purplish gray with lighter gray banding; cohesive/brittle; micaceous and sandy structu pulverized by drilling below 14.8 feet; slightly (@ 14.9'-15.2' orange/reddish brown discolora color change). No odor, No visible impact.	/ ure; partially moist. ation (distinct		0.0				
SynTerra 148 River Street, Suite 220 Greenville, South Carolina 29601 Phone: 864-421-9999 PAGE 1 OF 1			End of Boring @ 19' below ground surface Backfilled with bentonite chips to ground surf	face						
Syntema PROJECT LOCATION: Greenville, SC Syntema 148 River Street, Suite 220 Greenville, South Carolina 29601 PAGE 1 OF 1		·	mTorro					· I	CLIENT: Duke Ener	gy Carolinas, LLC.
SynTerra Greenville, South Carolina 29601 Phone: 864-421-9999 PAGE 1 OF 1		5) 14	48 River Street, Suite 220						PROJECT LOCATIO	ON: Greenville, SC
	synTer						PAGE 1 OF 1			

PROJECT:	Forr	ner Bramlette Road MGP Site	WELL / BORING NO: T3-SB3						
PROJECT NO:	1020	6.800	STARTED: 3/25/19					COMPLETED:	3/25/19
DRILLING CON	//PANY	2: Cascade Drilling	NORTHIN	G:	1	104585	.73	EASTING:	1574101.421
DRILLING MET	HOD:	Rotary Sonic	G.S. ELEV	' :	9	29.90 f	MSL	M.P. ELEV:	929.90 ft MSL
BOREHOLE DI	AMETE	ER: 6 IN	DEPTH TO) WA	TER: N	/A ft TC	C	TOTAL DEPTH:	19.0 ft BGS
NOTES: Hand	d Auger	- 0-5.5'	LOGGED	BY:	J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Br
DEPTH (ft) (ft) LOG LOG	uscs	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL	(mdd)	CON	WELL ISTRUCTION
5-		FILL; Wet, brown sandy silt with sporadic brick, co wood debris. No odor, No visible impact.	ncrete, and						
	rick debris; w plasticity, silt, few fine to nottling, clayey n dense,	_	5.6						
10-	SP SC	SAND, clayey; Same as above. @ 9.9' to 11.1' silt, lean clay, medium plastic @ 11.1' to 11.6' some clay. @ 11.6' to 12.3' trace clay. @ 12.3' to 12.4' sand. No odor, No visible impact.	ity.						
	sw	SAND; White-gray-black; trace micaceous grains; fir grain with trace small gravel; well-graded; me No odor, No visible impact.	ne to medium edium dense.		10.4				
$\frac{12}{12}$		SAPROLITE; Dark purplish gray with lighter and darker gra cohesive/brittle; micaceous and sandy structu moist; partially pulverized by drilling. No odor, No visible impact.	ay banding; ure; slightly						
		End of Boring @ 19' below ground surface Backfilled with bentonite chips to ground surf	face						
		-						CLIENT: Duke Ener	gy Carolinas, LL(
	Syr 149	B River Street Suite 220						PROJECT LOCATIO	DN: Greenville, S
antorr	Gre	eenville, South Carolina 29601							
Phone: 864-421-9999 PAGE 1 OF 1									

PROJECT: Former Bramlette Road MGP Site WELL / BORING NO: T4-SB1							31		
PROJ	PROJECT NO: 1026.800 ST					3/	18/19		COMPLETED: 3/18/19
DRILL	ING CO	MPAN'	Y: Cascade Drilling	NORTHIN	G:	1	104473	.296	EASTING: 1574021.58
DRILL	ING ME	THOD:	Rotary Sonic	G.S. ELEV	:	9	30.81 fi	MSL	M.P. ELEV: 930.81 ft MSL
BORE	HOLE D	IAMET	ER: 6 IN	DEPTH TO	WA	TER: 3	.52 ft T	OC	TOTAL DEPTH: 19.0 ft BGS
NOTE	S:			LOGGED	3Y: ,	J. Conz	elmann	/T. King	CHECKED BY: M. Mastbaum/A. Brey
DEPTH (ft)	GRAPHIC LOG	NSCS	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL IMPACTS	(mqq) DIA	WELL CONSTRUCTION
-	CL FILL; Lean clay with some silt; various shades of brown, gray and reddish brown; trace micaceous grains; medium dense; occasionally stiff; low plasticity; moist; trace rool and gravel; sporadic brick debris; and glass shards.					6.9			Ţ
5-		CL	CLAY, lean; Brown to 7.0' then gray with olive brown mott micaceous; medium plasticity; stiff; trace roo fine sand; moist. No odor, No visible impact.	ling; trace tlets, silt, and	-	6.9			
10-		CL	CLAY, lean; Same as above; mottling grades out @ 11.2'; sandier from @ 12.1'-12.8'. No odor, No visible impact.	; soft and					
ASTM LAB.GDT 5/15/19 		SW	SAND; White-gray-black; trace micaceous grains; fir well-graded; medium dense; moist; trace fine clayey seams. No odor, No visible impact	ne-coarse r grained	7728	10.6			-@ 15.5': VOC/SVOC
AMLETTE NAPL V2.GPJ GINT STD A4			SAPROLITE; Dark gray, purplish with lighter gray mixed in; cohesive/brittle micaceous structure, partially drilling. No odor, No visible impact. End of Boring @ 19' below ground surface Backfilled with bentonite chips to ground surf	; micaceous; pulverized by					Sample Concutou
C BR									
	5	Sy	nTerra						CLIENT: Duke Energy Carolinas, LLC.
148 River Street, Suite 220 Greenville. South Carolina 29601								PROJECT LOCATION: Greenville, SC	
gsyr	Phone: 864-421-9999 PAGE 1 OF 1								

PROJECT: Former Bramlette Road MGP Site WELL / BORING NO: T4-SB2							
PROJECT NO: 1026.800	STARTED		3/1	9/19		COMPLETED:	3/19/19
DRILLING COMPANY: Cascade Drilling	NORTHIN	G:	11	04453	.479	EASTING:	1574032.746
DRILLING METHOD: Rotary Sonic	G.S. ELEV	<i>!</i> :	93	2.08 ft	MSL	M.P. ELEV:	932.08 ft MSL
BOREHOLE DIAMETER: 6 IN	DEPTH TO	O WATE	R: N//	A ft TC	C	TOTAL DEPTH:	19.0 ft BGS
NOTES:	LOGGED	BY: J.(Conzel	lmann	T. King	CHECKED BY: M	Mastbaum/A. Brey
HL(1) DESCRIPTION		SAMPLE	(FT)	VISUAL IMPACTS	(mqq) DIA	CON	WELL ISTRUCTION
FILL; Various shades of brown, gray, and reddis clay with some silty; low plasticity; variable micaceous grains; fine sand and rootlets; o brick debris, wire, and wood debris. No odor, No visible impact. Note: poor recovery.	h brown; mostly density; trace gravel-sized						
5- CLAY, lean; Brown; grades from low-medium plasticity; micaceous; fine sand; moist; soft then grad some silt. No odor, No visible impact.	; trace des to medium;		4.8				
CLAY, lean; Gray; brown mottling that grades out from medium plasticity; stiff; moist; trace fine m trace silt and rootlets. No odor, No visible impact.	12.7'-13.8'; icaceous sand;	1	1.1				
15 SAND; White-gray-black; trace micaceous; mediu - @ 14.5'-16.5' Medium grained; poorly gra clayey seams. - @ 16.5'-17.3' Medium-coarse well-grade large gravel. - @ 17.0'-17.3' NAPL coated with brown s hydrocarbon odor.	m dense; moist. aded; and trace d with trace taining; and				4.7		
SAPROLITE; Dark purplish gray with lighter colors mixed moist; cohesive, brittle, and micaceous str pulverized. Faint odor, No visible impact. End of Boring @ 19' below ground surface Backfilled with bentonite chips to ground s	d in; slightly ucture; partially e urface				4.1	-@18': \ collected	/OC/SVOC sample
SynTerra							gy Carolinas, LLC.
148 River Street, Suite 220 Greenville. South Carolina 29601						TROJECT LOCATIO	
Solution Phone: 864-421-9999					PAGE 1 OF 1		

PROJ	ECT:	For	mer Bramlette Road MGP Site	WELL / BORING NO: T4-SB3																
PROJ	ECT NO	: 102	26.800	STARTED: 3/18/19					COMPLETED: 3/18/19											
DRILL	ING CO	MPAN	Y: Cascade Drilling	NORTHIN	G:	1	104426	6.345	EASTING: 1574042.791											
DRILL	ING ME	THOD:	Rotary Sonic	G.S. ELEV	/ :	9	32.33 f	t MSL	M.P. ELEV: 932.33 ft MSL											
BORE	HOLE D	IAMET	ER: 6 IN	DEPTH TO WATER: N/A ft TOC			I/A ft TC	C	TOTAL DEPTH: 19.0 ft BGS											
NOTE	S:			LOGGED BY: J. Conzelmann/T. King			elmann	/T. King	CHECKED BY: M. Mastbaum/A. B	rey										
DEPTH (ft)	SRAPHIC LOG	nscs	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL MPACTS	(mqq)	WELL CONSTRUCTION											
5		ML	 FILL; Various shades of brown, reddish brown, and micaceous; mostly silt with some clay; mediu plasticity; moist; and trace fine sand and root gravel and gravel-sized concrete debris. - @ 40" - 47.5" Light gray concrete. - @ 49" - 103" Little wood debris/rootlets, inc content. - @ 68" - 71" Pale orange/white plastic circul black cap and glass shard. - @ 103" Wood debris seam. No odor, No visible impact. 	d gray; trace m dense; low lets; trace reasing clay ar debris; and		10.7														
- 10-		CL	CLAY, lean; Dark brown, reddish brown, then gray @ 8.0' olive brown mottling; trace micaceous; trace rootlets; medium plasticity; medium moist. No odor, No visible impact.	with trace fine sand and																
DT 5/15/19		CL	CLAY, lean; Same as above; mostly stiff. Faint hydrocarbon odor, No visible impact.		-	11.6		14.1												
- 44 ASTM LAB.G		sw	SAND; White-gray-black; trace micaceous grained; medium-coarse; well-graded; trace fine grave dense; moist; trace fine sand. - @ 15.1'-15.8' NAPL coated with brown stai hydrocarbon odor	श; medium ning; and /																
TE NAPL V2.GPJ GINT STE			SAPROLITE; Gray with lighter gray and purplish gray band micaceous; cohesive, brittle, and partially mic structure; partially pulverized by drilling. Faint hydrocarbon odor, No visible impact.	ing; caceous	ZX				-@ 17': VOC/SVOC sam collected	ole										
BRAMLET	····		End of Boring @ 19' below ground surface Backfilled with bentonite chips to ground surf																	
	69 Nerr	Sy 14 a Gi PH	/nTerra I8 River Street, Suite 220 reenville, South Carolina 29601 jone: 864-421-9999					·	CLIENT: Duke Energy Carolinas, LL PROJECT LOCATION: Greenville, S	C. SC 1										
										Phone: 864-421-9999 PAGE 1 OF 1										

PROJECT NO: 1028.800 STARTED: 3/18/19 COMPLETED: 3/18/19 DRILLING COMPANY: Cascade Drilling NORTHING: 1104347.518 EASTINC: 157411127 DRILLING METHOD: Rotary Sonic G.S. ELEV: 934.38 ft MSL MP. ELEV: 934.38 ft MSL BOREHOLE DIAMETER: 6 IN DEPTH TO WATE: 107AL DEPTH: 101A DEPTH: 101A DEPTH: MOTE: DESCRIPTION Image: Starter Distribution of the st
DRILLING COMPANY: Cascade Drilling NORTHING: 1104347.518 EASTING: 1574111.27 DRILLING METHOD: Rotary Sonic G.S. ELEV: 934.381 ft MSL, M.P. ELEV: 934.381 ft MSL, BOREHOLE DIAMETER: 6 IN DEPTH TO WATER: 8.73 ft MSL, CHECKED BY: J. ConzemannT. King CHECKED BY: J. ConzemannT. King CHECKED BY: M.M. BitBaumA. MELE E E S S DESCRIPTION E E E CONSTRUCTION. Various shades of brown, gray, and reddish brown; trace ML FILL: Various shades of brown, gray, and reddish brown; trace 0 E E S E CONSTRUCTION S - 0 - - - S S CONSTRUCTION WELL Various shades of brown, gray, and reddish brown; trace - 0 - 8.8 - - 0 - CONSTRUCTION - - 0 - - - - - - - - - - - - - - - - - <
DRILLING METHOD: Rotary Sonic G.S. ELEV: 934.38 ft MSL M.P. ELEV: 934.38 ft MSL BOREHOLE DIAMETER: 6 IN DEPTH TO WATER: 8.71 ft TOC TOTAL DEPTH: 19.01 ft BGS NOTES: LOGGED BY: J. ConzelmannT. King CHECKED BY. M. Mastbaum/A. Log 0 G.S. 0 G.S. </td
BOREHOLE DIAMETER: 6 IN DEPTH TO WATER: 8.77 ft TOC TOTAL DEPTH: 19.0 ft BGS NOTES: LOGGED BY: J. ConzelmanT. King CHECKED BY: M. Mastbaund. Log E So So CHECKED BY: M. Mastbaund. Log E So So So CHECKED BY: M. Mastbaund. Log E So So So So CHECKED BY: M. Mastbaund. Log E So So So So So So CHECKED BY: M. Mastbaund. Log E So So So So So So So So So CHECKED BY: M. Mastbaund. Log E So
NOTES: LOGGED BY: J. Conzelmann(T. King CHECKED BY: M. Mastbaum/A. Log E Vertice
Edge Solution Sol
5- FILL; Various shades of brown, gray, and reddish brown; trace micaceous grains; mostly silt with some clay, low plasticity; medium dense; mostly site fires sand; few gravel and gravel-sized debris; occasional larger (2-5') concertet/prick chunks. - @ 3.8'-3.9' Thin metal piece; and possible fence tie. - @ 7.8'-9.0' Mostly wood debris in above matrix; dark brown; brick piece at 8.4'. Pine/woody odor, No visible impact. 8.8 10- ML FILL: Same as above with wood debris. 8.8 10- CLAY, lean; Gray, trace micaceous then grades to more micaceous with brown and olive brown motiling from @ 9.3'-14.0; medium plasticity; stiff; trace fine sand and ocolets; trace sit; moist. 8.8
10- CLAY, lean; Gray; trace micaceous then grades to more micaceous with brown and olive brown mottling from @ 9.3'-14.0'; medium plasticity; stiff; trace fine sand and rootlets; trace silt; moist.
Gray; trace micaceous then grades to more micaceous with brown and olive brown mottling from @ 9.3'-14.0'; medium plasticity; stiff; trace fine sand and rootlets; trace silt; moist.
CL - @ 11.3'-12.3' Trace tar blobs; and faint hydrocarbon odor. - @ 12.3'-12.4' Sandier seam. - @ 13.0'-16.6' Sporadic dark brown NAPL staining; hydrocarbon odor; increasing sand content with depth. - @ 15.9' Saturated NAPL lens; hydrocarbon odor in sand lens.
SP SAND; White-gray-black; trace micaceous grains; medium poorly graded; medium dense; moist; trace clay. - @ 16.8'-18' NAPL coated; hydrocarbon odor. 23.5 SAPROLITE; Gray with dark, light, and purplish banding; micaceous; cohesive, brittle, and micaceous structure; slightly moist; Mostly pulverized; faint hydrocarbon odor. 62.7 Saprol 1.6.6'-16.7' NAPL staining near interface with above / Sand 62.7
CLIENT: Duke Enorgy Carolings L
148 River Street, Suite 220 FROJECT LOCATION. Greenville, Greenville, South Carolina 29601
Symetra Phone: 864-421-9999 PAGE 1 0

PROJECT: Former Bramlette Road MGP Site WELL / BORING NO: T5-SB1										
PROJE		: 102	26.800	STARTED: 3/18/19				COMPLETED:	3/18/19	
DRILL	ING CO	MPAN	Y: Cascade Drilling	NORTHIN	G:	1	104347	.518	EASTING:	1574111.27
DRILL	ING ME	THOD	Rotary Sonic	G.S. ELEV: 934.38 ft MSL			MSL	M.P. ELEV:	934.38 ft MSL	
BORE	HOLE D	IAMET	TER: 6 IN	DEPTH TO	WA	TER: 8	.77 ft T	C	TOTAL DEPTH:	19.0 ft BGS
NOTE	S:			LOGGED	BY:	J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Brey
DEPTH (ft)	GRAPHIC LOG	nscs	DESCRIPTION	SAMPLE RECOV. (FT) VISUAL MPACTS PID (ppm)				WELL CONSTRUCTION		
	GRAF	DSU	DESCRIPTION	face	SAM	REC (F1		JId JI		
-										
5										
									CLIENT: Duke Ener	gy Carolinas, LLC.
	7	Sy 14	yn i erra 18 River Street, Suite 220						PROJECT LOCATIO	ON: Greenville, SC
syn	Greenville, South Carolina 29601 Phone: 864-421-9999									

PROJ	ECT:	Fo	rmer Bramlette Road MGP Site	WELL / BORING NO: T5-SB2						
PROJ	ECT NO:	10	26.800	STARTED: 3/18/19					COMPLETED:	3/18/19
DRILL	ING CO	MPAN	Y: Cascade Drilling	NORTHIN	G:	1	104320	.189	EASTING:	1574125.929
DRILL	ING ME	THOD	Rotary Sonic	G.S. ELEV	:	9	34.21 ft	MSL	M.P. ELEV:	934.21 ft MSL
BORE	HOLE D	IAME	TER: 6 IN	DEPTH TO WATER: N/A ft TOC			C	TOTAL DEPTH:	19.0 ft BGS	
NOTE	S:			LOGGED I	3Y: .	J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Brey
DEPTH (ft)	GRAPHIC LOG	NSCS	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL	(mdd) DIA	CON	WELL ISTRUCTION
5-		CL	FILL; Various shades of brown, reddish brown, and micaceous grains; mostly clay with some silt; medium-stiff; moist; trace find sand; few grav concrete, and asphalt debris. - @ 4.8'-5.4' Large (3"-4") asphalt-like fragme asphalt-like odor. No visible impact.	l gray; trace low plasticity; /el; brick, ents with		9.7				
-			WOOD DEBRIS; Dark gray layered wood debris in above matri - @ 7.5'-8.7' Continuous layered wood. Woody/pine odor, No visible impact.	 x. 						
-		CL	CLAY, lean; Gray; trace micaceous with olive brown mottl plasticity; stiff; moist; trace find sand; rootlets - @ 9.5'-12.5' Sporadic millimeter scale tar bl hydrocarbon odor.	ing; medium s. ebs/seams;						
5/15/19		SP SC	SAND, clayey; White-gray-black; micaceous grains; fine-me graded; medium dense; moist; and trace silt. - @ 12.8'-13.0' Trace dark brown NAPL stain hydrocarbon odor.	dium poorly ning;		10.1		92.8		
A4 ASTM LAB.GDT		sw	 SANU; White-gray-black; micaceous grains; medium moist. - @ 14.0'-14.8' Fine-medium; poorly graded; 14.0'-14.2' NAPL saturated; dark brown stain hydrocarbon odor; and @ 14.5'-14.7' NAPL s dark brown staining; hydrocarbon odor. 	n-dense; and and @ ing; and saturated with				15.9 101.7 39.2		
TTE NAPL V2.GPJ GINT STE	$\begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} $		 - @ 14.9-16.0' Fine-coarse; well-graded with grades near top of saprolite; and @ 15.4'-15. coated; and hydrocarbon odor; and @ 15.8'-1 NAPL staining; hydrocarbon odor SAPROLITE; Dark purplish gray with lighter gray banding; I cohesive, brittle, and micaceous structure; pu slightly moist. Faint hydrocarbon odor, No visible impact. 	1 coarser 1 6' NAPL 1 16.0' Brown 1 1 micaceous; Jlverized;	278				-@17': \ collected	'OC/SVOC sample I
BRAMLE ⁻			End of Boring @ 19' below ground surface Backfilled with bentonite chips to ground surf	ace						
DECI		-	_				1	. I	CLIENT: Duke Ener	gy Carolinas, LLC.
>	9	S 14	yn i erra 18 River Street, Suite 220						PROJECT LOCATIO	ON: Greenville, SC
ig syr	SynTerra Greenville, South Carolina 29601 Phone: 864-421-9999 PAGE 1 OF 1									

PROJECT: Former Bramlette Road MGP Site WELL / BORING NO: T5-SB3										
PROJ	ECT NO:	102	26.800	STARTED: 3/18/19					COMPLETED:	3/18/19
DRILL	ING CO	MPAN	Y: Cascade Drilling	NORTHIN	G:	1	104291	.203	EASTING:	1574142.686
DRILL	ING ME	THOD	Rotary Sonic	G.S. ELE\	/ :	9	33.53 fl	MSL	M.P. ELEV:	933.53 ft MSL
BORE	HOLE D	IAMET	ER: 6 IN	DEPTH TO WATER: N/A ft TOC			TOTAL DEPTH:	18.0 ft BGS		
NOTE	S:			LOGGED BY: J. Conzelmann/T. King			/T. King	CHECKED BY: M.	Mastbaum/A. Brey	
DEPTH (ft)	GRAPHIC LOG	nscs	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL	(mdd)	CON	WELL ISTRUCTION
		ML	FILL; Various shades of brown, reddish brown, and micaceous grains; mostly silt with clay; low pl moist; few gravel and gravel-sized brick, cond debris, and trace rootlets. - @ 2.5' Concrete fragments. No odor, No visible impact.	l gray; trace asticity; crete, asphalt		11.6				
-			WOOD DEBRIS; Primarily layered wood pieces in above matrix Pine/woody odor, No visible impact.				-			
		CL	GLA; react, frace micaceous grains with brown and mottling; medium plasticity; stiff; moist; trace - @ 10.0-10.5' Trace tar seams/blebs; black a hydrocarbon odor.	l olive brown fine sand. and shiny;						
-		CL	CLAY, sandy; White-gray-black; micaceous grains; low plas fine-medium poorly graded sand; medium mo Faint hydrocarbon odor, No visible impact.	sticity with bist.						
:TD A4 ASTM LAB.GDT 5/15/ 		SW	SAND; White-gray-black; trace micaceous grains; fin well-graded; medium dense; moist. - @ 14.7'-15.0' Clayey; and same as above. - @ 15.0' Coarser grains; NAPL coated with I saturated from 15.6'-16.0' with dark brown st hydrocarbon odor.	ne-coarse; NAPL aining;		9.2		17.4		
ETTE NAPL V2.GPJ GINTS			SAPROLITE; Gray and light gray; trace micaceous; occasic gray; cohesive, brittle structure with few hard mostly pulverized.	onal dark olive zones,					-@18':\ collected	/OC/SVOC sample
RAML	Backfilled with bentonite chips to ground surface									
	/									av Carolinas II C
	5	S	/nTerra						PROJECT LOCATIO	ON: Greenville SC
an	Torr		reenville, South Carolina 29601							
j oyi I	Phone: 864-421-9999 PAGE 1 OF 1									

PROJECT: Former Bramlette Road MGP Site WELL / BORING NO: T6-SB1									
PROJECT NO: 1026.800	STARTED: 3/18/19					COMPLETED:	3/18/19		
DRILLING COMPANY: Cascade Drilling	NORTHIN	G:	1	104279	.201	EASTING:	1574079.147		
DRILLING METHOD: Rotary Sonic	G.S. ELEV	G.S. ELEV: 934.04 ft MSL			M.P. ELEV:	934.04 ft MSL			
BOREHOLE DIAMETER: 6 IN	DEPTH TO WATER: N/A ft TOC			TOTAL DEPTH:	24.0 ft BGS				
NOTES:	LOGGED I	3Y: .	J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Brey		
HLAND SS DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL IMPACT	(mqq) DIG	CON	ISTRUCTION		
5 5 5 5 5 5 5 5 5 5 5 5 5 5	id dark brown; ie clay; trace n dense; moist; lebris; (up to 4").		6.3						
10- CL CL	nedium sand; trace silt pod pieces.		10.8						
15- SAND; White-gray-black; micaceous grains; fine-me graded; medium dense; moist; some clay. - @ 14.5'-15.0' NAPL coated with brown sta hydrocarbon odor in ~4" layer then a ~1/2" la	edium poorly nining; and ayer.				7.4				
White-gray-black; micaceous grains; lighter fine-coarse; well-graded; medium dense; mo - @ 17.2'-17.7' NAPL saturated with dark br hydrocarbon odor.	gray; pist. rown staining;				28.4				
SAPROLITE; Dark purplish/gray with lighter banding; mica cohesive, brittle. Faint hydrocarbon odor, No visible impact.	aceous;								
SvnTerra						CLIENT: Duke Ener	gy Carolinas, LLC.		
148 River Street, Suite 220						PROJECT LOCATIO	ON: Greenville, SC		
SynTerra Greenville, South Carolina 29601 Phone: 864-421-9999 PAGE 1 OF 2									

PROJECT: Former Bramlette Road MGP Site WELL / BORING NO: T6-SB1											
PROJECT NO:	1026.800	STARTED: 3/18/19					COMPLETED: 3/18/19				
DRILLING COM	IPANY: Cascade Drilling	NORTHING	G:	1	104279	.201	EASTING: 1574079.147				
DRILLING METH	HOD: Rotary Sonic	G.S. ELEV	G.S. ELEV: 934.04 ft MSL			MSL	M.P. ELEV: 934.04 ft MSL				
BOREHOLE DIA	AMETER: 6 IN	DEPTH TO WATER: N/A ft TOC			I/A ft TC	C	TOTAL DEPTH: 24.0 ft BGS				
NOTES:		LOGGED I	3Y: ,	J. Conz	elmann	/T. King	CHECKED BY: M. Mastbaum/A. Brey				
DEPTH (ft) GRAPHIC LOG	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL	(mqq) DIA	WELL CONSTRUCTION				
	SAPROLITE; Same as above with lighter gray layers. (cont SAPROLITE; Light gray; trace micaceous; trace dark gray light pink specks; mostly pulverized by drilling visible impact. Dry.	tinued) banding; trace J. No odor, No		7.2							
25-	End of Boring @ 24' below ground surface Backfilled with bentonite chips to ground surf	face									
_											
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30-											
-											
35-											
6	SynTerra 148 River Street, Suite 220 Greenville, South Carolina 29601										
synierra	Phone: 864-421-9999						PAGE 2 OF 2				

PROJECT: Former Bramlette Road MGP Site WELL / BORING NO: T6-SB2									
PROJECT NO:	102	26.800	STARTED:	STARTED: 3/18/19				COMPLETED:	3/18/19
DRILLING COM	IPAN	Y: Cascade Drilling	NORTHIN	G:	1	104250	.735	EASTING:	1574097.143
DRILLING METH	HOD:	Rotary Sonic	G.S. ELEV	G.S. ELEV: 933.98 ft MSL			M.P. ELEV:	933.98 ft MSL	
BOREHOLE DIA	AMET	ER: 6 IN	DEPTH TO WATER: N/A ft TOC			TOTAL DEPTH:	19.0 ft BGS		
NOTES:			LOGGED	3Y: .	J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Brey
DEPTH (ft) GRAPHIC LOG	NSCS	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL	(mqq) DIA	CON	WELL ISTRUCTION
	ML	FILL; Various shades of brown, gray, and reddish b silt with trace micaceous fine sand and rootle trace gravel; occasional brick fragments up to throughout; medium dense; moist. - @ 8.5' Large piece (4") of electrical wire. - @ 8.6' Dark gray; some fibrous debris. No odor, No visible impact.	orown; mostly ts; few clay; o 4"		8.9				
10-	CL	CLAY, lean; Gray; trace micaceous grains with brown and mottling; medium plasticity; moist; stiff; trace rootlets. - @ 9.0'-10.0' Some silt; wet; some coarse sa No odor, No visible impact.	l olive silt and and; soft.		10.0				
15-	SP SC	SAND, clayey; White-gray-black; micaceous grains; fine-me graded with low plasticity; medium dense; mo No odor, No visible impact.	dium; poorly pist.		10.9				
	sw	SAND; White-gray-black; trace micaceous; fine-coar well-graded; medium dense; moist. - @ 16.6'-18.0' More coarse grained. - @ 17.7'-18.0' Clayey sand; same as above. Faint hydrocarbon odor, No visible impact.	se						
		SAPROLITE; Dark purplish with gray, dark gray, and light g slight bluish hue with occasional pink; cohesi structure; somewhat micaceous. <u>Faint hydrocarbon odor, No visible impact.</u> End of Boring @ 19' below ground surface	gray banding; ve, brittle /						
	<u>c</u> ,							CLIENT: Duke Ener	gy Carolinas, LLC.
	3y 14	8 River Street, Suite 220						PROJECT LOCATIO	ON: Greenville, SC
synTerra	Gr Ph	reenville, South Carolina 29601 none: 864-421-9999							PAGE 1 OF 2

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PROJECT: Former Bramlette Road MGP Site WELL / BORING NO: T6-SB2											
PROJI	ECT NO	: 102	26.800	STARTED: 3/18/19					COMPLETED:	3/18/19	
DRILL	ING CO	MPAN	Y: Cascade Drilling	NORTHIN	G:	1	104250	.735	EASTING:	1574097.143	
DRILL	ING ME	THOD	Rotary Sonic	G.S. ELEV: 933.98 ft MSL			MSL	M.P. ELEV:	933.98 ft MSL		
BORE	HOLE D	IAMET	TER: 6 IN	DEPTH TO WATER: N/A ft TOC			C	TOTAL DEPTH:	19.0 ft BGS		
NOTE	S:			LOGGED	BY:	J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Brey	
DEPTH (ft)	BRAPHIC LOG	NSCS	DESCRIPTION	SAMPLE RECOV. (FT) VISUAL MPACTS PID PID				CON	WELL CONSTRUCTION		
	0		Backfilled with bentonite chips to ground surf	face							
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	5	S	<i>y</i> nTerra						CLIENT: Duke Energy	gy Carolinas, LLC.	
	Torr	12 G	l8 River Street, Suite 220 reenville, South Carolina 29601						PROJECT LOCATIO	JN: Greenville, SC	
syn	Greenville, South Carolina 29601 Phone: 864-421-9999 PAGE 2 OF 2										

PROJUCT NO. 1028.800 STATED. 318/19 COMPLETED: 318/19 DRULING METHOD. Rotary Sonic G.S. ELEV: 328.28 h M.N. PLEUVES 022.83 h DRULING METHOD. Rotary Sonic G.S. ELEV: 328.28 h M.P. ELEV: 328.28 h DORLING METHOD. Rotary Sonic G.S. ELEV: 328.28 h M.P. ELEV: 328.28 h NOTES: LOGGED BY: J.Commann.T. King CHECKED BY: M. Morealmann.T. King CHECKED BY: M. M	PRO	JECT:	For	mer Bramlette Road MGP Site	WELL / BORING NO: T6-SB3						
DRULING COMPANY: Cascade Drilling NORTHING: 1104225 333 EASTING: 15741215 DRULING DEMANTER: 6 IN DEPTH TO WATER: NA TOC CASCADE PTH TO WATER: NA TOC NOTES: DESCRIPTION Image: Cascade Drilling DESCRIPTION Image: Cascade Drilling CASCADE PTH TO WATER: NA TOC Label III: GOUNDARY: Image: Cascade Drilling DESCRIPTION Image: Cascade Drilling CASCADE PTH TO WATER: NA TOC Label III: GOUNDARY: Image: Cascade Drilling DESCRIPTION Image: Cascade Drilling CONSTRUCTION III: Goundary: Image: Cascade Drilling DESCRIPTION Image: Cascade Drilling CONSTRUCTION III: Goundary: Image: Cascade Drilling DESCRIPTION Image: Cascade Drilling CONSTRUCTION III: Goundary: Image: Cascade Drilling Image: Cascade Drilling Image: Cascade Drilling CONSTRUCTION III: Goundary: Image: Cascade Drilling Image: Cascade Drilling Image: Cascade Drilling Image: Cascade Drilling III: Goundary: Image: Cascade Drilling Image: Cascade Drilling Image: Cascade Drilling Image: Cascade Drilling III: Goundary: Image: Cascade Drilling Image: Cascade Drilling Image: Cascade Drilling Image: Cascade Drilling III: Goundary:	PRO	JECT NO:	102	26.800	STARTED: 3/18/19					COMPLETED:	3/18/19
DIPULING METHOD Rolary Solic G.S. ELEV 922.83 h.Ms. M.P. ELEV 92.83 h.Ms. M.P. ELEV	DRILI	LING COI	MPAN	Y: Cascade Drilling	NORTHIN	G:	1	104225	5.363	EASTING:	1574112.185
BOREHOLE DAMETER 0 IN DEPTH TO WATER: NALT TOO TOTAL DEPTH: 100 HBESING NOTES: LOGGED DY: LORONING CONSTRUCTION CHECKED BY: Meatsum/A HERE HERE Sole HERE Sole HERE CONSTRUCTION HERE HERE Sole HERE Sole HERE CONSTRUCTION HERE HERE HERE Sole HERE Sole HERE CONSTRUCTION HERE HERE HERE Notes HERE Sole HERE CONSTRUCTION HERE HERE HERE HERE HERE HERE HERE CONSTRUCTION HERE HERE HERE HERE HERE HERE HERE HERE HERE CONSTRUCTION HERE HERE HERE HERE HERE HERE HERE CONSTRUCTION HERE	DRILI	LING ME	THOD:	Rotary Sonic	G.S. ELEV	:	9	32.83 fl	t MSL	M.P. ELEV:	932.83 ft MSL
NOTE: LOGGED BY: J. Concentement? Ring CHECKED BY: M. MethalamAT. Label E Status Status Status Status Status CONSTRUCTION Label E Status Status Status Status Status Status Construction Status Status <t< td=""><td>BORE</td><td>EHOLE D</td><td>IAMET</td><td>ER: 6 IN</td><td colspan="3">DEPTH TO WATER: N/A ft TOC</td><td>C</td><td>TOTAL DEPTH:</td><td>19.0 ft BGS</td></t<>	BORE	EHOLE D	IAMET	ER: 6 IN	DEPTH TO WATER: N/A ft TOC			C	TOTAL DEPTH:	19.0 ft BGS	
Image: Section of the section of t	NOTE	ES:			LOGGED BY: J. Conzelmann/T. King			/T. King	CHECKED BY: M.	Mastbaum/A. Brey	
5- FILL; Various shades of brown, reddish brown, gray, and dark gray, trace micaceous, modely sit with little line sand, trace gray trace micaceous, modely sit with little line sand, trace gray trace micaceous, modely sit with little line sand, trace gray trace micaceous, modely sit with little line sand, trace gray trace micaceous, modely sit with little line sand, trace gray trace micaceous, modely sit with little line sand, trace gray trace micaceous with brown and rive - @ 7.0*7.2 Layer of wood. 7.4 10- WOOD DEBRIS: Dark torrein hatow matrix, - @ 7.0*7.2 Layer of wood. 7.4 10- CLAY lean: Gray trace micaceous with brown and dive motting; trace fine sand, sit, and rodelis; soft-medum from 3.3*10.0* the gray back; trace micaceous, medium dense, and . @ 11.2*14.2* Oreclamin dark brown staining, and faint hydrocarbon ado. 10.9 15- SAND; White gray-black; trace micaceous; medium dense, and . @ 11.2*15.2* Fine-medium poorty graded - @ 15.2*15.3* Fine-medium poorty graded - @ 15.2*15.3* Fine-coarse well-graded, and trace small grade. 10.9 16- SAND; White gray-black; trace micaceous; medium dense, and . @ 15.2*15.3* Fine-coarse well-graded, - @ 15.2*15.3* Fine-coarse well-graded, and trace small grade. 10.9 16- SAND; White gray-black; trace micaceous; medium dense, and . No ode. No visible impact. 10.9 16- SAND; White gray fill with gray, light gray, and dark gray bending. . White gray fill with provel with the gray light gray. 10.9	DEPTH (ft)	GRAPHIC LOG	NSCS	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL	(mqq)	CON	WELL ISTRUCTION
WOOD DEBRIS: Dark brown in above matrix. - @ 7.9.8.3 Pent metal piece. - @ 8.4 Solid wood. Pine/woody.dor_No visible impact. 10- CLAY, lean; Gray, trace micaceous with brown and olive mottling; trace fine sand, silt, and rootlets; soft-medium from 9.3-10.0' then grades to stiff, moist; and medium plasticity. - @ 12.4.12.7 Occasional dark brown staining; and faint hydrocarbon odor. 16- SAND; White-gray-black; trace micaceous; medium dense; and moist. - @ 13.4.15.2' Fine-medium poorly graded. - @ 15.2.15.9' Fine-coarse well-graded. - @ 15.2.15.0' COC/SVOC sample collected SW SAPROLITE: Dark purplish with gray, light gray, and dark gray banding; slightly moist; cohesive, sandy. No codor, No visible impact. End of Boring @ 19' below ground surface Backfilled with bentonite chips to ground surface Backfilled with bentonite chips to ground surface	5-		ML	FILL; Various shades of brown, reddish brown, gra gray; trace micaceous; mostly silt with little fii clay and rootlets; medium dense; moist; little gravel-sized debris (concrete/brick); occasion chunks (~2-4"). - @ 7.0'-7.2' Layer of wood.	y, and dark ne sand; trace gravel and lal larger		7.4				
10- CLAY, lean; Gray, trace micaceous with brown and olive mottling; trace fine sand, slit, and rootlets; soft-medium from 9.3:-10.0' then grades to slift; moist; and medium plasticity. - @ 12.2' Mottling grades out. - @ 12.2' Mottling grades out. - @ 12.2' INottling grades out. - @ 13.4'-15.2' Fine-medium poorly graded. - @ 15.9'-16.1' Fine-medium poorly-graded. - @ 15.9'-16.1' Fine-medium poorly-graded; and trace small gravel. No odor, No visible impact. 10.9 115- SAW - @ 15.2'-16.1' Fine-medium poorly-graded; and trace small gravel. No odor, No visible impact. 10.9 - @ 17.5: VOC/SVOC sample collected SAPROLITE: Dark purplish with gray, light gray, and dark gray banding; slightly moist; cohesive, sandy. No odor, No visible impact. - @ 17.5: VOC/SVOC sample collected				WOOD DEBRIS; Dark brown in above matrix. - @ 7.9'-8.3' Bent metal piece. - @ 8.4' Solid wood. Pine/woody odor, No visible impact							
15- SAND; White-gray-black; trace micaceous; medium dense; and moist. - @ 15.2·15.2' Fine-medium poorly graded. - @ 15.2·15.9' Fine-coarse well-graded. - @ 15.2·16.1' Fine-medium poorly-graded; and clayey. - @ 16.1'-17.3' Fine-coarse well-graded; and trace small gravel. No odor, No visible impact. 10.9 SW - @ 15.2' Fine-medium poorly-graded; and clayey. - @ 16.1'-17.3' Fine-coarse well-graded; and trace small gravel. No odor, No visible impact. - @ 17.5': VOC/SVOC sample collected End of Boring @ 19' below ground surface Backfilled with bentonite chips to ground surface - @ 17.5': VOC/SVOC	10-		CL	CLAY, lean; Gray; trace micaceous with brown and olive r fine sand, silt, and rootlets; soft-medium from then grades to stiff; moist; and medium plast - @ 12.2' Mottling grades out. - @ 12.4'-12.7' Occasional dark brown staini hydrocarbon odor.	nottling; trace n 9.3'-10.0' icity. ng; and faint						
SAPROLITE; Dark purplish with gray, light gray, and dark gray banding; Sample collected Back purplish with gray, light gray, and dark gray banding; Sightly moist; cohesive, sandy. Sample collected Back filled with bentonite chips to ground surface End of Boring @ 19' below ground surface Sample collected	FU GINT STD A4 ASTM LAB.GDT 5/15/19		sw	SAND; White-gray-black; trace micaceous; medium moist. - @ 13.4'-15.2' Fine-medium poorly graded. - @ 15.2'-15.9' Fine-coarse well-graded. - @ 15.9'-16.1' Fine-medium poorly-graded; and gravel. No odor, No visible impact.	dense; and and clayey. trace small	-	10.9			-@ 17 5 ¹	VOC/SVOC
Backfilled with bentonite chips to ground surface	ETTE NAPL V2.G			SAPROLITE; Dark purplish with gray, light gray, and dark g slightly moist; cohesive, sandy. No odor, No visible impact. End of Boring @ 19' below ground surface	gray banding;					sample	collected
	RAML			Backfilled with bentonite chips to ground surf	ace						
SynTerra SynTerra 148 River Street, Suite 220 Greenville, South Carolina 29601 Phone: 864-421-9999 PAGE 1 C											

PROJECT: Former Bramlette Road	MGP Site	WELL / BORING NO: T7-SB1						
PROJECT NO: 1026.800		STARTED: 3/15/19					COMPLETED:	3/15/19
DRILLING COMPANY: Cascade Dri	lling	NORTHING	G:	1	104201	.272	EASTING:	1574137.617
DRILLING METHOD: Rotary Sonic	;	G.S. ELEV	:	9	33.03 ft	MSL	M.P. ELEV:	933.03 ft MSL
BOREHOLE DIAMETER: 6 IN		DEPTH TO WATER: N/A ft TOC				C	TOTAL DEPTH:	19.0 ft BGS
NOTES:		LOGGED BY: J. Conzelmann/T. King			/T. King	CHECKED BY: M.	Mastbaum/A. Brey	
DEPTH (ft) (ft) LOG USCS	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL	(mqq) DIA	CON	WELL ISTRUCTION
5- 5- 5- 5- 5- 5- 5- 5- 5- 5-	of brown, reddish brown, and s; moist; medium dense; silty clay; trace rootlets; little well oncrete/brick debris. debris. oncrete fragments. ostly wood debris with brick p ain shards. ole impact.	d gray; trace y with trace graded pieces and a		8.3				
						6.5		
10 10 10 CL CL CL CL CL CL CL CL CL CL	ncluding larger wood debris; ce; some taffy-like black sticl <u>sheen.</u>	~4" by 3" /- ky material / / / / / / / / / / / / / / /		10.8		10.1 35 55	-@17': V collected	/OC/SVOC sample
Gray trace mica gray banding; de sandy structure. No odor, No visit	ceous grains; dark gray, purp nse; slightly moist; and cohe ole impact.	plish and light sive, brittle,					-@18.9':	VOC/SVOC
Backfilled with b	entonite chips to ground sufface	face.						
SynTerra 148 River Street, Suite	220						PROJECT LOCATIO	DN: Greenville, SC
Greenville, South Caro Phone: 864-421-9999							PAGE 1 OF 1	

PROJ	IECT:	For	mer Bramlette Road MGP Site	WELL / BORING NO: T7-SB2						
PROJ	IECT NO:	102	26.800	STARTED: 3/15/19				COMPLETED:	3/15/19	
DRILI	ING CO	MPAN	Y: Cascade Drilling	NORTHIN	G:	1	104184	.201	EASTING:	1574150.663
DRILI	ING ME	THOD	Rotary Sonic	G.S. ELEV	:	9	33.49 fi	t MSL	M.P. ELEV:	933.49 ft MSL
BORE	EHOLE D	IAMET	TER: 6 IN	DEPTH TO WATER: N/A ft TOC			C	TOTAL DEPTH:	19.0 ft BGS	
NOTE	S:			LOGGED	BY:	J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Brey
DEPTH (ft)	GRAPHIC LOG	nscs	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL	(mqq)	CON	WELL ISTRUCTION
5-		ML	 FILL; Reddish brown; mostly sandy silt with little w gravel and sporadic brick/concrete debris; loc and trace clay. Q 0' - 0.8' Wet; and Q 0.5' - 0.8' Layer of t pieces Q 7.6' - 8' Rock Q 8.1' - 9' Dark brownish gray; some wood black plastic (rubbery) piece (~3" long); and I plastic shard Q 8.5' Layered green/olive colored carpet-li No odor, No visible impact. 	ell-graded sse; moist; proken brick fragments; ight blue ke felt layer		9.0				
10-		ML CL	FILL; Same as above with some wood debris and t fragments; wet. <u>No odor, No visible impact.</u> CLAY, lean; Gray; trace micaceous grains with brown and mottling layers; medium plasticity; medium fr then grades to stiff; moist; trace fine sand an rootlets. No odor, No visible impact.	broken brick						
RAMLETTE NAPL V2.GPJ GINT STD A4 ASTM LAB.GDT 5/15/19 51		SP SW	SAND; White-gray-black; micaceous grains; fine-me graded; medium dense; moist; trace clay; me No odor, No visible impact. SAND; White-gray-black; trace micaceous grains; fir well-graded; moist; medium dense; trace laye sand. No odor, No visible impact. SAPROLITE; Gray; trace micaceous grains with dark gray; and light gray banding; cohesive/brittle struct pulverized by drilling. No odor, No visible impact. End of Boring @ 19' below ground surface Backfilled with bentonite chips to ground surface	dium; poorly edium dense.	228	9.7			-@15.5' sample (: VOC/SVOC collected
GD-VIDECBF	5 Jerr		/nTerra ł8 River Street, Suite 220 reenville, South Carolina 29601			<u> </u>	<u> </u>		CLIENT: Duke Ener PROJECT LOCATIO	gy Carolinas, LLC. DN: Greenville, SC
g - " ·			IUIIE. 804-421-9999							PAGE 1 OF 1
PROJEC	CT:	For	mer Bramlette Road MGP Site	WELL / BO	ORINO	G NO:	-	Г7-SB	3	
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PROJEC	CT NO:	102	26.800	STARTED:		3/	15/19		COMPLETED:	3/15/19
DRILLIN		MPAN	Y: Cascade Drilling	NORTHIN	G:	1	104166	.043	EASTING:	1574158.925
DRILLIN	NG MET	THOD	Rotary Sonic	G.S. ELEV	:	9	33.37 f	MSL	M.P. ELEV:	933.37 ft MSL
BOREH	OLE DI	IAMET	TER: 6 IN	DEPTH TO	WA	TER: N	I/A ft TC	C	TOTAL DEPTH:	19.0 ft BGS
NOTES:	:			LOGGED	LOGGED BY: J. Conzelmann/T. King		/T. King	CHECKED BY: M.	Mastbaum/A. Brey	
DEPTH (ft)	GRAPHIC LOG	NSCS	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL IMPACTS	(mqq) DIA	CON	WELL
		ML	FILL; Various shades of brown and reddish brown; fine micaceous sand; trace clay; some gravel gravel-sized debris of brick, concrete, and as dense; moist; trace rootlets; occasional large of debris throughout. No odor, No visible impact.	silt with trace l and phalt; medium r (2-5") pieces		8.2				
10-			TIMBER DEBRIS; Layered wood debris in above matrix; dark gr Woody/pine odor, No visible impact. TIMBER DEBRIS; Same as above. No odor, No visible impact.	ay. /			-			
		CL	 CLAY, lean; Gray; trace micaceous grains with some brow brown mottling; medium plasticity; stiff; moist sand and silt. @ 10.4' - 11.4' Sporadic seams of dark gray discoloration adjacent to woody debris/rootlet No odor, No visible impact. 	wn and olive t; trace fine y/black s.						
ASTM LAB.GDT 5/15/19		SW	SAND; White-gray-black; micaceous grains; trace cla fine-medium well-graded with finer poorly gra mixed in. - @ 13.1' - 14' Clayey. - @ 15.6' - 15.8' Clayey. No odor, No visible impact.	ay; aded layers		10.3				
NAPL V2.GPJ GINT STD A4 / 또		SW	SAND; White-gray-black; micaceous grains; medium including small gravel; well graded; loose; mo - @ 17.2' - 17.4' Some finer sand mixed in at No odor, No visible impact. SAPROLITE; Gray; trace micaceous grains with dark gray; and light gray banding; trace dark green; coh structure partially pulverized.	n-coarse bist. bove saprolite. dark purplish esive, brittle					-@16':∿ collected	/OC/SVOC sample
BRAMLETTE	012		No odor, No visible impact. End of Boring @ 19' below ground surface Backfilled with bentonite chips to ground surf	ace.						
DEC		S	<i>i</i> nTerra						CLIENT: Duke Ener	gy Carolinas, LLC.
>-	2	14	8 River Street, Suite 220						PROJECT LOCATIO	ON: Greenville, SC
synl	erra		none: 864-421-9999							PAGE 1 OF 1

PROJECT: For	rmer Bramlette Road MGP Site	WELL / BC	RING	NO:	-	Г8-SE	81	
PROJECT NO: 102	26.800	STARTED:		3/	13/19		COMPLETED:	3/13/19
DRILLING COMPAN	Y: Cascade Drilling	NORTHING	G:	1	104031	.912	EASTING:	1574185.892
DRILLING METHOD	: Rotary Sonic	G.S. ELEV		9	31.27 f	MSL	M.P. ELEV:	931.27 ft MSL
BOREHOLE DIAMET	rer: 6 IN	DEPTH TO WATER: N/A ft TOC			C	TOTAL DEPTH:	19.0 ft BGS	
NOTES:		LOGGED E	3Y: J	. Conz	elmann	/T. King	CHECKED BY: M	. Mastbaum/A. Brey
DEPTH (ft) (ft) LOG USCS	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL	(mqq) DIG	COM	WELL ISTRUCTION
	FILL: Reddish brown; low plasticity; soft-medium; r small and coarse gravel; trace organic matter sand. @ 2.5' - 5' Brick and concrete fragments. No odor, No visible impact.	noist; some r (roots); little		7.4				
	FILL: Grayish brown; low plasticity; soft-medium; n fine sand; organic matter (roots). @ 8' - 8.5' Heavy staining; strong hydrocarbc contains coal fragments and taffy-like tar mai wood debris.	noist; trace on odor; terial; small				45		
4 43TMLAB.GDT 5/15/19	SAND; White-gray-black; micaceous grains; fine-coa graded; medium dense; moist; trace clayey s rootlets. No odor, No visible impact.	arse; well ection and		7.8				
LETTE NAPL V2.GPJ GINT STD A	SAPROLITE; White-gray-black; micaceous; dark gray and banded; cohesive and brittle structure; slightly No odor, No visible impact. End of Boring @ 19' below ground surface	grayish purple y stiff; moist.						
3RAM	Backfilled with bentonite chips to ground surf	face.						
	1				I		CLIENT: Duke Ener	gy Carolinas. LLC
	ynTerra 18 River Street, Suite 220						PROJECT LOCATIO	ON: Greenville. SC
	reenville, South Carolina 29601							
	hone: 864-421-9999							PAGE 1 OF 1

PROJ	IECT:	For	mer Bramlette Road MGP Site	WELL / BO	ORINO	G NO:	-	Г8-SE	32	
PROJ	IECT NO:	102	26.800	STARTED		3/	12/19		COMPLETED: 3/12/19	
DRILI	ING CO	MPAN	Y: Cascade Drilling	NORTHIN	G:	1	104039	.42	EASTING: 1574204.891	1
DRILI	ING ME	THOD:	Rotary Sonic	G.S. ELEV	/ :	9	31.31 f	MSL	M.P. ELEV: 931.31 ft MS	SL
BORE	EHOLE D	IAMET	ER: 6 IN	DEPTH TO	O WA	TER: N	I/A ft TC	C	TOTAL DEPTH: 34.0 ft BGS	
NOTE	ES:			LOGGED	BY:	J. Conz	elmann	/T. King	CHECKED BY: M. Mastbaum/A.	Brey
DEPTH (ft)	GRAPHIC LOG	NSCS	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL IMPACTS	(mqq) DIG	WELL CONSTRUCTION	
		CL	 FILL, lean clay; Various shades of light brown, brown, reddisl plasticity; moist; little silt; little well graded sar medium consistency. @ 0.5' Cobble debris pieces, ~4" diameter. @ 3' Porecelin debris. No odor, No visible impact. 	h brown; low nd and gravel;						
5-		CL	FILL, lean clay; Dark brown; low plasticity; moist; little silt; tra and small gravel; timber and wood debris pier throughout (3" to 4" long); medium consisten - @ 4.5' Metal debris pieces (~5" by 3"). Faint hydrocarbon odor, No visible impact.	ce fine sand ces cy.		5.3		1.1		
10-		CL	CLAY, lean; Dark, grayish brown; low plasticity; soft; mois grain sand and small gravel; few organic deb @ 9.8' - 10' Reddish brown color. @ 10.1' Grades to stiff. @ 10'-10.4' Olive color. No odor, No visible impact.	t; trace of fine ris (roots).					-@ 10': VOC/SVOC sa collected `@10' - 11': Geotechnic sample collected	mple cal
		SC	SAND, clayey; Gray, micaceous grains; fine to medium grain graded; trace silt; trace organic material (root medium dense. No odor, No visible impact.	n; poorly s); moist;						
0 A4 ASTM LAB.GDT 5/15/19 - 91		sw	SAND; White-gray-black; fine to medium grain; well moist; trace small and large gravel. @ 14' - 14.5' Additional coarse sand. @ 15' - 15.8' Additional coarse sand. @ 15.8' - 16.2' Clayey sand, large gravel piec No odor, No visible impact.	graded, loose; xes.		10.8			-@14' - 15': Geotechnic sample collected	cal
BRAMLETTE NAPL V2.GPJ GINT STL			SAPROLITE; Gray, dark gray banded; micaceous grains; c brittle structure, stiff; slighty moist; fine to me poorly graded sand with little clay. @ 17.6' Grades to lighter gray with little smal gravel (angular). No odor, No visible impact.	ohesive; dium grain; I and large					-@ 17 VOC/SVOC san collected `@17' - 18': Geotechnic sample collected	nple cal
DEC	MAR ALIGHT								CLIENT: Duke Energy Carolinas, L	LC.
ş		Sy 14	River Street, Suite 220						PROJECT LOCATION: Greenville,	SC
syr	Terr	a Gi Ph	reenville, South Carolina 29601 none: 864-421-9999						PAGE 1 O	F 2

PROJECT: Fo	ormer Bramlette Road MGP Site	WELL / BOI	RING	NO:	-	r8-SE	32	
PROJECT NO: 10	026.800	STARTED:		3/	12/19		COMPLETED:	3/12/19
DRILLING COMPAI	NY: Cascade Drilling	NORTHING	i:	1	104039	.42	EASTING:	1574204.891
DRILLING METHO	D: Rotary Sonic	G.S. ELEV:		9	31.31 fl	MSL	M.P. ELEV:	931.31 ft MSL
BOREHOLE DIAME	ETER: 6 IN	DEPTH TO	WAT	ER: N	I/A ft TC	C	TOTAL DEPTH:	34.0 ft BGS
NOTES:		LOGGED B	Y: J	I. Conz	elmann	/T. King	CHECKED BY: M	. Mastbaum/A. Bre
DEPTH (ft) (ft) (ft) (ft) USCS	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL	(mqq)	CO	WELL NSTRUCTION
	Partially Weathered Bedrock; Pulverized; loose; saprolite (Same as above). Light gray; loose; dry; heavily disturbed by dri micaceous; dark gray, brown, olive banding/le broken apart. No odor, No visible impact.	illing; enses when	0	4.9				
30-	Partially Weathered Rock; Same as above. No odor, No visible impact.			8.2				
35-	End of Boring @ 34' below ground surface Backfilled with bentonite chips to ground surf							
							CLIENT: Duke Eng	ray Carolinas II (
	SynTerra						PROJECT I OCATI	ON Greenville S
anterra	Greenville, South Carolina 29601							
syi lielid	Phone: 864-421-9999							PAGE 2 OF

PROJECT: Form	mer Bramlette Road MGP Site	WELL / BC		NO∙	-	F8_SB	3	
PROJECT NO: 1026	6.800	STARTED:		3/	12/19		COMPLETED:	3/12/19
DRILLING COMPANY	/: Cascade Drilling	NORTHING	G: 1104048.36			.36	EASTING:	1574226 365
DRILLING METHOD:	Rotary Sonic	G.S. ELEV	: :	93	32.11 ft	MSL	M.P. ELEV:	932 11 ft MSI
BOREHOLE DIAMETE	ER: 6 IN	DEPTH TO WATER: 6 72 ft TOC			00		10.0 ft BGS	
NOTES.					/T Kina		Mastbaum/A. Brev	
т 2 и			Щ	<u>.</u>	<u></u> 22		ONE ON ED DT.	WELL
DEPTH (ft) (ft) (ft) USCS	DESCRIPTION		SAMPL	RECO/ (FT)	VISUA	(mqq) DIA	CON	ISTRUCTION
5	 FILL, lean clay; Low plasticity; moist; little well graded sand at little silt. @ 0' - 1.2' Soft to medium; trace organic mat orange-brown. @ 1.2' - 1.4' Large concrete fragments. @ 1.5' - 1.8' Large brick fragments. @ 1.4' - 6.1' Mixed dark and reddish brown; s No odor, No visible impact. 	nd gravel; ter (roots); stiff.		7.1			Ţ	
	FILL, lean clay; Dark grayish brown; low plasticity; soft-mediu Timber and wood debris pieces throughout (3 Trace fine sand; trace small and large gravel. Slight pine/woody odor, No visible impact.							
CL	FILL, lean clay;							
10-	little silt; trace organic material (roots); few fir	he sand and						
SW	No visible impact.							
	FILL, sand;	nse: moist:						
	 bark grayish blown, wei graded, meutinn der trace silt; some small and coarse gravel. Hydrocarbon sheen (light) and odor, large gra fragments of slag and coal (archive sample). CLAY, sandy; Gray; micaceous grains; medium plasticity; si trace organic matter (roots). @11.3' - 11.4' Reddish brown banding. 	oft; moist;						
	@11.4' - 12.8' Olive banding. No odor. No visible impact	/		10.0				
SC 15	SAND, clayey; Gray; micaceous grains; fine to medium grair graded; medium dense; moist. No odor. No visible impact			12.3				
	SAND; White-gray-black; micaceous grains; fine to n well-graded; loose; moist. @ 16.6' - 17.2' Additional coarse gravel and t	— — — — — — — nedium grain; race fine						
	yraver. No odor, No visible impact. SAPROLITE, differentially weathered; White-gray-black; micaceous grains; moist. @17.2' - 18.2' Cohesive/brittle structure. @18.2' - 20.2' Loose; non-cohesive; well-grav coarse sand and gravel. No odor, No visible impact. Partially Weathered Rock;	ded; fine to					-@ 17': VOC/S∖	Sample collected for OC
2KAN	grains; loose; dry; heavily disturbed by drilling	.						
Syr 148	nTerra 8 River Street, Suite 220	/				<u>ı </u>	CLIENT: Duke Ener	gy Carolinas, LLC. DN: Greenville, SC
synTerra Gree	eenville, South Carolina 29601 one: 864-421-9999							PAGE 1 OF 2

PROJ	ECT:	For	mer Bramlette Road MGP Site	WELL / BO	RIN	G NO:	-	F8-SE	33	
PROJ	ECT NO:	102	26.800	STARTED:		3/12/19 COMPLETED: 3/12/19				
DRILL	ING CO	MPAN	Y: Cascade Drilling	NORTHIN	G:	1	104048	.36	EASTING:	1574226.365
DRILL	ING ME	THOD	Rotary Sonic	G.S. ELEV	:	9	32.11 fi	MSL	M.P. ELEV:	932.11 ft MSL
BORE	HOLE D	IAMET	TER: 6 IN	DEPTH TO	WA	TER: 6	.72 ft T	OC	TOTAL DEPTH:	19.0 ft BGS
NOTE	S:			LOGGED	BY:	J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Brey
DEPTH (ft)	GRAPHIC LOG	nscs	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL	(mqq)	CON	WELL ISTRUCTION
	GRAI LC	S	DESCRIPTION	face.	SAM	REC		ad)		
	5	S	<i>y</i> nTerra						CLIENT: Duke Ener	gy Carolinas, LLC.
	1	12 C	l8 River Street, Suite 220 reenville, South Carolina 29601						PROJECT LOCATIO	JIN: Greenville, SC
syn	lerr		none: 864-421-9999							PAGE 2 OF 2

PROJ	ECT:	For	mer Bramlette Road MGP Site	WELL / BC	RING	G NO:	-	T9-SB	31	
PROJ	ECT NO:	102	26.800	STARTED:		3/	13/19		COMPLETED:	3/13/19
DRILL	ING CO	MPAN'	Y: Cascade Drilling	NORTHIN	G:	1	104429	9.476	EASTING:	1574181.299
DRILL	ING MET	THOD:	Rotary Sonic	G.S. ELEV	:	9	31.15 f	t MSL	M.P. ELEV:	931.15 ft MSL
BORE	HOLE DI	IAMET	ER: 6 IN	DEPTH TC) WAT	FER: N	I/A ft TC	C	TOTAL DEPTH:	19.0 ft BGS
NOTE	S:			LOGGED BY: J. Conzelmann/T. King				/T. King	CHECKED BY: M	Mastbaum/A. Brey
DEPTH (ft)	GRAPHIC LOG	NSCS	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL IMPACTS	(mqq)	CON	WELL ISTRUCTION
			FILL; Various shades of brown, reddish brown, gre dark gray; well graded sand and gravel; loose rootlets and fibrous materials; few silt in top 4 No odor, No visible impact. FILL; Lean clay; same color as above; low plasticity some well graded sand and gravel; few silt. - @ 4' - 4.5' Crushed rock pieces.	enish brown, r moist; some +". 						
5-			FILL, timber debris; Layered, large wood debris within dark, gray strace fine sand and gravel. - @ 5.5' Long brick fragment. CLAY, sandy;	silt matrix;		9.6				
-		CL	 Gray; micaceous in spots; layers of brown oli and mottling; medium plasticity; moist; some trace rootlets; occasional NAPL discoloration odor. - @ 7.4' NAPL discoloration within sandier lay hydrocarbon odor. - @ 8.8' NAPL discoloration within sandier lay hydrocarbon odor. 	ve coloring fine sand; ; hydrocarbon yer; and yer; and						
10-		SC	SAND, clayey; White-gray-black; micaceous grains; layers o mottiling; fine-medium poorly graded; medium moist; trace NAPL blebs, occasional spots ar dark brown residual of NAPL staining; hydroc - @ 10.5' - 12' Grades to less clayey.	f olive brown n dense; Id seams of carbon odor.				8		
		sw	SAND; White-gray-black; micaceous grains; brown s fine-medium; well graded; medium dense; mo @ 12.3' - 12.7' NAPL coated grains (dark bro hydrocarbon color (strong).	pots mixed in, oist. wn staining);				33.7		
AB.GDT 5/15		SW	White-gray-black; micaceous grains; fine-coa graded with little large and small gravel; loose - @ 13.7' - 13.8' NAPL coated, dark brown st	arse; well e; moist. aining (spot);		11.0				
E NAPL V2.GPJ GINT STD A4 ASTM L/	6°6°6°0°0°0°0°0°0°0°0°0°0°0°0°0°0°0°0°0		 @ 13.9' - 14.5' NAPL saturated, dark brown hydrocarbon odor (strong). SAPROLITE; White-gray-black, dark gray, light gray, and d banded; micaceous grains; trace light pink sp cohesive; brittle structure that is increasingly with depth; slightly moist; stiff. No odor, No visible impact. 	ark purplish pecks; pulverized					-@18':\ collected	/OC/SVOC sample
3RAMLETT	12 E. Y. X-15 (End of Boring @ 19' below ground surface Backfilled with bentonite chips to ground surf	ace.						
DECE			_				I	I	CLIENT: Duke Ener	gy Carolinas, LLC.
	5	Sy 14	nTerra 8 River Street. Suite 220						PROJECT LOCATIO	ON: Greenville, SC
S	Terr		reenville, South Carolina 29601							
9 ~"		S Pr	10116. 004-421-9999							PAGE 1 OF 1

PROJECT:	For	mer Bramlette Road MGP Site	WELL / BO	ORING	G NO:	-	Г9-SB	32	
PROJECT NO:	102	26.800	STARTED	:	3/	13/19		COMPLETED:	3/13/19
DRILLING CO	MPAN	Y: Cascade Drilling	NORTHIN	G:	1	104401	.42	EASTING:	1574195.406
DRILLING ME	THOD:	Rotary Sonic	G.S. ELEV	/ :	9	30.83 f	MSL	M.P. ELEV:	930.83 ft MSL
BOREHOLE D	IAMET	ER: 6 IN	DEPTH TO	D WA	NATER: N/A ft TOC			TOTAL DEPTH:	24.0 ft BGS
NOTES:			LOGGED	BY:	J. Conzelmann/T. King			CHECKED BY: M.	Mastbaum/A. Brey
DEPTH (ft) GRAPHIC LOG	NSCS	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL IMPACTS	(mqq) DIA	CON	WELL ISTRUCTION
	CL	 FILL; Lean clay; various shades of brown, reddish grayish brown; low plasticity; medium; moist; fine-medium sand and gravel; trace rootlets; @ 0' - 1.5' Well-graded sand and less fines No odor, No visible impact. FILL, timber debris; Layered large wood debris within sandy silt m brown. Slight pine/wood odor, No visible impact. Lean Clay; Gray; micaceous in spots; low-medium plasti moist; trace fine sand; silt and rootlets/fibrous some brown and olive layers. @ 6.2' - 6.3' Light staining near interface w debris; sporadic layers of NAPL coating withi strong hydrocarbon odor. 	brown, some some silt. natrix; dark		9.4		90		
	CL	Lean Clay; Gray with brown mottling; micaceous grains;	medium				135		
10-	sc	 No odor, No visible impact. SAND, clayey; White-gray-black; micaceous grains; fine-me graded; low plasticity and medium consistence moist; grades to less clayey. - @ 10.5' - 11.5' Sporadic residual NAPL with discoloration; continuous 5-inch layer @ 11'; hydrocarbon odor. 	dium; poorly cy; trace silt; h darker and strong	-					
GDT 5/15/19	SP	SAND; White-gray-black; micaceous grains; fine-me graded; medium dense; moist. No odor, No visible impact.	edium; poorly		12.3			-@13'-	16': Geotechnical
BRAMLETTE NAPL V2.GPJ GINT STD A4 ASTM LAB	SW	 SAND; White-gray-black; micaceous grains; fine-coa well-graded with small and large gravel (som- moist. @ 14.8' - 15.5' NAPL coating grains; strong odor; dark brown discoloration; light sheen. SAPROLITE; Gray; micaceous grains; dark gray, light gray purplish banding throughout; cohesive and bi partially pulverized by drilling; slightly moist. No odor, No visible impact. 	arse; e); loose; g hydrocarbon y, and dark rittle structure;				100	sample o -@ 19': \ collected	/OC/SVOC sample
		m Torro		•		•	·	CLIENT: Duke Ener	gy Carolinas, LLC.
	3y 14	8 River Street, Suite 220						PROJECT LOCATIO	DN: Greenville, SC
synler	a Gr Př	reenville, South Carolina 29601 none: 864-421-9999							PAGE 1 OF 2

PROJECT: Form	ner Bramlette Road MGP Site	WELL / BO	RING	G NO:		r9-SB	32	
PROJECT NO: 1026	5.800	STARTED:		3/13/19			COMPLETED:	3/13/19
DRILLING COMPANY	: Cascade Drilling	NORTHIN	G:	1	104401	.42	EASTING:	1574195.406
DRILLING METHOD:	Rotary Sonic	G.S. ELEV	:	9	30.83 ft	MSL	M.P. ELEV:	930.83 ft MSL
BOREHOLE DIAMETE	ER: 6 IN	DEPTH TO) WA	FER: N	/A ft TC	C	TOTAL DEPTH:	24.0 ft BGS
NOTES:		LOGGED	3Y: 、	J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Brey
DEPTH (ft) (ft) LOG USCS	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL	(mqq) DIA	CON	WELL ISTRUCTION
$\sum_{i=1}^{n} \left(\frac{1}{2} + \frac{1}{2} +$	SAPROLITE; Gray; micaceous grains; dark gray, light gray purplish banding throughout; cohesive and br partially pulverized by drilling; slightly moist. No odor, No visible impact. <i>(continued)</i>	/, and dark ittle structure;	228	6.8			-@22':\ collected	/OC/SVOC sample
	End of Boring @ 24 Backfilled with bentonite chips to ground surf	ace.						
	лТегга						CLIENT: Duke Ener	gy Carolinas, LLC.
synTerra ¹⁴⁸	3 River Street, Suite 220 senville, South Carolina 29601 one: 864-421-9999						PROJECT LOCATIO	DN: Greenville, SC

PROJ	ECT:	Fo	mer Bramlette Road MGP Site	WELL / BO	ORINO	g NO:		T9-SE	33	
PROJ	ECT NO:	: 102	26.800	STARTED:		3/	13/19		COMPLETED:	3/13/19
DRILI	ING CO	MPAN	Y: Cascade Drilling	NORTHIN	G:	1	104374	.97	EASTING:	1574207.841
DRILI	ING ME	THOD	Rotary Sonic	G.S. ELEV	' :	9	30.72 ft	t MSL	M.P. ELEV:	930.72 ft MSL
BORE	HOLE D	IAMET	TER: 6 IN	DEPTH TO WATER: 3.19 ft TOC			OC	TOTAL DEPTH:	19.0 ft BGS	
NOTE	S:			LOGGED	BY:	J. Conz	elmann	/T. King	CHECKED BY: M.	Mastbaum/A. Brey
DEPTH (ft)	GRAPHIC LOG	nscs	DESCRIPTION		SAMPLE	RECOV. (FT)	VISUAL	(mqq)	CON	WELL ISTRUCTION
5-		SW SM	FILL; Various shades of brown, dark gray, gray, red moist; medium dense; mostly well graded sar pieces of asphalt and concrete. - @ 2.3' - 4.5' More silt/clay. No odor, No visible impact. No odor, No visible impact. FILL, timber debris; Layered large wood debris within dark gray si within trace fine sand; moist. No odor, No visible impact. No odor, No visible impact.	ddish brown; nd with gravel;	-	5.9			Ţ	
10-		SC	SAND, clayey; White-gray-black; micaceous grains; fine-me graded; moist; medium dense; trace dark bro blebs; occasional seams of dark brown NAPL hydrocarbon odor.	dium; poorly wn NAPL _ staining;						
		SP	SAND; White-gray-black; micaceous grains; medium graded; moist; medium dense; occasional da NAPL staining seams. - @ 12.7' - 13.1' Cluster of larger dark brown stained seams; strong hydrocarbon odor.	n poorly rk brown NAPL				36.3		
5TM LAB.GDT 5/15/19 - 91		SW	SAND; White-gray-black; micaceous grains; medium well-graded within some small gravel; medium moist. - @ 13.5' - 13.7' Dark brown NAPL coated gr hydrocarbon odor. - @ 14.2' Dark brown NAPL saturated, separ	n-coarse; m dense; rains; strong rated by ~2"		11.3		88.5 203.7		
TE NAPL V2.GPJ GINT STD A4 AS			unimpacted layer of sand containing finer gra - @ 14.5' - 15.5' Dark brown NAPL saturated hydrocarbon odor. - @ 15.5' - 15.7' Sandy clay layer with NAPL grains where coarse grain layers mix includin with saprolite; strong hydrocarbon odor. SAPROLITE; White-gray-black with dark gray, light gray, al purplish banding; micaceous grains; cohesive structure; increasing pulverized with depth. No odor, No visible impact.	ains. I strong saturated g at interface nd dark e brittle				46.5		
BRAMLET			End of Boring @ 19' below ground surface Backfilled with bentonite chips to ground surf	ace.						
DEC					•		•	. 1	CLIENT: Duke Ener	gy Carolinas, LLC.
ş		14	48 River Street, Suite 220						PROJECT LOCATIO	DN: Greenville, SC
syr	Terr	a ^G	reenville, South Carolina 29601 none: 864-421-9999							PAGE 1 OF 1



	2600 Bull 9	N Street Col	Vater Well Record Bureau of Water umbia SC 29201-1708: (803) 898-4300 Note: Personal information provided on this document is subject to public scrutiny or release
	2000 Dull C		7 DEDMIT NUMPED:
Name: Duke Energy Carolinas,	LLC.		7. PERMIT NOMBER: MW-11615
(last)	(firs	st)	8. USE:
Address: 526 South Church Stree	ŧ		Residential Public Supply Process
City:Charlotte State: N	C Zip: 28	3202	□ Irrigation □ Air Conditioning □ Emergency □ Test Well ☑ Monitor Well □ Replacement
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/27/19
2. LOCATION OF WELL:	COUNTY:Green	nville	64.5 ft. Date Completed:4/1/19
Name:CSXT Bramlette Site			10. CASING: Threaded Welded
Street Address: 411 East Bramle	ette Road		Diam.: 0.25 In. Outer/2 In. Inner Height: Above/Below
City:Greenville	^{Zip:} 29611		Type:
Latitude: 34,850030 Longitur	de: 82 /10525		0 in. to 54 ft. depth Drive Shoe? \Box Yes \Box No
	Je02.41932.)	<u>-2.5</u> in. to <u>64</u> ft. depth
3. PUBLIC SYSTEM NAME: F	PUBLIC SYSTE	M NUMBER:	11. SCREEN: Type: <u>SCH 40 PVC</u> Diam.: <u>2 in.</u>
	7 No		Slot/Gauge: $\frac{0.010}{50}$ Length: $\frac{5 \text{ ft.}}{50}$
Give Details Below	/		Set Between: <u>59</u> ft. and <u>64</u> ft. NOTE: MULTIPLE SCREENS
Grouted Depth: from	_ ft. to	ft.	Sieve Analysis
	*Thickness	Depth to	12. STATIC WATER LEVEL ft. below land surface after 24 hours
Formation Description	of Stratum	Bottom of Stratum	13. PUMPING LEVEL Below Land Surface.
	10.5	10.5	ft. after hrs. Pumping G.P.M.
FILL	10.5	10.5	Pumping Test: Yes (please enclose) No
RESIDUUM	5.5	16	Yield: 14. WATER QUALITY
SAPROLITE	18.5	34.5	Chemical Analysis
PWR	9.5	44	15. ARTIFICIAL FILTER (filter pack) ✓ Yes □ No Installed from 56 ft. to 64.5 ft.
BEDROCK	20	64	Effective size #2 Sand Uniformity Coefficient
			16. WELL GROUTED? ☑ Yes □ No ☑ Neat Cement □ Bentonite □ Bentonite/Cement □ Other Depth: From 0 ft. to 52
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction
			Type Well Disinfected Types Type: Amount:
			Mfr. Name: Model No.:
			H.P Volts Length of drop pipe ft. Capacity gpm
			TYPE: Submersible Jet (shallow) Turbine
			L Jet (deep) L Reciprocating L Centrifugal
			19. WELL DRILLER: VEHIOR D'AIE OISEIL JI. CERT. NO.: 2265 Address: (Print)
			114 Craven I n
			Carthage, NC 28327
*Indicate Water Bearing Zones			Telephone No.: 910-639-3978 Fax No.: 20. WATER WELL DRIVE END OF STITUTED TO A TO
(Use a 2nd sheet if needed)			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief
5. REMARKS:			
MW-03BR			Signed: Vernox Jak Ober for Date: 4/3/19
			Well Driller
6. TYPE: Mud Rotary Jette Dug Air F Cable tool Othe	ed 🛛 🖂 Rotary 🗖 er Sonic	Bored Driven	If D Level Driller, provide supervising driller's name:

dhec	2600 Bull S	M Street, Coli	Vater Well Record Note: Personal informa Bureau of Water provided on this docum umbia, SC 29201-1708; (803) 898-4300 or release
. WELL OWNER INFORMATION:			7. PERMITNUMBER:
Name Synterra	16.00		
Address 148 River street #2	2 <i>0</i>	51)	8. USE: Residential EPublic Supply [] Process
City Greenville State 4.	a 210 2	9601	Imigation I Air Conditioning I Preserve I Test Well Immonitor Well I Replacement
LOCATION OF WELL	Home	mile	9. WELL DEPTH (completed) Date Started 2-22-/9
Street Address HOD Last Bra	mlett Rd.		10. CASING: Withreaded Welded
City Greenville s.C.	110 2960		Theight Above/Below
Latitude Longitud	l¢		an to 5 tt depth Drive Shae? DYes [] No in to B depth
PUBLIC SYSTEM NAME: P	UBLIC SYSTE	M NUMBER;	11. SCREEN Iypa PVC Diam Zinch
ABANDONMENT: Yes Give Details Below	l No		Stot/Gauge 010 Longth 10-14 Sct Between 5 It and 15 ft NOTE: MULTIPLE SCREENS
Grouted Depth from	ft to	Ĥ.	Sieve Analysis 17 Yes (please enclose) 1 No
Formation Description	*Thickness	Depth to Bottom of	12. STATIC WATER LEVEL. It bolow land surface allor 24 ho
	Stratum	Stratum	13. PUMPING LEVEL Brow Land Surface
Sand	5'	5	ft after hrs Pumping fest (1) Yes (please enclose) - Ne
clay	7'	12	14. WATER QUALITY
Sand	3	15'	Chemical Analysis Yes No Bastonal Analysis 1 Yes [] No Please enclose fab results
			15. ARTIFICIAL FILTER (filter pack) Yes L NS Installed from A fit to 15 Effective size IA Uniformity Coefficient
	-		16. WELL GROUTED?) Yes No
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: 11 direction Type
			Well Disinfected T Yes No Type Amount
			18 PUMP: Date installed Net installed Mfr. Name Model No H.P. Volts Length of drop pipe It Capacity gl TYPI Submersible Jet (shallow) Litting
			[[liet/decp] Reciprocating Contribugat
			Addross (Print: 825 N. Matinsfine of Leve A B C Dicircle an New Ellent on S.C.
ndicate Water Bearing Zones			Telephone No lax No
(Use a 2nd sheet if needed)			20 WATER WELL DRILLER'S CERTIFICATION. This we trade durate my direction and this report is true to the best of my knowledge and belief.
ACHARAS:			a
		7 J.	

V dhec 2	:600 Bull S	W I treet, Colu	Vater Well Record Note: Personal information Bureau of Water provided on this document is subject to public scrutiny introdection
1. WELL OWNER INFORMATION: Name Synteira	1 Sec.		7 PERMITNUMBER:
Address 148 River st. \$220 City Greenville State 5.6	> Zip 25	7601	8. USE: 1 Residential I Public Supply I Process 1 I riggation I Air Conditioning I I Emergency 1 Test Well I Replacement
Tolephone Work 1864-421-999 Jone 2. LOCATION OF WELL COUNTY: Greenville			9 WELL DEPTH (completed) Date Started 2-22-/9 3/ ft Date Completed 2-22-/9 10. CASING: Withreaded Weided
Street Address. Hoo East Bra City Greenville Latitude. Longitude	110 29601		Diam Ainch Height Above/Below Type V PVC 11 Calvanized Surface 3 It Little 1 Calvanized Weight Ib-8t in to 2 ft depth Drive Shoe? Little State
3. PUBLIC SYSTEM NAME: PU Mula 4. ABANDONMENT: 1 Yos 1	IBLIC SYSTE	M NUMBER:	11. SCREEN Type PVG Diam 2 Meh Stot-Gauge 26 H and 31 H NOTE: MULTIPLE SCREENS
Give Details Bolow Grouted Depth from	ft to Thickness	fi Depth to Bottom of	In and It USE SECOND SHEET Sidue Analysis Yes please encloses No 12. STATIC WATER LEVEL It below land surface after 24 hours
Sund	Stratum	n Stratum	13 PUMPING LEVEL Brow and Surface It after hrs Pumping GPM Pumping fest Yes (please enclose) No
Clay	7	12	14 WATER QUALITY Chemical Analysis Yes No Bacteria Analysis Yes No
Sapplik	10.51	24'	Please on lose lab (esuits 15. ARTIFICIAL FILTER (fater pack) - Yes I filo Installed from 24 II to 3/ It
Park	2'	31'	Effective size A Uniformity Coefficient 16. WELL GROUTED? (VYes 1) No 1 Neat Coment 1 Bentanite WitchenterComent Other
PSe di occu	5	53	Doptis From ft to ft 17. NEAREST SOURCE OF POSSIBLE CONTAMINATION It direction Type Well Disinfected I ves 1 veg Amount
	-		18. PUMP Date installed Not installed Mr. Name Mode No H P Volts TYPF Submersible [] Jet (deep) [] Recipronating [] Jet (deep)
			19. WELL DRILLER Kay WAITT CERT NO 2225 Address (Print) 825 North Main Street Ieve A B C D (circle one) New Klienton 5.1- 21809
*Indicate Water Bearing Zones (Use a 2nd sheet if needed) 5. REMARKS	-		Tetephane No Lax No 20. WATER WELL DRILLER'S CERTIFICATION. This well was drilled under my direction and this replint is true to the best of my knowledge and beint
			Signed Astronom Date 2-22-1
6. TYPE: FI Mud Rotary FI Jotto (1 Dug 11 Air R (1 Cable tool	d (iotary (r) Kard I Orisen	If D Level Drilter, provide supervising driller's name

Mahac	2600 8-41 0	N I	/ater Well Record Bureau of Water	Note: Personal information provided on this document is subject to public scrutiny
		orreet, Col	umpia, SC 29201-1708; (803) 898-4300	or release.
1. WELL OWNER INFORMATION: Name: Duke Energy Carolinas 1	LC		7. PERMIT NUMBER: MW-11615	
(last)	(firs	it)	8. 11SE	
Address: 526 South Church Street			Residential Public Supply	Process
City:Charlotte State: N(Zip: 28	202	□ Irrigation □ Air Conditioning	Emergency
			Test Well [7] Monitor Well	Replacement
Telephone: Work (980) 373-2663	Home;		9. WELL DEPTH (completed) Date Started: 12/	/4/18
2. LOCATION OF WELL: C	OUNTY:Greet	nville	19.90 ft. Date Completed:	12/5/18
Street Address' 400 Fact During			10. CASING: I Threaded I Welded	m - La
City: Greenwille	Zip' aport		Type: Z PVC Galvanized Surface	(Selow A
	29611		Steel Other Weight	tt
Latitude: 34.859963 Longitude	e: -82.420715	;	0in. to <u>4.90</u> ft. depth Drive Shoe?	🗘 Yes 🔲 No
		M NUMPER.	In to It. depth	
3. POBLIC STATEM NAME. P		W NUMBER:	Type: <u>PVC</u> Diam. 2 in.	
	No		Slot/Gauge: 0.010 Length; 15	
Give Details Below			Set Between: 4.90 ft. and 9.90 ft. No	DTE: MULTIPLE SCREENS
Grouted Depth: from	ft. to	ft.)	Sieve Analysis Ves (please enclose) 2 No	SE SECOND SHEET
	*Thickness	Depth to	12. STATIC WATER LEVEL 11.76 the	low land surface after 24 hours
Formation Description	of Stratum	Bottom of Stratum	13. PUMPING LEVEL Below Land Surface	
	10	10	ft. after hrs. Pumping _	G.P.M.
	10	10	Pumping Test: 🔲 Yes (please enclose) 🖉 No	
RESIDUUM	8	18	Yield:	
	ROLITE 2	20	14. WATER QUALITY	
SAPROLITE			Chemical Analysis () Yes (//No Bacterial Analysis Please enclose lab results.	i []Yes [2]No
			15. ARTIFICIAL FILTER (filter pack) 71 Yes 1 No	
			Installed from 4 ft. to	19.90 ft
			Effective size <u>#2</u> Uniformity Coeffi	cient
·			16. WELL GROUTED? 🕢 Yes 🗔 No	
			☑ Neat Cement ☐ Bentonite ☐ Bentonite/Cement [Other
				<u> </u>
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:	ft direction
			Well Disinfected I Yes I No Type:	Amount:
			18. PUMP: Date installed:	Not installed [7]
			Mfr. Name: Model No.;	
			H.P. Volts Length of drop pipe	ft. Capacity gpm
			IYPE: Submersible Jet (shallow)] Turbine] Centrifucal
			19 WELL DRILLER-Richard Mooney	: NO+1/35
			Address: (Print) Level	ABCD (circle one)
			825 South Main Street, New Ellenton.	/
*Indicate Water Passing Zapas	+		SC 29809	. 15
			20. WATER WELL DRILLER'S CERTIFICATION: This well used	ID.:
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my know	viedge and belief.
5. REMARKS:				
MW-30S				
			Signed: Kalad Mus	Date: 12-19-18
			Well Driller	
6. TYPE: Mud Rotary	d 🖸	Bored	If D Level Driller, provide supervising driller's name:	
Li Dug Air R		Driven		
	UP I/Hollow	stem Auger		

COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

	2600 Bull S	W E treet Colu	Vater Well Record Note: Personal information Bureau of Water provided on this document is subject to public scrutiny or release
I GIICC	2000 Duli Ş		11101a, 30 29201-1700, (003) 090-4300 or release
1. WELLOWNER INFORMATION:		I	7. PERMITNUMBER: MW-11615
Name: Duke Energy Carolinas, L	LC.	1)	
Address 526 South Church Street	6 4 4 1 ad	· ·	8. USE:
City Charlotte State NC	Zip 28	202	Irrigation Air Conditioning Emergency Test Well Z Monitor Well Replacement
Telephone Work (980) 373-2663	Home		9. WELL DEPTH (completed) Date Started: 10/10/18
2. LOCATION OF WELL: C	OUNTY:Green	iville	20 ft. Date Completed 10/11/18
Name:CSXT Bramlette Site			10. CASING: Threaded Uklded
Street Address: Bramlette Road			Diam 2 In. Height Above/Below
City:Greenville	Zip: 29611		Type L2 PVC L3 Galvanized Sunace ft.
Latitude:34,858685 Longitude	e:+82,420131		0in to 5ft. depth Drive Shoe? □ Yes □ No
			11 SCREEN
3. PUBLIC STSTEM NAME: P			Type PVC Diam 2 in.
	L. hla		Slot/Gauge 0.010 Length 15 ft.
4. ABANDONMENT: L Yes La	I NO		Set Between: 5 ft_and 20 ft. NOTE: MULTIPLE SCREENS
Give Details Below	£ 10	ft	t USE SECOND SHEET
	*Thickness	Depth to	Sieve Analysis LI Yes (please enclose) 12 No
Formation Description	of	Bottom of	12. STATIC WATER LEVEL 110 tt. below land surface after 24 hours
	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface.
FILL	9 ft	9 ft	Eumoino Test D Ves (clease enclose) Z No
			Yield
RESIDUUM	5 ft	14 ft	
SAPROLITE	6 ft	20 ft	Chemical Analysis Ves No Bacterial Analysis Ves No Please enclose lab results
	-		15 ARTIEICIAL EILTER (liller pack) [7] Ves 🗌 No
			Installed from 4 ft to 20 ft.
			Effective size 1A Uniformity Coefficient
			16. WELL GROUTED? 17 Yes 17 No
			Neat Cement 📋 Bentonite 🗹 Bentonite/Cement 📋 Other
······································			Depth From 0 ft to 4 ft
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction
		<u> </u>	Type
			Well Disinfected U Yes 12 No Type Amount:
			- 18. PUMP: Date installed Not installed 2
			Mfr Name Model No
			TYPE Submersible Jet (shallow) Turbine
			☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal
			19. WELL DRILLER: J. Hall Jr. CERT. NO.: 1398
			_ Address (Print) Level A B C D (circle one)
			825 South Main Street New Ellenton SC 29809
*Indicate Water Bearing Zones			Telephone No (803) 220-3735 Fax No.
(Line of Ond shoet (Excepted)			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under
		-	my direction and this report is true to the best of my knowledge and belief.
D. REMARNO.			
MW-315			Signed Signed And Alel 9. Date 10/11/18
6. TYPE: Mud Rotary Dug Arr Cable tool Othe	ed C Rotary C er Sonic	Bored Driven	If D Level Driller, provide supervising driller's name

L

COPY 1 MAIL TO SCOHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

		W 1	Vater Well Record Note: Personal information Bureau of Water provided on this document is subject to public scrutiny
Variec	2600 Bull S	treet, Colu	umbia, SC 29201-1708; (803) 898-4300 or release
1. WELL OWNER INFORMATION:			7. PERMITNUMBER: MW-11615
Name: Duke Energy Carolinas, I (last)	LC. (firs	t)	A 1105
Address: 526 South Church Street	eet		8. USE:
City:Charlotte State: N(C Zip: 28	202	Irrigation Air Conditioning Emergency Test Well Ø Monitor Well Replacement
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 10/9/18
2. LOCATION OF WELL: C	OUNTY:Greet	nville	38 ft. Date Completed: 10/10/18
Name:CSXT Bramlette Site			10. CASING: ☑ Threaded
City:Greenville	Zip: 20611		Type: Z PVC C Galvanized Surface ft.
Greenville	27011		Steel Other Weight lb./ft.
Latitude: 34,858727 Longitud	e:-82.420048	5	in. toft. depth Drive Shoe? U Yes U No
3. PUBLIC SYSTEM NAME: P	UBLIC SYSTE	M NUMBER:	11. SCREEN: Type <u>PVC</u> <u>Diam</u> <u>2 in</u>
4. ABANDONMENT: Yes Give Details Below	No		Stot/Gauge: 0.010 Length: 1010 Set Between: 28 ft. and 38 ft. NOTE: MULTIPLE SCREENS
Grouted Depth: from	ft. to	ft.	Sieve Analysis 🔲 Yes (please enclose) 🔽 No
Exemption Description	*Thickness	Depth to Bottom of	12. STATIC WATER LEVEL 12.75 It below land surface after 24 hours
	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface. ft, after hrs. PumpingG.P.M.
FILL	9 ft.	9 16.	Pumping Test: 🗋 Yes (please enclose) 🖉 No
RESIDUUM	5 N.	14 ft.	Yield: 14. WATER QUALITY
SAPROLITE	11 ft.	25 Ĥ.	Chemical Analysis [] Yes @No Bacterial Analysis [] Yes @No Please enclose lab results.
TRANSITION ZONE	9 ft.	34 ft.	15. ARTIFICIAL FILTER (filter pack) ? Yes [] No Installed from 26 ft. to 39
BEDROCK	~~		Effective size 1
			16. WELL GROUTED? [] Yes No In Neat Cement Isentonite Bentonite/Cement Other Depth: From 0 ft. to 26 ft.
·			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction Type
			Wetl Disinfected Yes No Type Amount:
		1	- 18. PUMP: Date installed: Not installed
	,		H.P. Volts Length of drop pipe ft. Capacity gpm
			TYPE: Submersible Jet (shallow) Turbine
			[] Jet (deep) Reciprocating Centrifugal
			19. WELL DRILLER; J. Dati Jr. CERT. NO.: 1398 Address: (Print) Level: A B C D (circle one)
			825 South Main Street New Ellenton SC 29809
*Indicate Water Bearing Zones			Telephone No.: (803) 220-3735 Fax No.: 20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.
5. REMARKS:			
MW-31TZ			Signed Jan a hall fr. Date 10-10-18
6. TYPE: Mud Rotary Jett Dug Air Cable tool	ed 🛛 Rotary 🖾 er Sonic	Bored Driven	If D Level Driller, provide supervising driller's name:

Mohec	Water Well Record Note: Personal information provided on this document is subject to public scruting or release 2600 Bull Street Columbia SC 29201-1708: (803) 898-4300 or release				
	2000 Dull C		7 DEDMIT NI IMPED		
Name: Duke Energy Carolinas, LLC.			7. FERMIT NOWDER.		
(last)	(firs	st)	8. USE:		
Address. 526 South Church Stree	et		Residential Public Supply Process		
City:Charlotte State: N	C Zip: 28	3202	Irrigation Infigation Infi		
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/26/19		
2. LOCATION OF WELL:	COUNTY:Green	nville	ft. Date Completed:3/26/19		
Name:CSXT Bramlette Site			10. CASING: Threaded Welded		
City of the city o	ette Road		Diam.: Height: Above/Below		
Greenville	^{219.} 29611		□ Steel □ Other		
Latitude: 34.860491 Longitud	de:-82.419809)	in. to ft. depth Drive Shoe? □ Yes □ No in. to ft. depth		
3. PUBLIC SYSTEM NAME: F	PUBLIC SYSTE	M NUMBER:	11. SCREEN:		
			Type: Slot/Gauge: Length:		
4. ABANDONMENT: Ves	⊡ No		Set Between: ft. and ft. NOTE: MULTIPLE SCREENS		
Give Details Belov	V ft to	f t	ft. and ft. USE SECOND SHEET		
	*Thickness	Depth to	Sieve Analysis 📋 Yes (please enclose) 🗌 No		
Formation Description	of	Bottom of	12. STATIC WATER LEVEL ft. below land surface after 24 hours		
	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface. ft after hrs Pumping GPM		
FILL	11	11	Pumping Test: Yes (please enclose) No		
RESIDUUM	11.5	22.5	Yield:		
SAPROLITE	1.5	24	Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes ☑ No Please enclose lab results.		
			15. ARTIFICIAL FILTER (filter pack)		
			Installed from ft. to ft.		
			Effective size Uniformity Coefficient		
			16. WELL GROUTED? ☑ Yes □ No □ Neat Cement ☑ Bentonite □ Bentonite/Cement □ Other		
			Depth: From $\underline{0}$ ft. to $\underline{24}$ ft.		
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction		
			Type		
			18. PUMP: Date installed: Not installed		
			Mfr. Name: Model No.:		
			H.P Volts Length of drop pipe ft. Capacity gpm		
			TYPE: Submersible Jet (shallow) Turbine		
			19. WELL DRILLER: Vernon Dale Olsen Jr. CERT. NO.: 2265		
			114 Craven Ln		
*Indicate Water Pooring Zanas			Carthage, NC 28327		
mulcale water bearing zones			Telephone No.: 910-0.39-3978 Fax No.: 20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under		
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.		
5. REMARKS:					
Soil Boring RI-SB1			Vernor Jale Ober by 4/4/2019		
24 feet			Signed Well Driller		
6. TYPE: □ Mud Rotary □ Jetted □ Bored □ Dug □ Air Rotary □ Driven □ Cable tool ☑ Other Sonic			If D Level Driller, provide supervising driller's name:		

Vidhec	Water Well Record Bureau of WaterNote: Personal information provided on this document is subject to public scrutiny or release.2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300or release.				
1. WELL OWNER INFORMATION:			7. PERMIT NUMBER:		
Name: Duke Energy Carolinas, LLC.					
Address: 526 South Church Stree	t (III:	51)	8. USE:		
520 South Church Stee	l		Residential Public Supply Process Kinetic Conditioning Finetic Conditioning Finei		
City:Charlotte State: N	C Zip: 28	3202	Test Well Monitor Well Replacement		
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/26/19		
2. LOCATION OF WELL:	COUNTY:Green	nville	ft. Date Completed:3/26/19		
Name:CSXT Bramlette Site			10. CASING: Threaded Welded		
City: Crasses 11	Zip: 20(11)		Type: PVC Galvanized Surface ft.		
Greenville	29611		□ Steel □ Other Weight lb./ft.		
Latitude: 34.860682 Longitud	de:-82.419684	Ļ	in. to ft. depth Drive Shoe? □ Yes □ No in. to ft. depth		
3. PUBLIC SYSTEM NAME: P	UBLIC SYSTE	M NUMBER:	11. SCREEN:		
			Iype: Slot/Gauge: Length:		
4. ABANDONMENT:	🛛 No		Set Between: ft. and ft. NOTE: MULTIPLE SCREENS		
Give Details Below	/ # to	4	ft. and ft. USE SECOND SHEET		
	*Thickness	Depth to	Sieve Analysis 📋 Yes (please enclose) 🗌 No		
Formation Description	of	Bottom of	12. STATIC WATER LEVEL ft. below land surface after 24 hours		
	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface. ft after brs Pumping GPM		
FILL	10	10	Pumping Test: Yes (please enclose) No		
RESIDUUM	5	15			
SAPROLITE	3	19	Chemical Analysis □ Yes ☑No Bacterial Analysis □ Yes ☑ No Please enclose lab results.		
			15. ARTIFICIAL FILTER (filter pack)		
			Installed from ft. to ft.		
			Effective size Uniformity Coefficient		
			16. WELL GROUTED?		
			Depth: From 0 ft. to 19 ft.		
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction		
			18. PUMP: Date Installed: Not installed Mfr. Name: Model No ·		
			H.P Volts Length of drop pipe ft. Capacity gpm		
			TYPE: 🔲 Submersible 🔛 Jet (shallow) 🔲 Turbine		
			Jet (deep) Reciprocating Centrifugal		
			19. WELL DRILLER: VEHIOR Date OISER JI. CERT. NO.: 2265 Address: (Print) Level: A B C D (circle one)		
			114 Craven Ln		
*Indicate Water Bearing Zones			Carthage, NC 28327 Telephone No : 910-639-3978		
			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under		
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.		
5. REMARKS:			. 0.0 1		
Soil Boring RI-SB2			Signed Vernox Jak Clar by Date: 4/4/2019		
19 leet			Well Driller		
6. TYPE: □ Mud Rotary □ Jetted □ Bored □ Dug □ Air Rotary □ Driven □ Cable tool ☑ Other Sonic			If D Level Driller, provide supervising driller's name:		

Vidhec	Water Well Record Note: Personal information Bureau of Water provided on this document is subject to public scrutint 2600 Bull Street, Columbia, SC 29201-1708: (803) 898-4300 or release				
	2000 Dull C		7 DEDMIT NI IMPED:		
Name: Duke Energy Carolinas, LLC.			7. FERMIT NOWDER.		
(last)	(firs	st)	8. USE:		
Address: 526 South Church Stree	et		Residential Public Supply Process		
City:Charlotte State: N	C Zip: 28	3202	Irrigation Air Conditioning Emergency Test Well Monitor Well Replacement		
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/28/19		
2. LOCATION OF WELL:	COUNTY:Green	nville	ft Date Completed:3/28/19		
Name:CSXT Bramlette Site			10. CASING: Threaded Welded		
City: a w	ette Road		Diam.: Height: Above/Below		
Greenville	^{21p.} 29611		Steel Other Weight lb./ft.		
Latitude: 34.858753 Longitud	de:-82.418833	3	in. toft. depth Drive Shoe? □ Yes □ No in. toft. depth		
3. PUBLIC SYSTEM NAME: F	PUBLIC SYSTE	M NUMBER:	11. SCREEN:		
			Type: Diam.:		
4. ABANDONMENT: Ves	⊡ No		Slot/Gauge: Length: Set Between: ft and ft NOTE: MULTIPLE SCREENS		
Give Details Belov	V		ft. andft. USE SECOND SHEET		
Grouted Depth: from	_ ft. to	ft.	Sieve Analysis 🛛 Yes (please enclose) 🗌 No		
Formation Description	of	Bottom of	12. STATIC WATER LEVEL ft. below land surface after 24 hours		
	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface.		
FILL	5	5	ft. after hrs. Pumping G.P.M.		
			Yield:		
RESIDUUM	8.5	13.5	14. WATER QUALITY		
SAPROLITE	3.5	17	Chemical Analysis □ Yes ☑No Bacterial Analysis □ Yes ☑ No Please enclose lab results.		
			15. ARTIFICIAL FILTER (filter pack)		
			Installed from ft. to ft.		
			Effective size Uniformity Coefficient		
			16. WELL GROUTED?		
			Depth: From 0 ft. to 17 ft.		
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction		
			Type Well Disinfected II Yes II No Type: Amount:		
			18. PUMP: Date installed: Not installed		
			Mfr. Name: Model No.:		
			H.P Volts Length of drop pipe ft. Capacity gpm		
			TYPE: Submersible Jet (shallow) Turbine		
			19. WELL DRILLER: Vernon Dale Olsen Jr. CERT. NO.: 2265		
			Address: (Print) Level: A B C D (circle one)		
			Carthage, NC 28327		
*Indicate Water Bearing Zones			Telephone No.: 910-639-3978 Fax No.:		
(Use a 2nd sheet if needed)			20. WATER WELL DRILLER S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.		
5. REMARKS:					
Soil Boring			11 all A Ame he		
RI-SB3			Signed Certain Signed Date: 4/4/2019		
1 / feet			Well Driller		
6. TYPE: Mud Rotary Jette	ed 🗌	Bored	If D Level Driller, provide supervising driller's name:		
Dug Air F	Rotary	Driven			
□ Cable tool					

	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Street, Columbia, SC 20201, 1709; (802) 808, 4200 ar release				
	2600 Bull 3	Street, Cor	umbla, SC 29201-1708; (803) 898-4300 or release.		
Name: Duke Energy Carolinas, LLC.					
(last)	(firs	st)	8. USE:		
Address: 526 South Church Stree	et		Residential Public Supply Process		
City:Charlotte State: N	C Zip: 28	3202	Irrigation Air Conditioning Emergency Test Well Monitor Well Replacement		
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/14/19		
2. LOCATION OF WELL: 0	COUNTY:Greet	nville	ft. Date Completed:3/14/19		
Name:CSXT Bramlette Site			10. CASING: Threaded Welded		
Street Address: 411 East Bramle	ette Road		Diam.: Height: Above/Below		
City: Greenville	^{Zip:} 29611		I Steel C Other Weight h/ft		
Latitude: 34 860316 Longitud	de: -82 419296	5	in. toft. depth Drive Shoe? □ Yes □ No		
	4002.419290)	in. toft. depth		
3. PUBLIC SYSTEM NAME: F	PUBLIC SYSTE	M NUMBER:	11. SCREEN:		
			Type: Diam.:		
4. ABANDONMENT: Ves	⊡ No		Slot/Gauge: Length: Set Between: ft and ft NOTE: MULTIPLE SCREENS		
Give Details Below	V		ft. andft. USE SECOND SHEET		
Grouted Depth: from	_ ft. to	ft.	Sieve Analysis 🛛 Yes (please enclose) 🗌 No		
Formation Description	*Thickness	Bottom of	12. STATIC WATER LEVEL ft. below land surface after 24 hours		
romation bescription	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface.		
FILL	7	7	ft. after hrs. Pumping G.P.M.		
	-		Pumping lest: 📋 Yes (please enclose) 📋 No Vield:		
RESIDUUM	7	14			
		19	14. WATER GOALITY Chemical Analysis □ Yes ☑ No Bacterial Analysis □ Yes ☑ No		
SAPROLITE	5		Please enclose lab results.		
			15. ARTIFICIAL FILTER (filter pack)		
			Installed from ft. to ft.		
			Effective size Uniformity Coefficient		
			16. WELL GROUTED? 🗹 Yes 🗌 No		
			□ Neat Cement Bentonite Bentonite/Cement Other		
			Well Disinfected I Yes I No Type: Amount:		
			18. PUMP: Date installed: Not installed		
			Mfr. Name: Model No.:		
			H.P Volts Length of drop pipe ft. Capacity gpm		
			IYPE: Submersible Jet (shallow) Iurbine		
			19 WELL DRILLER: David Wilcox		
			Address: (Print) Level: A B C D (circle one)		
			825 S Main Street		
the directo Materia Describer 7			New Ellenton SC 29809		
maicate vvater Bearing Zones			Ielephone No.: X()3-22()-3/35 Fax No.: 20 WATER WELL DRILLER'S CERTIFICATION: This wall was drilled updar		
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.		
5. REMARKS:					
Soil Boring					
T10-SB1			Signed: Date: 3/14/2019		
19 feet			Well Driller		
6. TYPE: Mud Rotary Jette	ed 🗌	Bored	If D Level Driller, provide supervising driller's name:		
Dug Air F	Rotary	Driven			
Cable tool Othe	sonic				

	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Street, Columbia, SC 29201-1708: (803) 898-4300 or release				
	2000 Dull C				
Name: Duke Energy Carolinas, J	LLC.		7. PERMIT NUMBER:		
(last)	(firs	st)	8. USE:		
Address: 526 South Church Street	t		Residential Public Supply Process		
City:Charlotte State: No	C Zip: 28	3202	□ Irrigation □ Air Conditioning □ Emergency		
(000) 070 0 660			I lest Well Monitor Well Replacement		
Telephone: Work: (980) 373-2663			2/12/10		
Name: CSXT Bramlette Site	Journ Gree	nville	ft. Date Completed: 3/13/19		
Street Address: 411 Fast Bramle	tte Road		Diam.: Height: Above/Below		
City:Greenville	Zip: 29611		Type: PVC Galvanized Surface ft.		
	27011		□ Steel □ Other Weight lb./ft.		
Latitude: 34.860303 Longitud	le: -82.419214	Ļ	in. toft. depth Drive Shoe? □ Yes □ No		
3. PUBLIC SYSTEM NAME: P	UBLIC SYSTE	M NUMBER:	11. SCREEN:		
			Type: Diam.:		
4. ABANDONMENT: D Yes] No		Slot/Gauge: Length:		
Give Details Below	,		ft. USE SECOND SHEET		
Grouted Depth: from	ft. to	ft.	Sieve Analysis 🛛 Yes (please enclose) 🗌 No		
Eormation Description	*Thickness	Depth to Bottom of	12. STATIC WATER LEVEL ft. below land surface after 24 hours		
Tornation Description	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface.		
FILL	6	6	ft. after hrs. Pumping G.P.M.		
			Yield:		
RESIDUUM	8	14			
		24	Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes ☑ No		
SAPROLITE	10	24	Please enclose lab results.		
			15. ARTIFICIAL FILTER (filter pack) Yes No		
			Installed fromft. toft.		
			No ■ Neat Cement P Bentonite ■ Bentonite/Cement ■ Other		
			Depth: From 0 ft. to 24 ft.		
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction		
			Туре		
			Well Disinfected LI Yes LI No Type: Amount:		
			18. PUMP: Date installed: Not installed		
			H.P Volts Length of drop pipe ft. Capacity gpm		
			TYPE: Submersible Jet (shallow) Turbine		
			☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal		
			19. WELL DRILLER: David Wilcox CERT. NO.: 01437		
			Address: (Print) Level: A B C D (circle one)		
			New Ellenton SC 29809		
*Indicate Water Bearing Zones			Telephone No.: 803-220-3735 Fax No.:		
(Use a 2nd sheet if needed)			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief		
5. REMARKS:			my uncouon and this report is the to the best of my knowledge and belief.		
Soil Boring					
T10-SB2			Signed Dileant Date 3/13/2019		
24 feet			Well Driller Date:		
6. TYPE: Mud Rotary Jette	d 🗆	Bored	If D Level Driller, provide supervising driller's name		
Dug Air R	otary	Driven			
Cable tool Other	Sonic				

	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Street, Columbia, SC 29201-1708: (803) 898-4300 or release				
	2000 Dull 3	Sileei, Col	7 PERMIT NUMBER		
Name: Duke Energy Carolinas,	LLC.		7. TERMIT ROMBER.		
(last)	(firs	st)	8. USE:		
Address: 526 South Church Stree	t		Residential Public Supply Process		
City:Charlotte State: N	C Zip: 28	3202	□ Irrigation □ Air Conditioning □ Emergency □ Test Well □ Monitor Well □ Replacement		
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/14/19		
2. LOCATION OF WELL:	COUNTY:Green	nville	ft. Date Completed:3/14/19		
Name:CSXT Bramlette Site			10. CASING: Threaded Welded		
Street Address: 411 East Bramle	tte Road		Diam.: Height: Above/Below		
City:Greenville	^{Zip:} 29611		Type: PVC Galvanized Surface ft.		
Latitude: 34 860257 Longitur	6. 82 11017/	1	in. to ft. depth Drive Shoe? □ Yes □ No		
	02.4191/2	÷	in. to ft. depth		
3. PUBLIC SYSTEM NAME: P	UBLIC SYSTE	M NUMBER:	11. SCREEN:		
			Type: Diam.:		
4. ABANDONMENT: Ves	2 No		Slot/Gauge: Length: Set Between: ft and ft NOTE: MULTIPLE SCREENS		
Give Details Below	1		ft. andft. USE SECOND SHEET		
Grouted Depth: from	_ ft. to	ft.	Sieve Analysis 🛛 Yes (please enclose) 🗌 No		
Formation Description	*Thickness	s Depth to Bottom of Stratum	12. STATIC WATER LEVEL ft. below land surface after 24 hours		
	Stratum		13. PUMPING LEVEL Below Land Surface.		
FILL	5.5	5.5	ft. after hrs. Pumping G.P.M.		
			Yield:		
RESIDUUM	9.5	15			
SAPROLITE	4	19	Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes ☑ No Please enclose lab results		
			Installed from ft. to ft.		
			Effective size Uniformity Coefficient		
			16. WELL GROUTED? ✓ Yes □ No □ Neat Cement ✓ Bentonite □ Depth: From 0 ft. to 19		
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction		
			Well Disinfected Ves No Type: Amount:		
			18. PUMP: Date installed: Not installed		
			Mfr. Name: Model No.:		
			H.P Volts Length of drop pipe ft. Capacity gpm		
			IYPE: Submersible Jet (shallow) Iurbine		
			19 WELL DRILLER: David Wilcox CEPT NO: 01/437		
			Address: (Print) Level: A B C D (circle one)		
			825 S Main Street		
*Indicate Water Papering Zanag			New Ellenton SC 29809		
maicale waler bearing 2011es			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under		
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.		
5. REMARKS:					
Soil Boring			2 11. 1		
19 feet			Signed: Date: 3/14/2019		
			Well Driller		
6. TYPE: □ Mud Rotary □ Jette □ Dug □ Air R	d 🗆	Bored Driven	If D Level Driller, provide supervising driller's name:		
□ Cable tool					

	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Stroot, Columbia, SC 20201, 1709; (802) 808, 4200 arrelease				
	2600 Bull 3	Street, Col	umbla, SC 29201-1708; (803) 898-4300 or release.		
Name: Duke Energy Carolinas,	LLC.		7. FERMIT NUMBER.		
(last)	(firs	st)	8. USE:		
Address. 526 South Church Stree	t		Residential Public Supply Process		
City:Charlotte State: N	C Zip: 28	3202	Irrigation Information Informati		
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/14/19		
2. LOCATION OF WELL: 0	COUNTY:Green	nville	ft. Date Completed:3/14/19		
Name: CSXT Bramlette Site			10. CASING: Threaded Welded		
City: C	tte Road		Diam.: Height: Above/Below		
Greenville	29611		□ Steel □ Other Weight lb./ft.		
Latitude: 34.860096 Longitud	le: -82.419359)	in. toft. depth Drive Shoe? □ Yes □ No in. toft. depth		
3. PUBLIC SYSTEM NAME: P	UBLIC SYSTE	M NUMBER:	11. SCREEN:		
			Type: Diam.:		
4. ABANDONMENT: Q Yes	🛛 No		Stot/Gauge: Length: Set Between: ft. and ft. NOTE: MULTIPLE SCREENS		
Give Details Below	ft to	<i>f</i> +	ft. USE SECOND SHEET		
	*Thickness	Depth to	Sieve Analysis 📋 Yes (please enclose) 🗌 No		
Formation Description	of	Bottom of	12. STATIC WATER LEVEL		
	Stratum	Stratum	ft. after hrs. PumpingG.P.M.		
FILL	9	9	Pumping Test: 🔲 Yes (please enclose) 🗌 No		
RESIDUUM	9	18	Yield:		
SAPROLITE	1	19	Chemical Analysis □ Yes ☑No Bacterial Analysis □ Yes ☑ No Please enclose lab results.		
			15. ARTIFICIAL FILTER (filter pack) Yes No		
			Installed from ft. to ft.		
			□ Neat Cement ☑ Bentonite □ Bentonite/Cement □ Other		
			Depth: From 0 ft. to 19 ft.		
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction Type		
			Well Disinfected See No Type: Amount:		
			18. PUMP: Date installed: Not installed		
			Mfr. Name: Model No.:		
			TYPE: \Box Submersible \Box Jet (shallow) \Box Turbine		
			☐ Jet (deep)		
			19. WELL DRILLER: David Wilcox CERT. NO.: 01437		
			Address: (Print) Level: A B C D (circle one)		
			New Ellenton SC 29809		
*Indicate Water Bearing Zones			Telephone No.: 803-220-3735 Fax No.: 20. WATER WELL PRICE CERTIFICATION TO A State of the stat		
(Use a 2nd sheet if needed)			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.		
5. REMARKS:					
Soil Boring					
T11-SB1			Signed: Date: 3/14/2019		
17 1001			Well Driller		
6. TYPE: Mud Rotary	d 🗌	Bored	If D Level Driller, provide supervising driller's name:		
□ Cable tool □ Othe	r Sonic	UIVEII			

	Water Well Record Note: Personal information Bureau of Water provided on this document is subject to public scrutint 2600 Rull Street, Columbia, SC 20201, 1708; (802) 808, 4200 analysis				
	2600 Bull 3	Street, Col	umbla, SC 29201-1708; (803) 898-4300 or release.		
1. WELLOWNER INFORMATION: Name: Duke Energy Carolinas.	LLC.		7. PERMIT NUMBER:		
(last)	(fire	st)	8. USE:		
Address: 526 South Church Stree	t		Residential Public Supply Process		
City:Charlotte State: N	C Zip: 28	3202	Irrigation Air Conditioning Emergency Test Well Monitor Well Replacement		
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/14/19		
2. LOCATION OF WELL:	COUNTY:Green	nville	ft Date Completed:3/14/19		
Name:CSXT Bramlette Site			10. CASING: Threaded Welded		
City: C	tte Road		Diam.: Height: Above/Below		
Greenville	29611		Steel Other Weight lb./ft.		
Latitude: 34.860127 Longitud	de:-82.419276	5	in. to ft. depth Drive Shoe? □ Yes □ No in. to ft. depth		
3. PUBLIC SYSTEM NAME: P	UBLIC SYSTE	M NUMBER:	11. SCREEN:		
			Type: Diam.:		
4. ABANDONMENT:	2 No		Slot/Gauge: Length: Set Between: ft ft NOTE: MULTIPLE SCREENS		
Give Details Below	1		ft. andft. USE SECOND SHEET		
Grouted Depth: from	_ ft. to	ft.	Sieve Analysis 🛛 Yes (please enclose) 🗌 No		
Formation Description	of	Bottom of	12. STATIC WATER LEVEL ft. below land surface after 24 hours		
	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface.		
FILL	9	9	tt. atter hrs. Pumping G.P.M. Pumping Test: □ Yes (please enclose) □ No		
DECIDIUD/	0	17	Yield:		
RESIDUUM	0	1/	14. WATER QUALITY		
SAPROLITE	7	24	Chemical Analysis		
PWR	11	35	15. ARTIFICIAL FILTER (filter pack) Yes No		
DEDDOCK	4	20	Installed from ft. to ft. Effective size Uniformity Coefficient		
BEDROCK	4	39			
			□ Neat Cement ☑ Bentonite □ Bentonite/Cement □ Other		
			Depth: From 0 ft. to 39 ft.		
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction		
			Well Disinfected Yes No Type: Amount:		
			18. PUMP: Date installed: Not installed []		
			Mfr. Name: Model No.:		
			TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine		
			☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal		
			19. WELL DRILLER: David Wilcox CERT. NO.: 01437		
			Address: (Print) Level: A B C D (circle one)		
			825 S Main Street		
*Indicate Water Bearing Zones			Telephone No.: 803-220-3735 Fax No.:		
(lleo a 2nd aboat if readed)			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under		
5. REMARKS:			my direction and this report is true to the best of my knowledge and belief.		
Soil Boring					
T11-SB2			2 2 1 2 and - 3/14/2019		
39 feet			Signed: Date: Date:		
6. TYPE: Mud Rotary Jette	d 🗆	Bored	If D Level Driller, provide supervising driller's name.		
	otary	Driven	To Level Driller, provide supervising drillers harrie.		
□ Cable tool	r Sonic				

	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Street Columbia SC 29201-1708: (803) 898-4300 or release			
Name: Duke Energy Carolinas, J	LLC.		7. PERMIT NUMBER:	
(last)	(firs	st)	8. USE:	
Address: 526 South Church Stree	t		Residential Public Supply Process	
City:Charlotte State: No	C Zip: 28	3202	Irrigation Information Emergency Em	
			VELL DEPTH (completed) Date Started: 3/14/19	
Telephone: Work: (980) 373-2663				
Name:CSXT Bramlette Site	Given Greek	ivine	tt. Date Completed: 3/ 14/ 19	
Street Address: 411 East Bramle	tte Road		Diam.: Height: Above/Below	
City:Greenville	Zip: 29611		Type: PVC Galvanized Surface ft.	
			□ Steel □ Other	
Latitude: 34.860103 Longitud	le: -82.419125	5	In. toft. depth Drive Snoe? □ Yes □ No	
3. PUBLIC SYSTEM NAME: P	UBLIC SYSTE	M NUMBER:	11. SCREEN:	
			Type: Diam.:	
4. ABANDONMENT: 🗆 Yes 🕑] No		Slot/Gauge: Length:	
Give Details Below	,		Set between: It. and It. NOTE. MOLIFIE SCREENS	
Grouted Depth: from	ft. to	ft.	Sieve Analysis 🛛 Yes (please enclose) 🗌 No	
Eormation Description	*Thickness n of Stratum	s Depth to Bottom of Stratum	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
Tornation Description			13. PUMPING LEVEL Below Land Surface.	
FILL	8	8	ft. after hrs. Pumping G.P.M.	
			Yield:	
RESIDUUM	6	14	14. WATER QUALITY	
		10	Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes ☑ No	
SAPROLITE	3	17	Please enclose lab results.	
			15. ARTIFICIAL FILTER (filter pack) Yes No	
			Installed from ft. to ft.	
			Neat Cement	
			Depth: From 0 ft. to 19 ft.	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			Not installed Not installed	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			TYPE: Submersible Jet (shallow) Turbine	
			☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal	
			19. WELL DRILLER: DaVID WIICOX CERT. NO.: 01437	
			825 S Main Street	
			New Ellenton SC 29809	
*Indicate Water Bearing Zones			Telephone No.: 8()3-22()-3735 Fax No.: 20. WATER WELL RDM EDU OFFICIATION TO 100000000000000000000000000000000000	
(Use a 2nd sheet if needed)			20. WALER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief	
5. REMARKS:				
Soil Boring				
T11-SB3			Signed: Date: 3/14/2019	
19 feet			Well Driller	
6. TYPE: Mud Rotary Jette	d 🗆	Bored	If D Level Driller, provide supervising driller's name:	
Dug Air R	otary	Driven		
Cable tool I Other	Source			

	Water Well Record Note: Personal information Bureau of Water provided on this document is subject to public scrutine 2600 Bull Street, Columbia, SC 29201-1708: (803) 898-4300 or release			
	2000 Dull 3	Sileei, Col	7 PERMIT NUMBER	
Name: Duke Energy Carolinas,	LLC.		7. TERMIT ROMBER.	
(last)	(fir	st)	8. USE:	
Address: 526 South Church Stree	t		Residential Public Supply Process	
City:Charlotte State: N	C Zip: 28202		Irrigation Air Conditioning Emergency Test Well Monitor Well Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/20/19	
2. LOCATION OF WELL: 0	COUNTY:Gree	nville	ft. Date Completed:3/20/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
Street Address: 411 East Bramle	ette Road		Diam.: Height: Above/Below	
City:Greenville	^{Zip:} 29611		I Steel C Other Weight Ib /ft	
Latitude: 34 850843 Longitur	he 82 /103/1	1	in. toft. depth Drive Shoe? □ Yes □ No	
Landoc. 34,839845 Longido		L	in. to ft. depth	
3. PUBLIC SYSTEM NAME: F	UBLIC SYSTE	M NUMBER:	11. SCREEN:	
			Type: Diam.:	
4. ABANDONMENT: Ves	🛛 No		Slot/Gauge: Length:	
Give Details Below	I		ft. andft. USE SECOND SHEET	
Grouted Depth: from	_ ft. to	ft.	Sieve Analysis 🛛 Yes (please enclose) 🗌 No	
Formation Description	*Thickness	Depth to	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
Formation Description	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface.	
FILL	9	9	ft. after hrs. Pumping G.P.M.	
	,	-	Pumping Test: Yes (please enclose) No	
RESIDUUM	8	17		
			14. WALER QUALITY Chemical Analysis □ Yes ☑ No Bacterial Analysis □ Yes ☑ No	
SAPROLITE	2	19	Please enclose lab results.	
			15. ARTIFICIAL FILTER (filter pack) Yes No	
			Installed from ft. to ft.	
			Effective size Uniformity Coefficient	
			16. WELL GROUTED? ✓ Yes No □ Neat Cement ✓ Bentonite □ Bentonite/Cement □ Other □ Depth: From 0 ft. to 19 ft.	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			. Type Well Disinfected Type Amount:	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			TYPE: Submersible Jet (shallow) Turbine	
] Jet (deep) Reciprocating Centrifugal	
			19. WELL DRILLER: D'aVIG W1ICOX CERT. NO.: 01437	
			825 S Main Street	
			New Ellenton SC 29809	
*Indicate Water Bearing Zones			Telephone No.: 803-220-3735 Fax No.:	
(Use a 2nd sheet if needed)			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief	
5. REMARKS:			my direction and this report is true to the best of my knowledge and belief.	
Soil Boring				
T12-SB1			2 / Lan L 3/20/2019	
19 feet			Signed: Date: 5/20/2017	
6. TYPE: Mud Rotary Jette Dug Air F Cable tool Othe	d 🗆 Rotary 🗆 r Sonic	Bored Driven	If D Level Driller, provide supervising driller's name:	

	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Street Columbia SC 29201-1708: (803) 898-4300			
	2600 Bull 3	Street, Col	uffibila, SC 29201-1708; (803) 898-4300 or release.	
Name: Duke Energy Carolinas,	LLC.		7. FERMIT NUMBER.	
(last)	(firs	st)	8. USE:	
Address: 526 South Church Stree	et		Residential Public Supply Process	
City:Charlotte State: N	C Zip: 28	3202	Test Well Monitor Well Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/20/19	
2. LOCATION OF WELL:	COUNTY:Greet	nville	ft. Date Completed:3/20/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
City: a street Address: 411 East Bramle	ette Road		Diam.: Height: Above/Below	
Greenville	^{21p.} 29611		Stringer Stringer Stringer	
Latitude: 34.859812 Longitur	de:-82.419200)	in. toft. depth Drive Shoe? □ Yes □ No in. toft. depth	
3. PUBLIC SYSTEM NAME:	PUBLIC SYSTE	M NUMBER:	11. SCREEN:	
			Type: Diam.:	
4. ABANDONMENT: Q Yes [⊡ No		Slot/Gauge: Length: Set Between: ft. and ft. NOTE: MULTIPLE SCREENS	
Give Details Below	V		ft. and ft. USE SECOND SHEET	
Grouted Deptn: from	_ IT. TO *Thickness	Depth to	Sieve Analysis 🛛 Yes (please enclose) 🗌 No	
Formation Description	of	Bottom of	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface. ft. after hrs. Pumping G.P.M.	
FILL	9	9	Pumping Test: Yes (please enclose) No	
RESIDUUM	9	18	Yield:	
SAPROLITE	1	19	Chemical Analysis □ Yes ☑ No Bacterial Analysis □ Yes ☑ No Please enclose lab results.	
			15. ARTIFICIAL FILTER (filter pack)	
			Installed from ft. to ft.	
			16. WELL GROUTED? ☑ Yes □ No □ Neat Cement ☑ Bentonite □ Bentonite/Cement □ Other Depth: From 0 ft. to 19 ft.	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			iype Well Disinfected □ Yes □ No Type: Amount:	
			18. PUMP: Date installed: Not installed	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal	
			19. WELL DRILLER: David Wilcox CERT. NO.: 01437	
			Address: (Print) Level: A B C D (circle one)	
			825 S Main Street	
*Indicate Water Bearing Zones			Telephone No.: 803-220-3735 Fax No.:	
(Lico a 2nd about if readed)			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under	
5. REMARKS:			my direction and this report is true to the best of my knowledge and belief.	
Soil Boring				
T12-SB2			20/2019 3/20/2019	
19 feet			Signed: Date: Date: Date: Date:	
6. TYPE: Mud Rotary Jette Dug Air F Cable tool Othe	ed 🛛 Rotary 🗆 er Sonic	Bored Driven	If D Level Driller, provide supervising driller's name:	

	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Street, Columbia, SC 29201-1708: (803) 898-4300 or release			
	2000 Dull 3	Sileei, Col	7 PERMIT NUMBER	
Name: Duke Energy Carolinas,	LLC.			
(last)	(fir	st)	8. USE:	
Address: 526 South Church Stree	t		Residential Public Supply Process	
City:Charlotte State: N	[C Zip: 28202		Irrigation Air Conditioning Emergency Test Well Monitor Well Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/20/19	
2. LOCATION OF WELL:	COUNTY:Gree	nville	ft. Date Completed:3/20/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
Street Address: 411 East Bramle	ette Road		Diam.: Height: Above/Below	
City:Greenville	^{Zip:} 29611		I I I I I I I I I I I I I I I I I I I	
Latitude: 34 850704 Longitur	40. 82 /10121	1	in. toft. depth Drive Shoe? Yes No	
Landoc. 34.839794 Longitud		L	in. to ft. depth	
3. PUBLIC SYSTEM NAME: F	UBLIC SYSTE	M NUMBER:	11. SCREEN:	
			Type: Diam.:	
4. ABANDONMENT: Ves	🛛 No		Slot/Gauge: Length:	
Give Details Below	I		ft. andft. USE SECOND SHEET	
Grouted Depth: from	_ ft. to	ft.	Sieve Analysis 🛛 Yes (please enclose) 🗌 No	
Formation Description	*Thickness	Depth to	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
Formation Description	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface.	
FILL	9	9	ft. after hrs. Pumping G.P.M.	
	,	-	Pumping Test: 🔲 Yes (please enclose) 🗌 No	
RESIDUUM	8	17		
			14. WATER QUALITY Chemical Analysis □ Yes ☑No Bacterial Analysis □ Yes ☑ No	
SAPROLITE	2	19	Please enclose lab results.	
			15. ARTIFICIAL FILTER (filter pack)	
			Installed from ft. to ft.	
			Effective size Uniformity Coefficient	
			16. WELL GROUTED? ☑ Yes □ No □ Neat Cement ☑ Bentonite □ Bentonite/Cement □ Other □ Depth: From 0 ft. to 19	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			Well Disinfected Yes No Type: Amount:	
			18 PLIMP: Date installed:	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			TYPE: Submersible Jet (shallow) Turbine	
			L Jei (deep) L Reciprocating L Centrifugar	
			19. WELL DRILLER: David Willow CERT. NO.: U143 / Address: (Print) Level: A B C D (circle one)	
			825 S Main Street	
			New Ellenton SC 29809	
*Indicate Water Bearing Zones			Telephone No.: 8()3-22()-3735 Fax No.: 20. WATER WELL RDM EDU OFFICIATION TO 100000000000000000000000000000000000	
(Use a 2nd sheet if needed)			20. WALER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief	
5. REMARKS:				
Soil Boring				
T12-SB3			Simul 2012an - 3/20/2019	
19 feet			Signed: Date: Date:	
6. TYPE: Mud Rotary Dug Air F Cable tool Othe	Rotary D	Bored Driven	If D Level Driller, provide supervising driller's name:	

	Water Well Record Note: Personal inform Bureau of Water provided on this docu 2600 Bull Street SC 29201-1708: (803) 898-4300			
	2000 Bull 3	Sileei, Col	7 PERMIT NUMBER	
Name: Duke Energy Carolinas,	LLC.			
(last)	(fir	st)	8. USE:	
Address: 526 South Church Stree	t		Residential Public Supply Process	
City:Charlotte State: N	C Zip: 28	3202	Irrigation Air Conditioning Emergency Test Well Monitor Well Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/20/19	
2. LOCATION OF WELL: 0	COUNTY:Gree	nville	ft. Date Completed:3/20/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
Street Address: 411 East Bramle	ette Road		Diam.: Height: Above/Below	
City: Greenville	^{Zip:} 29611		Strace tr.	
Latitude: 34.859551 Longitud	de: -82.419344	1	in. toft_depth Drive Shoe? ☐ Yes ☐ No	
3 PUBLIC SYSTEM NAME: P			11. SCREEN:	
3. TOBEIC STOTEM NAME.			Type: Diam.:	
	P No		Slot/Gauge: Length:	
Give Details Below	/		Set Between:ft. andft. NOTE: MULTIPLE SCREENS	
Grouted Depth: from	_ ft. to	ft.	Sieve Analysis \Box Yes (please enclose) \Box No	
	*Thickness	Depth to	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
Formation Description	of Stratum	Bottom of Stratum	13. PUMPING LEVEL Below Land Surface.	
		0	ft. after hrs. Pumping G.P.M.	
FILL	9	9	Pumping Test: Yes (please enclose) No	
RESIDUUM	4	13	Yield:	
			14. WATER QUALITY	
SAPROLITE	2.5	15.5	Please enclose lab results.	
BEDROCK	3.5	19	15. ARTIFICIAL FILTER (filter pack) □ Yes □ No	
			Installed from ft. to ft.	
			Neat Cement ☑ Bentonite ☐ Bentonite/Cement ☐ Other	
			Depth: From 0 ft. to 19 ft.	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			Well Disinfected I Yes I No Type: Amount:	
			18. PUMP: Date installed: Not installed	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			TYPE:SubmersibleJet (shallow)Turbine	
			19 WELL DRILLER: David Wilcox CERT NO:01437	
			Address: (Print) Level: A B C D (circle one)	
			825 S Main Street	
*Indicate Water Bearing Zonos			New Ellenton SC 29809	
maicale water bearing 201185			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under	
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.	
5. REMARKS:				
Soil Boring				
T13-SB1			Signed: Date: 3/20/2019	
171001			Well Driller	
6. TYPE: Mud Rotary Jette	d 🗌	Bored	If D Level Driller, provide supervising driller's name:	
□ Dug □ Air Rotary □ Driven □ Cable tool				

	Water Well Record Note: Personal information provided on this document is subject to public scrutiny or release 2600 Bull Street Columbia SC 29201-1708: (803) 898-4300 avr release			
	2600 Bull 3	Street, Col	umbla, SC 29201-1708; (803) 898-4300 or release.	
1. WELL OWNER INFORMATION:	ИС		7. PERMIT NUMBER:	
(last)	LLC.	st)		
Address: 526 South Church Stree	et		Residential Public Supply Process	
City:Charlotte State: N	IC Zip: 28202		□ Irrigation □ Air Conditioning □ Emergency □ Test Well □ Monitor Well □ Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/20/19	
2. LOCATION OF WELL:	COUNTY:Gree	nville	ft. Date Completed:3/20/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
Street Address: 411 East Bramle	ette Road		Diam.: Height: Above/Below	
City:Greenville	Zip: 29611		Type: D PVC D Galvanized Surface tt.	
Latitude: 3/ 859506	de: 87/1073()	in. toft. depth Drive Shoe? □ Yes □ No	
Lanude. 34.839300 Longitu	ue02.41923)	in. to ft. depth	
3. PUBLIC SYSTEM NAME: F	UBLIC SYSTE	M NUMBER:	11. SCREEN:	
			Type: Diam.:	
4. ABANDONMENT: D Yes	⊡ No		Slot/Gauge: Length: Set Between: ft and ft NOTE: MULTIPLE SCREENS	
Give Details Belov	V		ft. andft. USE SECOND SHEET	
Grouted Depth: from	_ ft. to	ft.	Sieve Analysis 🛛 Yes (please enclose) 🗌 No	
Formation Description	*Thickness	Bottom of	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
romation Description	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface.	
FILL	4.5	4.5	ft. after hrs. Pumping G.P.M.	
			Pumping lest: 📋 Yes (please enclose) 📋 No Vield:	
RESIDUUM	10.5	15		
		19	Chemical Analysis □ Yes ☑ No Bacterial Analysis □ Yes ☑ No	
SAPROLITE	4		Please enclose lab results.	
			15. ARTIFICIAL FILTER (filter pack)	
			Installed from ft. to ft.	
			Effective size Uniformity Coefficient	
			16. WELL GROUTED? ✓ Yes No □ Neat Cement ✓ Bentonite □ Bentonite/Cement □ Other Depth: From 0 ft. to 19	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			Type Well Disinfected □ Ves □ No _Type: Amount:	
			Mot installed Not installed Model No.: _	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			TYPE: Submersible Jet (shallow) Turbine	
			19. WELL DRILLER: D'avia willow CERT. NO.: 0143 / Address: (Print) Level: A B C D (circlo ono)	
			825 S Main Street	
			New Ellenton SC 29809	
*Indicate Water Bearing Zones			Telephone No.: 803-220-3735 Fax No.:	
(Use a 2nd sheet if needed)			20. WALCK WELL DRILLER 3 CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.	
5. REMARKS:				
Soil Boring				
T13-SB2			Signed: Date: 3/20/2019	
19 feet			Well Driller	
6. TYPE: Mud Rotary Jette Dug Air F Cable tool Othe	ed 🛛 Rotary 🗆 er Sonic	Bored Driven	If D Level Driller, provide supervising driller's name:	

	Water Well Record Note: Personal information Bureau of Water provided on this document is subject to public scrutine 2600 Pull Street, Columbia, SC 20201, 1708; (802) 808, 4200 arrs/sees			
	2600 Bull 3	Street, Col	umbla, SC 29201-1708; (803) 898-4300 or release.	
Name: Duke Energy Carolinas, 1	LLC.		7. FERMIT NUMBER.	
(last)	(fir	st)	8. USE:	
Address: 526 South Church Stree	t		Residential Public Supply Process	
City:Charlotte State: N	C Zip: 28202		□ Irrigation □ Air Conditioning □ Emergency □ Test Well □ Monitor Well □ Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/20/19	
2. LOCATION OF WELL: 0	COUNTY:Gree	nville	ft. Date Completed:3/20/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
City a city of the	tte Road		Diam.: Height: Above/Below	
Greenville	^{21p:} 29611		String St	
Latitude: 34.859472 Longitud	de:-82.419155	5	in. toft. depth Drive Shoe? □ Yes □ No	
3 PUBLIC SYSTEM NAME: P			11. SCREEN:	
	000000000		Type: Diam.:	
4. ABANDONMENT: Ves] No		Slot/Gauge: Length:	
Give Details Below	1		Set Between: ft. and ft. NOTE: MULTIPLE SCREENS ft. and ft USE SECOND SHEET	
Grouted Depth: from	_ ft. to	ft.	Sieve Analysis Yes (please enclose) No	
Formation Deconintian	*Thickness	s Depth to Bottom of Stratum	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
Formation Description	Stratum		13. PUMPING LEVEL Below Land Surface.	
FILL	9	9	ft. after hrs. Pumping G.P.M.	
	-	-	Pumping Test: Yes (please enclose) No Yield:	
RESIDUUM	7	16		
SAPROLITE	3	19	Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes ☑ No Please enclose lab results.	
			15. ARTIFICIAL FILTER (filter pack) Yes No	
			Installed from ft. to ft.	
			Effective size Uniformity Coefficient	
			16. WELL GROUTED? ✓ Yes □ No □ Neat Cement Ø Bentonite □ Depth: From 0 ft. to 19 ft.	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			iype Well Disinfected □ Yes □ No Type: Amount:	
			18. PUMP: Date installed: Not installed	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			I YPE: Submersible Jet (snallow) I urbine	
			19 WELL DRILLER: David Wilcox CERT NO: 01437	
			Address: (Print) Level: A B C D (circle one)	
			825 S Main Street	
*Indicate Water Bearing Zones			New Ellenton SC 29809	
			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under	
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.	
5. REMARKS:				
Soil Boring			2 11.1/2	
113-SB3 19 feet			Signed: Date: 3/20/2019	
			Well Driller	
6. 「YPE: ☐ Mud Rotary ☐ Jette	d 🗌	Bored Driven	If D Level Driller, provide supervising driller's name:	
□ Cable tool				

	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Street Columbia SC 29201-1708: (803) 898-4300 or release			
1. WELL OWNER INFORMATION:	2000 Bull (Sileel, COI	7. PERMIT NUMBER:	
Name: Duke Energy Carolinas,	LLC.			
(last) Address: 526 South Church Stree	(fir:	st)	8. USE:	
520 South Church Stree			Residential Public Supply Process Air Conditioning From From Supply	
City:Charlotte State: N	C Zip: 28	3202	Test Well Monitor Well Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/19/19	
2. LOCATION OF WELL:	COUNTY:Gree	nville	ft Date Completed:3/19/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
Street Address: 411 East Bramle	ette Road		Diam.: Height: Above/Below	
City: Greenville	^{ZIP:} 29611		Type: PVC Galvanized Surrace ft.	
Latitude: 34 850205	de 82 /10069	2	in. toft. depth Drive Shoe? □ Yes □ No	
Lainude. 34,839203 Longitud	ue02.419000)	in. to ft. depth	
3. PUBLIC SYSTEM NAME: F	PUBLIC SYSTE	M NUMBER:	11. SCREEN:	
			Type: Diam.:	
4. ABANDONMENT: Q Yes	⊡ No		StorGauge: Length: Set Between: ft NOTE: MULTIPLE SCREENS	
Give Details Below	V		ft. and ft. USE SECOND SHEET	
Grouted Depth: from	_ ft. to	ft.	Sieve Analysis 🛛 Yes (please enclose) 🗌 No	
Formation Description	* I hickness of	Bottom of	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface.	
FILL	6	6	ft. after hrs. Pumping G.P.M.	
			Pumping lest: 📋 Yes (please enclose) 📋 No Vield:	
RESIDUUM	11	17		
		19	Chemical Analysis 🗌 Yes 🗹 No Bacterial Analysis 🗌 Yes 🗹 No	
SAPROLITE	2		Please enclose lab results.	
			15. ARTIFICIAL FILTER (filter pack)	
			Installed from ft. to ft.	
			Effective size Uniformity Coefficient	
			16. WELL GROUTED? 🗹 Yes 📋 No	
			□ Neat Cement ☑ Bentonite □ Bentonite/Cement □ Other	
			Type	
			Well Disinfected I Yes I No Type: Amount:	
			18. PUMP: Date installed: Not installed	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			TYPE: Submersible Jet (shallow) Turbine	
			to well point on David Wilcox	
			Address: (Print)	
			825 S Main Street	
			New Ellenton SC 29809	
*Indicate Water Bearing Zones			Telephone No.: 803-220-3735 Fax No.:	
(Use a 2nd sheet if needed)			20. WALER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief	
5. REMARKS:			my anection and this report is true to the best of my knowledge and belief.	
Soil Boring				
T14-SB1			2012an L _ 3/19/2019	
19 feet			Signed: Date: Date:	
6. TYPE: Mud Rotary Dug Air F Cable tool Othe	Rotary D Rotary D	Bored Driven	If D Level Driller, provide supervising driller's name:	

	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Street Columbia SC 29201-1708: (803) 898-4300			
	2000 Bull 3	Street, Con	ullibla, SC 29201-1706, (603) 696-4300 or release.	
Name: Duke Energy Carolinas,	LLC.		7. PERMIT NUMBER:	
(last)	(firs	st)	8. USE:	
Address: 526 South Church Stree	et		Residential Public Supply Process	
City:Charlotte State: N	C Zip: 28	3202	Irrigation Irrigation Intercept Air Conditioning Emergency Replacement Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/19/19	
2. LOCATION OF WELL:	COUNTY:Greet	nville	ft. Date Completed:3/19/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
City: a street Address: 411 East Bramle	ette Road		Diam.: Height: Above/Below	
Greenville	^{21p.} 29611		Stinace it.	
Latitude: 34.859238 Longitur	de:-82.418995	5	in. toft. depth Drive Shoe? □ Yes □ No in. toft. depth	
3. PUBLIC SYSTEM NAME:	PUBLIC SYSTE	M NUMBER:	11. SCREEN:	
			Type: Diam.:	
4. ABANDONMENT: Q Yes	⊡ No		Slot/Gauge: Length: Set Between: ft. and ft. NOTE: MULTIPLE SCREENS	
Give Details Below	V		ft. and ft. USE SECOND SHEET	
Grouted Deptn: from	Thickness	Depth to	Sieve Analysis Yes (please enclose) No	
Formation Description	of	Bottom of	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface ft. after hrs. Pumping G.P.M.	
FILL	9	9	Pumping Test: Yes (please enclose) No	
RESIDUUM	4	13	Yield:	
BEDROCK	6	19	Chemical Analysis □ Yes ☑No Bacterial Analysis □ Yes ☑ No Please enclose lab results.	
			15. ARTIFICIAL FILTER (filter pack)	
			Installed from ft. to ft.	
			16. WELL GROUTED? ✓ Yes □ No □ Neat Cement Ø Bentonite □ Bentonite/Cement □ Other Depth: From 0 ft. to 19 ft. ft.	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			i ype Well Disinfected □ Yes □ No Type: Amount:	
			18. PUMP: Date installed: Not installed	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal	
			19. WELL DRILLER: David Wilcox CERT. NO.: 01437	
			Address: (Print) Level: A B C D (circle one)	
			825 S Main Street	
*Indicate Water Bearing Zones			Telephone No.: 803-220-3735 Fax No.:	
(Lico a 2nd about if readed)			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under	
5. REMARKS:			my direction and this report is true to the best of my knowledge and belief.	
Soil Poring				
T14-SB2			2 2 1 ean L _ 3/19/2019	
19 feet			Signed: Date: Date:	
6. TYPE: Mud Rotary Jette	ed 🗆 Rotary 🗆 er Sonic	Bored Driven	If D Level Driller, provide supervising driller's name:	

	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Street Columbia SC 20201-1708: (803) 898-4300			
	2000 Bull 3	Street, Cor	11101a, SC 29201-1706, (803) 896-4300 or release. 2 BERMIT NUMBED.	
Name: Duke Energy Carolinas,	LLC.		7. FERMIT NUMBER.	
(last)	(firs	st)	8. USE:	
Address: 526 South Church Stree	t		Residential Public Supply Process	
City:Charlotte State: N	C Zip: 28	3202	□ Irrigation □ Air Conditioning □ Emergency □ Test Well □ Monitor Well □ Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/19/19	
2. LOCATION OF WELL:	COUNTY:Green	nville	ft. Date Completed:3/19/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
City a city of the	ette Road		Diam.: Height: Above/Below	
Greenville	^{21p.} 29611		Stringer Stringer Stringer	
Latitude: 34.859247 Longitud	de: -82.418942	2	in. toft. depth Drive Shoe? □ Yes □ No	
3 PUBLIC SYSTEM NAME: P			11. SCREEN:	
			Type: Diam.:	
4. ABANDONMENT: Ves	7 No		Slot/Gauge: Length:	
Give Details Below	1		Set Between: ft. and ft. NOTE: MULTIPLE SCREENS	
Grouted Depth: from	_ ft. to	ft.	Sieve Analysis Set (please enclose) No	
	*Thickness	s Depth to Bottom of Stratum	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
Formation Description	Stratum		13. PUMPING LEVEL Below Land Surface.	
FILL	9	9	tt. atter hrs. Pumping G.P.M. Pumping Test: Yes (please enclose) No	
RESIDUUM	4	13	Yield:	
PWR	4.5	17.5	Chemical Analysis □ Yes ☑No Bacterial Analysis □ Yes ☑ No Please enclose lab results.	
BEDROCK	1.5	19	15. ARTIFICIAL FILTER (filter pack) Yes No	
			Installed from π. to π. Effective size Uniformity Coefficient	
			□ Neat Cement ☑ Bentonite □ Bentonite/Cement □ Other	
			Depth: From 0 ft. to 19 ft.	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction Type	
			Well Disinfected I Yes I No Type: Amount:	
			18. PUMP: Date installed: Not installed	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm TVPE: Submersible let (shallow) Turbine	
			☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal	
			19. WELL DRILLER: David Wilcox CERT. NO.: 01437	
			Address: (Print) Level: A B C D (circle one)	
			825 S Main Street	
*Indicate Water Bearing Zones			New Ellenton SC 29809 Telephone No.: 803-220-3735 Fax No.:	
			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under	
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.	
5. REMARKS:				
Soil Boring			ZUNA	
114-5B3 19 feet			Signed: Date: 3/19/2019	
	. –	I	Well Driller	
b. IYPE: □ Mud Rotary □ Jette	d 🗌	Bored Driven	If D Level Driller, provide supervising driller's name:	
□ Cable tool				

	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Pull Street Columbia SC 20201 1708: (202) 208 1200 arreference			
	2600 Bull 3	Street, Cor	7 PERMIT NUMBER:	
Name: Duke Energy Carolinas, LLC.				
(last)	(firs	st)	8. USE:	
Address: 526 South Church Stree	t		Residential Public Supply Process	
City:Charlotte State: No	C Zip: 28	3202	□ Irrigation □ Air Conditioning □ Emergency □ Test Well □ Monitor Well □ Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/19/19	
2. LOCATION OF WELL: 0	COUNTY:Greet	nville	ft. Date Completed:3/19/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
Street Address: 411 East Bramle	tte Road		Diam.: Height: Above/Below	
City: Greenville	^{Zip:} 29611		Type: PVC Galvanized Surrace ft.	
Latitude: 34 858868 Longitud	le: -82 418990)	in. toft. depth Drive Shoe? Yes No	
			in. to ft. depth	
3. PUBLIC SYSTEM NAME: P	UBLIC SYSTE	M NUMBER:	11. SCREEN:	
			Type: Diam.:	
4. ABANDONMENT:	3 No		Stot/Gauge: Length:	
Give Details Below	1		ft. andft. USE SECOND SHEET	
Grouted Depth: from	_ ft. to	ft.	Sieve Analysis 🛛 Yes (please enclose) 🗌 No	
Formation Description	of	Bottom of	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface.	
FILL	9	9	ft. after hrs. Pumping G.P.M.	
			Yield:	
RESIDUUM	7	16		
	2	10	Chemical Analysis □ Yes ☑ No Bacterial Analysis □ Yes ☑ No	
SAPROLITE	3	19	Please enclose lab results.	
			15. ARTIFICIAL FILTER (filter pack)	
			Installed from ft. to ft.	
			Effective size Uniformity Coefficient	
			16. WELL GROUTED? ☑ Yes □ No	
			Depth: From 0 ft. to 19 ft.	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction	
			Туре	
			Well Disinfected I Yes I No Type: Amount:	
			18. PUMP: Date installed: Not installed	
			Mfr. Name: Model No.:	
			TYPE: □ Submersible □ Jet (shallow) □ Turbine	
			☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal	
			19. WELL DRILLER: David Wilcox CERT. NO.: 01437	
			Address: (Print) Level: A B C D (circle one)	
			825 S Main Street	
*Indicate Water Bearing Zones			Telephone No.: 803-220-3735 Fax No.:	
			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under	
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.	
5. REMARKS:				
Soil Boring			ZUNA	
115-5B1 19 feet			Signed: Date: 3/19/2019	
			Well Driller	
6. TYPE: Mud Rotary	d 🗌	Bored	If D Level Driller, provide supervising driller's name:	
□ Cable tool □ Othe	r Sonic			
	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Street Columbia SC 20201-1708: (803) 898-4300			
---------------------------------	--	----------------------	--	--
	2000 Bull 3	Street, Cor	ullibla, SC 29201-1706, (603) 696-4300 or release.	
Name: Duke Energy Carolinas,	LLC.		7. PERMIT NUMBER:	
(last)	(firs	st)	8. USE:	
S26 South Church Stree	et		Residential Public Supply Process	
City:Charlotte State: N	C Zip: 28	3202	Test Well Monitor Well Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/19/19	
2. LOCATION OF WELL:	COUNTY:Greet	nville	ft. Date Completed:3/19/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
City: C	ette Road		Diam.: Height: Above/Below	
Greenville	^{219:} 29611		□ Steel □ Other Weight lb./ft.	
Latitude: 34.858882 Longitu	de:-82.418942	2	in. toft. depth Drive Shoe? □ Yes □ No in. toft. depth	
3. PUBLIC SYSTEM NAME: F	PUBLIC SYSTE	M NUMBER:	11. SCREEN:	
			Type: Diam.: Slot/Gauge: Lepath:	
4. ABANDONMENT:	⊡ No		Set Between: ft. and ft. NOTE: MULTIPLE SCREENS	
Grouted Depth: from	v ft to	ft	ft. USE SECOND SHEET	
	*Thickness	Depth to	Sieve Analysis I ves (please enclose) I No	
Formation Description	of Stratum	Bottom of Stratum	13. PUMPING LEVEL Below Land Surface.	
FILL	9	9	ft. afterhrs. PumpingG.P.M.	
		-	Pumping Test: Yes (please enclose) No Yield:	
RESIDUUM	8	17		
SAPROLITE	7	24	Chemical Analysis □ Yes ☑No Bacterial Analysis □ Yes ☑ No Please enclose lab results.	
BEDROCK	5	29	15. ARTIFICIAL FILTER (filter pack) Yes No	
			Installed from ft. to ft.	
			Neat Cement ☐ Bentonite ☐ Bentonite/Cement ☐ Other	
			Depth: From 0 ft. to 29 ft.	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			Well Disinfected I Yes I No Type: Amount:	
			18. PUMP: Date installed: Not installed	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm TYPE: Submersible Jet (shallow) Turbine	
			□ Jet (deep) □ Reciprocating □ Centrifugal	
			19. WELL DRILLER: David Wilcox CERT. NO.: 01437	
			Address: (Print) Level: A B C D (circle one)	
			825 S Main Street New Ellenton SC 29809	
*Indicate Water Bearing Zones			Telephone No.: 803-220-3735 Fax No.:	
(Use a 2nd sheet if needed)			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief	
5. REMARKS:			my direction and this report is true to the best of my knowledge and belief.	
Soil Boring				
T15-SB2			Signed: Date: 3/19/2019	
29 feet			Well Driller	
6. TYPE: Mud Rotary	ed 🗌	Bored	If D Level Driller, provide supervising driller's name:	
☐ Dug ☐ Air F	Rotary 🗆	Driven		

	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Street, Columbia, SC 29201-1708: (803) 898-4300 or release			
	2000 Dull 3		Impla, SC 29201-1700, (003) 690-4300 or release. 7 DEDMIT NUMBED:	
Name: Duke Energy Carolinas, LLC.			7. FERMIT NOWDER.	
(last)	(fir	st)	8. USE:	
Address: 526 South Church Stree	t		Residential Public Supply Process	
City:Charlotte State: N	C Zip: 28	3202	□ Irrigation □ Air Conditioning □ Emergency □ Test Well □ Monitor Well □ Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/19/19	
2. LOCATION OF WELL: 0	COUNTY:Gree	nville	ft. Date Completed:3/19/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
Street Address: 411 East Bramle	ette Road		Diam.: Height: Above/Below	
City: Greenville	^{Zip:} 29611		Surrace ft.	
Latitude: 34.858908 Longitud	de: -82.418887	7	in. toft. depth Drive Shoe? □ Yes □ No	
			11. SCREEN:	
3. TOBEIC STOTEM NAME.			Type: Diam.:	
	P No		Slot/Gauge: Length:	
Give Details Below	/		Set Between:ft. andft. NOTE: MULTIPLE SCREENS	
Grouted Depth: from	_ ft. to	ft.	Sieve Analysis Set (please enclose) No	
	*Thickness	Depth to	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
Formation Description	of Stratum	Bottom of Stratum	13. PUMPING LEVEL Below Land Surface.	
FILI	0	9	ft. after hrs. Pumping G.P.M.	
	,	,	Pumping Test: Yes (please enclose) No	
RESIDUUM	8.5	17.5		
SAPROLITE	1.5	19	Chemical Analysis Yes No Bacterial Analysis Yes No	
			Installed from ft to ft	
			Effective size Uniformity Coefficient	
			16. WELL GROUTED? ✓ Yes No □ Neat Cement ✓ Bentonite □ Bentonite/Cement □ Other Depth: From 0 ft.	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			Well Disinfected Yes No Type: Amount:	
			18. PUMP: Date installed: Not installed	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			IYPE: Submersible Jet (shallow) Iurbine	
			19 WELL DRILLER: David Wilcox CERT NO: 01437	
			Address: (Print) Level: A B C D (circle one)	
			825 S Main Street	
*Indicate Water Bearing Zonos			New Ellenton SC 29809	
			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under	
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.	
5. REMARKS:				
Soil Boring			2 11.1/	
115-SB3 19 feet			Signed: Date: 3/19/2019	
			. Well Driller	
6. TYPE: □ Mud Rotary □ Jette □ Dug □ Air F	Rotary	Bored Driven	If D Level Driller, provide supervising driller's name:	
Cable tool 🗹 Othe	r Sonic			

Mohec	Water Well Record Bureau of WaterNote: Personal information provided on this document is subject to public scrutiny or release.2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300or release.			
1. WELL OWNER INFORMATION:			7. PERMIT NUMBER:	
Name: Duke Energy Carolinas, LLC.				
Address: 526 South Church Stree	t.	50)	8. USE:	
520 South Church Stree			Residential Public Supply Process Irrigation Air Conditioning Emergency	
City:Charlotte State: N	C Zip: 28	3202	Test Well Monitor Well Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/29/19	
2. LOCATION OF WELL:	COUNTY:Green	nville	ft Date Completed:3/29/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
City: Course :11	Zip: 20(11		Diam.: Height: Above/Below Type: □ PVC □ Galvanized Surface ft.	
Greenville	29611		□ Steel □ Other Weight lb./tt.	
Latitude: 34.860467 Longitud	de:-82.420051		in. to ft. depth Drive Shoe? □ Yes □ No in. to ft. depth	
3. PUBLIC SYSTEM NAME: F	UBLIC SYSTE	M NUMBER:	11. SCREEN:	
			Type: Diam.:	
4. ABANDONMENT: Q Yes	⊡ No	_	Set Between: ft. and ft. NOTE: MULTIPLE SCREENS	
Give Details Below	/ # to	"	ft. and ft. USE SECOND SHEET	
	*Thickness	Depth to	Sieve Analysis 🗋 Yes (please enclose) 🗌 No	
Formation Description	of	Bottom of	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface. ft. after hrs. Pumping G.P.M.	
FILL	7.5	7.5	Pumping Test: Yes (please enclose) No	
RESIDUUM	8.5	16	Yield:	
SAPROLITE	3	19	Chemical Analysis ☐ Yes ☑No Bacterial Analysis ☐ Yes ☑ No Please enclose lab results.	
			15. ARTIFICIAL FILTER (filter pack)	
			Installed from ft. to ft.	
			Effective size Uniformity Coefficient	
			16. WELL GROUTED? ✓ Yes □ No	
			Depth: From 0 ft. to 19 ft.	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			Туре	
			Well Disinfected LI Yes LI No Type: Amount:	
			18. PUMP: Date installed: Not installed	
			H.P. Volts Length of drop pipe ft. Capacity apm	
			TYPE: Submersible Jet (shallow) Turbine	
			☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal	
			19. WELL DRILLER: Vernon Dale Olsen Jr. Address: (Print)CERT. NO.: 2265Level: A B C D (circle one)	
			114 Craven Ln	
*Indicate Water Bearing Zones			Telephone No.: 91()-639-3978 Fax No.:	
			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under	
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.	
Soil Boring T17-SB1 19 feet			Signed Vernor Jak Cher pr Date: 4/3/2019	
19 feet Image: Constraint of the state of the stat			If D Level Driller, provide supervising driller's name:	

Mohec	Water Well Record Bureau of WaterNote: Personal information provided on this document is subject to public scrutiny or release.2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300or release.			
1. WELL OWNER INFORMATION:			7. PERMIT NUMBER:	
Name: Duke Energy Carolinas, LLC.				
Address: 526 South Church Stree	•t	51)	8. USE:	
520 South Church Stree			Residential Irrigation Air Conditioning Emergency	
City:Charlotte State: N	C Zip: 28	3202	Test Well Monitor Well Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/29/19	
2. LOCATION OF WELL:	COUNTY:Green	nville	ft Date Completed:3/29/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
City: Course :11	Zip: 20(11		Diam.: Height: Above/Below Type: PVC Galvanized Surface ft.	
Greenville	29611		□ Steel □ Other Weight lb./ft.	
Latitude: 34.860265 Longitud	de:-82.420015	5	in. to ft. depth Drive Shoe? □ Yes □ No in. to ft. depth	
3. PUBLIC SYSTEM NAME: F	PUBLIC SYSTE	M NUMBER:	11. SCREEN:	
			Type: Diam.: Slot/Gauge: Length:	
4. ABANDONMENT: Q Yes	⊡ No		Set Between: ft. and ft. NOTE: MULTIPLE SCREENS	
Give Details Below	V ft. to	"	ft. and ft. USE SECOND SHEET	
	*Thickness	Depth to	Sieve Analysis 📋 Yes (please enclose) 🗌 No	
Formation Description	of	Bottom of	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface. ft. after hrs. Pumping G.P.M.	
FILL	7.5	7.5	Pumping Test: Yes (please enclose) No	
RESIDUUM	8.5	16	Yield:	
SAPROLITE	3	19	Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes ☑ No Please enclose lab results.	
			15. ARTIFICIAL FILTER (filter pack)	
			Installed from ft. to ft.	
			Effective size Uniformity Coefficient	
			16. WELL GROUTED?	
			Depth: From 0 ft. to 19 ft.	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction	
			Туре	
			Well Disinfected I Yes I No Type: Amount:	
			18. PUMP: Date installed: Not installed	
			H.P. Volts Model No.: H.P. Volts Length of drop pipe ft. Capacity gpm	
			TYPE: Submersible Jet (shallow) Turbine	
			Jet (deep) Reciprocating Centrifugal	
			19. WELL DRILLER: Vernon Dale Olsen Jr.CERT. NO.: 2265Address: (Print)Level: A B C D (circle one)	
			114 Craven Ln	
*Indicate Water Bearing Zones			Car mage, INC 20327 Telephone No.: 91()-639-3978 Fax No.:	
			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under	
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.	
			A Rec. 11	
Soil Boring T17-SB2			Signed Vernox Jak Chrs pt - Data: 4/3/2019	
19 feet			Well Driller	
6. TYPE: □ Mud Rotary □ Jetted □ Bored □ Dug □ Air Rotary □ Driven □ Cable tool ☑ Other Sonic			If D Level Driller, provide supervising driller's name:	

Vidhec	Water Well Record Bureau of WaterNote: Personal information provided on this document is subject to public scrutiny or release.2600 Bull Street. Columbia. SC 29201-1708; (803) 898-4300or release.			
1. WELL OWNER INFORMATION:		· · · · , - ·	7. PERMIT NUMBER:	
Name: Duke Energy Carolinas, LLC.				
(last) Address: 526 South Church Stress	(firs	st)	8. USE:	
526 South Church Stree	l		Residential Public Supply Process	
City:Charlotte State: N	C Zip: 28	3202	Test Well Monitor Well Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/29/19	
2. LOCATION OF WELL:	COUNTY:Green	nville	ft Date Completed:3/29/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
City: a street Address: 411 East Bramle	ette Road		Diam.: Height: Above/Below	
Greenville	^{21p.} 29611		Stringer Surface it.	
Latitude: 34.860014 Longitud	de:-82.41997()	in. toft. depth Drive Shoe? □ Yes □ No in. toft. depth	
3. PUBLIC SYSTEM NAME: P	UBLIC SYSTE	M NUMBER:	11. SCREEN:	
			Type: Diam.:	
4. ABANDONMENT: Q Yes	🛛 No		StorGauge: Length: Set Between: ft. and ft. NOTE: MULTIPLE SCREENS	
Give Details Below	1		ft. and ft. USE SECOND SHEET	
Grouted Depth: from	_ ft. to	ft.	Sieve Analysis Ves (please enclose) No	
Formation Description	of	Bottom of	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface.	
FILL	8	8	tt. atter hrs. Pumping G.P.M. Pumping Test: □ Yes (please enclose) □ No	
	75	15.5	Yield:	
RESIDUUM	7.5	13.3	14. WATER QUALITY	
SAPROLITE	3.5	19	Chemical Analysis □ Yes ☑No Bacterial Analysis □ Yes ☑ No Please enclose lab results.	
			15. ARTIFICIAL FILTER (filter pack) Yes No	
			Installed from ft. to ft.	
			16. WELL GROUTED? Yes □ No Neat Cement I Bentonite □ Bentonite/Cement □ Other	
			Depth: From 0 ft. to 19 ft.	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			18 PLIMP: Date installed: Not installed	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			TYPE: Submersible Jet (shallow) Turbine	
			19. WELL DRILLER: Vernon Dale Olsen Jr. CERT. NO.: 2265	
			Address: (Print) Level: A B C D (circle one)	
			114 Craven Ln Carthage NC 28327	
*Indicate Water Bearing Zones			Telephone No.: 910-639-3978 Fax No.:	
(Use a 2nd sheet if needed)			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under	
5. REMARKS:			my direction and this report is true to the best of my knowledge and beller.	
Soil Boring			1 Aren Ll	
T17-SB3			Signed Vernor Jake Strapper 4/3/2019	
19 feet			Well Driller	
6. TYPE: □ Mud Rotary □ Jetted □ Bored □ Dug □ Air Rotary □ Driven □ Cable tool ☑ Other Sonic			If D Level Driller, provide supervising driller's name:	

	Water Well Record Note: Personal information Bureau of Water provided on this document is subject to public scruting 2600 Bull Street, Columbia, SC 20201, 1708; (802) 808, 4200 ar release			
	2600 Bull 3	Street, Col	umbla, SC 29201-1708; (803) 898-4300 or release.	
Name: Duke Energy Carolinas, LLC.			7. FERMIT NUMBER.	
(last)	(firs	st)	8. USE:	
Address: 526 South Church Stree	t		Residential Public Supply Process	
City:Charlotte State: N	C Zip: 28	3202	Irrigation Air Conditioning Emergency Test Well Monitor Well Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/21/19	
2. LOCATION OF WELL:	COUNTY:Green	nville	ft. Date Completed:3/21/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
Street Address: 400 East Bramle	ette Road		Diam.: Height: Above/Below	
Greenville	^{Zip:} 29611		String St	
Latitude: 34.861538 Longitud	de:-82.419018	3	in. toft. depth Drive Shoe? □ Yes □ No	
3 PUBLIC SYSTEM NAME: P			11. SCREEN:	
			Type: Diam.:	
4. ABANDONMENT: Ves	7 No		Slot/Gauge: Length:	
Give Details Below	/		Set Between: ft. and ft. NOTE: MULTIPLE SCREENS	
Grouted Depth: from	_ ft. to	ft.	Sieve Analysis Set (please enclose) No	
	*Thickness	Depth to	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
Formation Description	of Stratum	Bottom of Stratum	13. PUMPING LEVEL Below Land Surface.	
FILL	8	8	Pumping Test: Yes (please enclose) No	
RESIDUUM	8	16	Yield: 14. WATER QUALITY	
SAPROLITE	3	19	Chemical Analysis	
			15. ARTIFICIAL FILTER (filter pack) Yes No	
			Installed from ft. to ft.	
			16. WELL GROUTED? ✓ Yes □ No □ Neat Cement Ø Bentonite □ Bentonite/Cement □ Other Depth: From 0 ft. to 19 ft. ft.	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			iype Well Disinfected □ Yes □ No Type: Amount:	
			18. PUMP: Date installed: Not installed	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			I YPE: Submersible Jet (snallow) I urbine	
			19. WELL DRILLER: David Wilcox CFRT NO · 01437	
			Address: (Print) Level: A B C D (circle one)	
			825 S Main Street	
*Indicate Water Bearing Zones			New Ellenton SC 29809	
			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under	
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.	
5. REMARKS:				
Soil Boring T1-SB1			Signed: Date: 3/21/2019	
171001			Well Driller	
6. TYPE: Mud Rotary	ed 🛛	Bored	If D Level Driller, provide supervising driller's name:	
☐ Dug ☐ Air R	r Sonic	Driven		

	Water Well Record Note: Personal information provided on this document is subject to public scrutiny or release 2600 Bull Street Columbia SC 29201-1708: (803) 898-4300 or release			
	2000 Bull 3	Sileei, Col	UTIDIA, SC 29201-1706, (603) 696-4500 or release.	
Name: Duke Energy Carolinas, J	LLC.		7. PERMIT NUMBER:	
(last)	(fir	st)	8. USE:	
Address: 526 South Church Stree	t		Residential Public Supply Process	
City:Charlotte State: No	C Zip: 28	3202	□ Irrigation □ Air Conditioning □ Emergency □ Test Well □ Monitor Well □ Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/21/19	
2. LOCATION OF WELL: C	COUNTY:Gree	nville	ft. Date Completed:3/21/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
Street Address: 400 East Bramle	tte Road		Diam.: Height: Above/Below	
City:Greenville	Zip: 29611		Type: D PVC D Galvanized Surface ft.	
Latitude: 34.861496 Longitud	le: -82.419008	3	in. toft. depth Drive Shoe? □ Yes □ No	
	021112000	- -	in. to ft. depth	
3. PUBLIC SYSTEM NAME: P	UBLIC SYSTE	M NUMBER:	11. SCREEN:	
			Slot/Gauge: Length:	
4. ABANDONMENT: Ves	1 No		Set Between: ft. and ft. NOTE: MULTIPLE SCREENS	
Grouted Depth: from	ft to	ft	ft. andft. USE SECOND SHEET	
	*Thickness	s Depth to Bottom of		
Formation Description	of		12. STATIC WATER LEVEL	
	Stratum	Stratum	ft. after hrs. Pumping G.P.M.	
FILL	6	6	Pumping Test: 🔲 Yes (please enclose) 🔲 No	
RESIDUUM	9.5	15.5	Yield:	
			14. WATER QUALITY	
SAPROLITE	7.5	23	Please enclose lab results.	
PWR	16	39	15. ARTIFICIAL FILTER (filter pack) Yes No	
			Installed from ft. to ft.	
			□ Neat Cement Bentonite □ Bentonite/Cement □ Other	
			Depth: From 0 ft. to 39 ft.	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			Well Disinfected I Yes I No Type: Amount:	
			18. PUMP: Date installed: Not installed	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal	
			19. WELL DRILLER: David Wilcox CERT. NO.: 01437	
			Address: (Print) Level: A B C D (circle one)	
			825 S Main Street	
*Indicate Water Bearing Zones			New Ellenton SC 29809 Telephone No: 803-220-3735	
			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under	
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.	
5. REMARKS:				
Soil Boring			2 11 a h h	
39 feet			Signed: Date: 3/21/2019	
			vveil Driller	
Dug □ Air R	o ⊔ otarv □	Bored Driven	If D Level Driller, provide supervising driller's name:	
□ Cable tool				

Mohec	Water Well RecordNote: Personal information provided on this document is subject to public scrutiny or release.2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300or release.			
1. WELL OWNER INFORMATION:			7. PERMIT NUMBER:	
Name: Duke Energy Carolinas, LLC.				
(last) (first) Address: 526 South Church Street			8. USE:	
City:Charlotte State: N	C Zip: 28	3202	Irrigation Air Conditioning Emergency Test Well Monitor Well Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/21/19	
2. LOCATION OF WELL:	COUNTY:Green	nville	ft. Date Completed:3/21/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
Street Address: 400 East Bramle	ette Road		Diam.: Height: Above/Below	
City:Greenville	^{Zip:} 29611		Type: PVC Galvanized Surface ft.	
Latitude: 34.861435 Longitu	de:-82.418977	7	in. toft. depthTt. depth IVergint	
			11. SCREEN:	
			Type: Diam.:	
	MO		Slot/Gauge: Length:	
Give Details Below	N NO		Set Between: ft. and ft. NOTE: MULTIPLE SCREENS	
Grouted Depth: from	ft. to	ft.		
· · · · · · · · · · · · · · · · · · ·	*Thickness	Depth to	12 STATIC WATER EVEL ft below land surface after 24 hours	
Formation Description	of	Bottom of	13 PLIMPING LEVEL Below Land Surface	
	Stratum	Stratum	ft. after hrs. PumpingG.P.M.	
FILL	7.5	7.5	Pumping Test: Yes (please enclose) No	
RESIDUUM	8.5	16		
SAPROLITE	3	19	Chemical Analysis □ Yes ☑No Bacterial Analysis □ Yes ☑ No Please enclose lab results.	
			15. ARTIFICIAL FILTER (filter pack)	
			Installed from ft. to ft.	
			Effective size Uniformity Coefficient	
			16. WELL GROUTED? ✓ Yes No □ Neat Cement ✓ Bentonite □ Bentonite/Cement □ Other Depth: From 0 ft. to 19	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction Type	
			Well Disinfected	
			18. PUMP: Date installed: Not installed	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			\Box Jet (deep) \Box Reciprocating \Box Centrifugal	
			19. WELL DRILLER: David Wilcox CFRT NO · 01437	
			Address: (Print) Level: A B C D (circle one)	
			825 S Main Street	
			New Ellenton SC 29809	
Tindicate vvater Bearing Zones			Ielephone No.: X()3-22()-3735 Fax No.: 20 WATER WELL DRILLER'S CEPTIFICATION: This well was drilled upday	
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.	
5. REMARKS:				
Soil Boring T1-SB3 19 feet			Signed: Mall Deiller	
6. TYPE: Mud Rotary Dug Air F Cable tool Othe	ed 🗆 Rotary 🗆 Pr Sonic	Bored Driven	If D Level Driller, provide supervising driller's name:	

Vidhec	Water Well RecordNote: Personal information provided on this document is subject to public scrutiny or release.2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300or release.			
1. WELL OWNER INFORMATION:		· · · · , · · ·	7. PERMIT NUMBER:	
Name: Duke Energy Carolinas, LLC.				
(last) (first) Address: 526 South Church Street			8. USE:	
City:Charlotte State: N	C Zip: 28	3202	Irrigation Air Conditioning Emergency Test Well Monitor Well Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/22/19	
2. LOCATION OF WELL:	COUNTY:Green	nville	ft. Date Completed:3/22/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
Street Address: 400 East Bramle	ette Road		Diam.: Height: Above/Below	
City:Greenville	^{Zip:} 29611		Type: PVC Galvanized Surface ft.	
			□ Steel □ Other Weight Ib./tt.	
Latitude: 34.861272 Longitud	de:-82.419447	7	in. to ft. depth Drive Snoe? YesNo	
3. PUBLIC SYSTEM NAME: F	PUBLIC SYSTE	M NUMBER:	11. SCREEN:	
			Iype: Diam.: Slot/Gauge: Length:	
4. ABANDONMENT: Yes	⊡ No		Set Between: ft. and ft. NOTE: MULTIPLE SCREENS	
Give Details Below Grouted Depth: from	v ft. to	ft.	Sieve Analysis Ves (please enclose) No	
·	*Thicknes		12. STATIC WATER LEVEL ft. below land surface after 24 hours	
Formation Description	of Stratum	Bottom of Stratum	13. PUMPING LEVEL Below Land Surface.	
FILI	4.5	4.5	ft. after hrs. Pumping G.P.M.	
	4.5	ч.5	Pumping Test: Yes (please enclose) No	
RESIDUUM	10.5	15		
SAPROLITE	4	19	Chemical Analysis Yes No Bacterial Analysis Yes No Please enclose lab results.	
			15. ARTIFICIAL FILTER (filter pack)	
			Installed from ft. to ft.	
			Effective size Uniformity Coefficient	
			16. WELL GROUTED? ☑ Yes □ No □ Neat Cement ☑ Bentonite □ Bentonite/Cement □ Other Depth: From 0 ft. to 19 ft.	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			Well Disinfected I Yes I No Type: Amount:	
			18. PUMP: Date installed: Not installed	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			☐ Jet (deep)	
			19. WELL DRILLER: David Wilcox CERT. NO.: 01437	
			Address: (Print) Level: A B C D (circle one)	
			825 S Main Street	
*Indicate Water Bearing Zones			New Ellenton SC 29809 Telephone No.: 803-220-3735 Fax No.:	
			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under	
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.	
Soil Boring T2-SB1			2012abl 3/22/2019	
19 feet			Signed: Date: Jr22/2019	
6. TYPE: Mud Rotary Dug Air F Cable tool	ed 🛛 🗠 Rotary 🗆 er Sonic	Bored Driven	If D Level Driller, provide supervising driller's name:	

	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Street Columbia SC 29201-1708: (803) 898-4300 or release			
	2000 Bull 3	Sileei, Col	7 PERMIT NUMBER	
Name: Duke Energy Carolinas, 1	LLC.			
(last)	(fir	st)	8. USE:	
Address: 526 South Church Stree	t		Residential Public Supply Process	
City:Charlotte State: No	C Zip: 28	3202	□ Irrigation □ Air Conditioning □ Emergency □ Test Well □ Monitor Well □ Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/22/19	
2. LOCATION OF WELL:	COUNTY:Gree	nville	ft. Date Completed:3/22/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
Street Address: 411 East Bramle	tte Road		Diam.: Height: Above/Below	
City:Greenville	Zip: 29611		Type: D PVC D Galvanized Surface ft.	
Latitude: 34 861338 Longitur	le· 82/11037/	5	in. toft. depth Drive Shoe? □ Yes □ No	
		J	in. to ft. depth	
3. PUBLIC SYSTEM NAME: P	UBLIC SYSTE	M NUMBER:	11. SCREEN:	
			Type: Diam.:	
4. ABANDONMENT: Ves	3 No		Slot/Gauge: Length:	
Give Details Below	1		ft. USE SECOND SHEET	
Grouted Depth: from	_ft. to	ft.	Sieve Analysis 🛛 Yes (please enclose) 🗌 No	
Formation Description	*Thickness	Depth to	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
Formation Description	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface.	
FILL	9	9	ft. after hrs. Pumping G.P.M.	
			Pumping lest: 📋 Yes (please enclose) 📋 No Vield:	
RESIDUUM 8	17			
		10	Chemical Analysis □ Yes ☑ No Bacterial Analysis □ Yes ☑ No	
SAPROLITE	2	19	Please enclose lab results.	
			15. ARTIFICIAL FILTER (filter pack)	
			Installed from ft. to ft.	
			Effective size Uniformity Coefficient	
			16. WELL GROUTED? ☑ Yes □ No □ Neat Cement ☑ Bentonite □ Bentonite/Cement □ Other	
			Depth: From 0 ft. to 19 ft.	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			Well Disinfected Ves No Type: Amount:	
			18. PUMP: Date installed: Not installed	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			TYPE: Submersible Jet (shallow) Turbine	
			10 WELL DRILLED. David Wilcox	
			Address: (Print) Level: A B C D (circle one)	
			825 S Main Street	
			New Ellenton SC 29809	
[^] Indicate Water Bearing Zones			Telephone No.: 8()3-22()-3735 Fax No.:	
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.	
5. REMARKS:				
Soil Boring				
T2-SB2			Signed: Date: 3/22/2019	
19 feet			Well Driller	
6. TYPE: Mud Rotary Jette	d 🗌	Bored Driven	If D Level Driller, provide supervising driller's name:	
□ Cable tool □ Othe	sonic	2.11011		

	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Street, Columbia, SC 29201-1708: (803) 898-4300 or release			
	2000 Duil C		7 PERMIT NI IMBER	
Name: Duke Energy Carolinas,	LLC.			
(last)	(fir	st)	8. USE:	
Address. 526 South Church Stree	t		Residential Public Supply Process	
City:Charlotte State: N	C Zip: 28	3202	□ Irrigation □ Air Conditioning □ Emergency □ Test Well □ Monitor Well □ Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/21/19	
2. LOCATION OF WELL:	COUNTY:Gree	nville	ft. Date Completed:3/21/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
Street Address: 400 East Bramle	ette Road		Diam.: Height: Above/Below	
City: Greenville	^{Zip:} 29611		Type: □ PVC □ Galvanized Surface π.	
Latitude: 34.861377 Longitud	de:-82.419327	7	in. to ft. depth Drive Shoe? Yes No	
			In. to It. depth	
3. FUBLIC STSTEW NAME. F		IN NONDER.	Type: Diam.:	
	7 No		Slot/Gauge: Length:	
Give Details Below	/		Set Between:ft. andft. NOTE: MULTIPLE SCREENS	
Grouted Depth: from	_ ft. to	ft.	Sieve Analysis See (please enclose) No	
	*Thickness	Depth to	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
Formation Description	of Stratum	Bottom of Stratum	13. PUMPING LEVEL Below Land Surface.	
FILL	6.5	6.5	ft. after hrs. Pumping G.P.M.	
			Pumping lest: Yes (please enclose) No Yield:	
RESIDUUM	SIDUUM 10	16.5		
SAPROLITE	2.5	19	Chemical Analysis □ Yes ☑No Bacterial Analysis □ Yes ☑ No Please enclose lab results.	
			15. ARTIFICIAL FILTER (filter pack)	
			Installed from ft. to ft.	
			Effective size Uniformity Coefficient	
			16. WELL GROUTED? ✓ Yes No □ Neat Cement Ø Bentonite □ Bentonite/Cement □ Other Depth: From 0 ft. to 19 ft.	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			Well Disinfected Yes No Type: Amount:	
			18. PUMP: Date installed: Not installed	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			TYPE: Submersible Jet (shallow) Turbine	
			10. WELL DRULLED, David Wilcox	
			Address: (Print) Level: A B C D (circle one)	
			825 S Main Street	
Aladiaata Water Despire Zerre			New Ellenton SC 29809	
mulcale water Bearing Zones			Ielephone No.: X().5-22()-57.5. Fax No.: 20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under	
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.	
5. REMARKS:				
Soil Boring				
T2-SB3			Signed: Date: 3/21/2019	
171001			. Well Driller	
6. TYPE: □ Mud Rotary □ Jetted □ Bored □ Dug □ Air Rotary □ Driven □ Cable tool ☑ Other Sonic			If D Level Driller, provide supervising driller's name:	

	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Street Columbia SC 29201-1708: (803) 898-4300 or release			
	2000 Dull 3	Street, Cor	7 DEDMIT NI IMBED:	
Name: Duke Energy Carolinas, LLC.				
(last)	(firs	st)	8. USE:	
Address: 526 South Church Stree	t		Residential Public Supply Process	
City:Charlotte State: No	C Zip: 28	3202	Irrigation Air Conditioning Emergency Test Well Monitor Well Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/22/19	
2. LOCATION OF WELL: 0	COUNTY:Green	nville	ft. Date Completed:3/22/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
Street Address: 400 East Bramle	tte Road		Diam.: Height: Above/Below	
City: Greenville	^{Zip:} 29611		I Steel C Other Weight h/ft	
Latitude: 34 861234 Longitud	le· 82 110770)	in. toft. depth Drive Shoe? Yes No	
	602.419770)	in. to ft. depth	
3. PUBLIC SYSTEM NAME: P	UBLIC SYSTE	M NUMBER:	11. SCREEN:	
			Type: Diam.:	
4. ABANDONMENT: Ves	1 No			
Give Details Below	,		Set Between:ft. andft. NOTE: MULTIPLE SCREENS	
Grouted Depth: from	ft. to	ft.	Sieve Analysis Se (please enclose)	
	*Thickness	Depth to	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
Formation Description	ot Stratum	Bottom of Stratum	13. PUMPING LEVEL Below Land Surface.	
	4.5	4.5	ft. after hrs. Pumping G.P.M.	
FILL	4.5	4.5	Pumping Test: 🔲 Yes (please enclose) 🔲 No	
RESIDUUM	10.5	15	Yield:	
	10.5		14. WATER QUALITY	
SAPROLITE	4	19	Chemical Analysis 🗌 Yes 🗹 No 🛛 Bacterial Analysis 🗌 Yes 🗹 No	
			15. ARTIFICIAL FILTER (filter pack) ∐ Yes ∐ No	
			Effective size Uniformity Coefficient	
			Neat Cement	
			Depth: From 0 ft. to 19 ft.	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			Туре	
			Well Disinfected Ves No Type: Amount:	
			18. PUMP: Date installed: Not installed	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm TYPE: Submersiblelet (shallow) Turbine	
			☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal	
			19. WELL DRILLER: David Wilcox CERT. NO.: 01437	
			Address: (Print) Level: A B C D (circle one)	
			825 S Main Street	
*Indianto Water Deparing Zaraa			New Ellenton SC 29809	
mulcale vvaler bearing Zones	lones		20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under	
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.	
5. REMARKS:				
Soil Boring				
T3-SB1			Signed: Dife 3/22/2019	
19 feet			Well Driller	
6. TYPE: Mud Rotary Jette Dug	d 🗆 otary 🗆	Bored Driven	If D Level Driller, provide supervising driller's name:	
□ Cable tool □ Othe	Sonic			

Mohec	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Street, Columbia, SC 29201-1708: (803) 898-4300 or release				
	2000 Dull C		7 PERMIT NUMBER		
Name: Duke Energy Carolinas,	LLC.		7. TERMITROMBER.		
(last)	(firs	st)	8. USE:		
S26 South Church Stree	t		Residential Public Supply Process		
City:Charlotte State: N	C Zip: 28	3202	Test Well Monitor Well Replacement		
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/25/19		
2. LOCATION OF WELL:	COUNTY:Green	nville	ft Date Completed:3/25/19		
Name:CSXT Bramlette Site			10. CASING: Threaded Welded		
City: Groonwille	Zip: 20611		Type: PVC Galvanized Surface ft.		
Greenvine	- 29011		□ Steel □ Other Weight lb./ft.		
Latitude: 34.861172 Longitud	de: -82.419719)	in. toft. depth Drive Shoe? □ Yes □ No in. toft. depth		
3. PUBLIC SYSTEM NAME: F	UBLIC SYSTE	M NUMBER:	11. SCREEN:		
			ıype: Diam.: Slot/Gauge: Length:		
4. ABANDONMENT: Yes	⊡ No ,		Set Between: ft. and ft. NOTE: MULTIPLE SCREENS		
Grouted Depth: from	ft. to	ft.	ft. and ft. USE SECOND SHEET		
·	*Thickness	Depth to	12. STATIC WATER LEVEL ft. below land surface after 24 hours		
Formation Description	of Stratum	Bottom of Stratum	13. PUMPING LEVEL Below Land Surface.		
FILI	6	6	ft. after hrs. Pumping G.P.M.		
	0	0	Pumping Test: 🔲 Yes (please enclose) 🗌 No Yield:		
RESIDUUM	8	14	14. WATER QUALITY		
SAPROLITE	3	19	Chemical Analysis □ Yes ☑No Bacterial Analysis □ Yes ☑ No Please enclose lab results.		
			15. ARTIFICIAL FILTER (filter pack)		
			Installed fromft.		
			Neat Cement		
			Depth: From 0 ft. to 19 ft.		
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction		
			l ype Well Disinfected □ Yes □ No Type: Amount:		
			18. PUMP: Date installed: Not installed []		
			Mfr. Name: Model No.:		
			H.P Volts Length of drop pipe ft. Capacity gpm TYPE: Submersible let (shallow) Turbine		
			☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal		
			19. WELL DRILLER: Vernon Dale Olsen Jr. CERT. NO.: 2265 Address: (Print) Level: A B C D (circle one)		
			114 Craven Ln		
*Indicate Water Rearing Zones			Carthage, NC 28327		
			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under		
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.		
D. KEWAKNO:			1 100 11		
Soil Boring			Vernor aller pr 1/3/2010		
19 feet			Signed Well Driller		
6. TYPE: Mud Rotary Dug Air Rotary Cable tool Other Sonic			If D Level Driller, provide supervising driller's name:		

	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Street, Columbia, SC 29201-1708: (803) 898-4300 or release				
	2000 Dull C		7 PERMIT NUMBER		
Name: Duke Energy Carolinas, LLC.			7. TERMIT ROMBER.		
(last) Address: 526 South Church Street	(firs	st)	8. USE:		
Side South Church Stree			Residential Public Supply Process Air Conditioning Fmergency		
City:Charlotte State: N	IC Zip: 28	3202	Test Well Monitor Well Replacement		
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/25/19		
2. LOCATION OF WELL:	COUNTY:Green	nville	ft Date Completed:3/25/19		
Name:CSXT Bramlette Site			10. CASING: Threaded Welded		
City C	ette Road		Diam.: Height: Above/Below		
Greenville	^{219.} 29611		Steel Other Weight lb./ft.		
Latitude: 34.861102 Longitu	de:-82.419673	3	in. toft. depth Drive Shoe? □ Yes □ No in. toft. depth		
3. PUBLIC SYSTEM NAME:	PUBLIC SYSTE	M NUMBER:	11. SCREEN:		
			ıype: Diam.: Slot/Gauge: Lenath:		
4. ABANDONMENT: Yes [⊡ No		Set Between: ft. and ft. NOTE: MULTIPLE SCREENS		
Give Details Below	V ft to	f +	ft. and ft. USE SECOND SHEET		
	*Thickness	Depth to	Sieve Analysis 📋 Yes (please enclose) 🗌 No		
Formation Description	of	Bottom of	12. STATIC WATER LEVEL ft. below land surface after 24 hours		
	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface. ft after brs Pumping GPM		
FILL	6	6	Pumping Test: Yes (please enclose) No		
RESIDUUM	9	15	Yield:		
SAPROLITE	4	19	Chemical Analysis □ Yes ☑No Bacterial Analysis □ Yes ☑ No Please enclose lab results.		
			15. ARTIFICIAL FILTER (filter pack)		
			Installed from ft. to ft.		
			Effective size Uniformity Coefficient		
			16. WELL GROUTED? ☑ Yes □ No		
			Depth: From $\underline{0}$ ft. to $\underline{19}$ ft.		
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction		
			18 PLIMP: Date installed:		
			Mfr. Name: Model No.:		
			H.P Volts Length of drop pipe ft. Capacity gpm		
			TYPE: Submersible Jet (shallow) Turbine		
			19. WELL DRILLER: Vernon Dale Olsen Jr. CERT. NO.: 2265		
			114 Craven Ln		
*Indicate Water Bearing Zones			Carthage, NC 28327 Telephone No.: 910-639-3978 Fax No.:		
			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under		
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.		
J. KEMARAS:					
Soil Boring T3-SB3 19 feet			Signed Well Driller		
6. TYPE: □ Mud Rotary □ Jetted □ Bored □ Dug □ Air Rotary □ Driven □ Cable tool ☑ Other Sonic			If D Level Driller, provide supervising driller's name:		

Vidhec	Water Well Record Bureau of WaterNote: Personal information provided on this document is subject to public scrutiny or release.2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300or release.			
1. WELL OWNER INFORMATION:			7. PERMIT NUMBER:	
Name: Duke Energy Carolinas, LLC.				
Address: 526 South Church Street			8. USE:	
City:Charlotte State: N	C Zip: 28	3202	Irrigation Air Conditioning Emergency Test Well Monitor Well Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/18/19	
2. LOCATION OF WELL:	COUNTY:Green	nville	ft. Date Completed:3/18/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
Street Address: 411 East Bramle	ette Road		Diam.: Height: Above/Below	
City: Greenville	^{Zip:} 29611		Type: PVC Galvanized Surraceπ.	
Latitude: 34.860817 Longitue	de:-82.419978	3	in. toft. depth Drive Shoe? □ Yes □ No in. toft. depth	
3. PUBLIC SYSTEM NAME: F	PUBLIC SYSTE	M NUMBER:	11. SCREEN:	
			Type: Diam.:	
4. ABANDONMENT: Ves	⊡ No		Slot/Gauge: Length:	
Give Details Below	v		t. USE SECOND SHEET	
Grouted Depth: from	_ ft. to	ft.	Sieve Analysis 🛛 Yes (please enclose) 🗌 No	
Formation Decorintion	*Thickness	Depth to	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
Formation Description Str	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface.	
FILL	4.5	4.5	ft. after hrs. Pumping G.P.M.	
			Pumping Test: Yes (please enclose) No Vield:	
RESIDUUM	11.5	16		
SAPROLITE	3	19	Chemical Analysis □ Yes ☑No Bacterial Analysis □ Yes ☑ No Please enclose lab results.	
			15. ARTIFICIAL FILTER (filter pack)	
			Installed from ft. to ft.	
			Effective size Uniformity Coefficient	
			16. WELL GROUTED? ✓ Yes No □ Neat Cement Ø Bentonite □ Bentonite/Cement □ Other Depth: From 0 ft. to 19	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			ıype Well Disinfected □ Yes □ No Type: Amount:	
			18. PUMP: Date installed: Not installed	
			Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			TYPE: Submersible Jet (shallow) Turbine	
			Address: (Print) CERI. NO.: U145 /	
			825 S Main Street	
			New Ellenton SC 29809	
*Indicate Water Bearing Zones			Telephone No.: 803-220-3735 Fax No.: 20 WATER WELL DRIF CERTIFICATION: This walls 100	
(Use a 2nd sheet if needed)			20. WATER WELL DRILLER S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.	
5. REMARKS:				
Soil Boring T4-SB1 19 feet			Signed: Mall Datillar Date: 3/18/2019	
6. TYPE: Mud Rotary Dug Air F Cable tool Othe	ed 🗆 Rotary 🗆 Pr Sonic	Bored Driven	If D Level Driller, provide supervising driller's name:	

	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Street, Columbia, SC 29201-1708: (803) 898-4300 creation			
1. WELL OWNER INFORMATION:	2000 Bull C	Sileel, COI	7. PERMIT NUMBER:	
Name: Duke Energy Carolinas,	LLC.			
(last) Address: 526 South Church Stree	(fir: et	st)	8. USE:	
City:Charlotte State: N	C Zip: 28	3202	Irigation Irigation Air Conditioning Emergency Replacement Replacement	
Telephone: Work: (980) 373-2663	Home.		9. WELL DEPTH (completed) Date Started: 3/19/19	
2. LOCATION OF WELL:	COUNTY:Greet	nville	ft Date Completed 3/19/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
Street Address: 411 East Bramle	ette Road		Diam.: Height: Above/Below	
City:Greenville	^{Zip:} 29611		Type: PVC Galvanized Surfaceft.	
	da. 0 0 4100 0	7	in toft_denthTypes No	
Latitude: 34.860/36 Longitu	de: -82.41992	/	in. toft. depth	
3. PUBLIC SYSTEM NAME:	PUBLIC SYSTE	M NUMBER:	11. SCREEN:	
			Type: Diam.:	
4. ABANDONMENT: Q Yes	⊡ No		Slot/Gauge: Length: Set Between: ft and ft NOTE: MULTIPLE SCREENS	
Give Details Below	v		ft. andft. USE SECOND SHEET	
Grouted Depth: from	_ ft. to	ft.	Sieve Analysis 🛛 Yes (please enclose) 🗌 No	
Formation Description	* I hickness of	Bottom of	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
Stra	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface.	
FILL	4	4	ft. after hrs. Pumping G.P.M.	
			Yield:	
RESIDUUM	13	17	14. WATER QUALITY	
SAPROLITE	2	19	Chemical Analysis ☐ Yes ☑No Bacterial Analysis ☐ Yes ☑ No Please enclose lab results.	
			15. ARTIFICIAL FILTER (filter pack)	
			Installed from ft. to ft.	
			Effective size Uniformity Coefficient	
			16. WELL GROUTED? 🗹 Yes 🗋 No	
			□ Neat Cement 🗹 Bentonite □ Bentonite/Cement □ Other	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction	
			18. PUMP: Date installed: Not installed	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			TYPE: Submersible Jet (shallow) Turbine	
			☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal	
			19. WELL DRILLER: David Wilcox CERT. NO.: 01437	
			Address: (Print) Level: A B C D (circle one)	
			New Ellenton SC 29809	
*Indicate Water Bearing Zones			Telephone No.: 803-220-3735 Fax No.:	
(Use a 2nd sheet if needed)			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under	
5. REMARKS:			my direction and this report is true to the best of my knowledge and belief.	
Soil Boring				
T4-SB2			2 2 1 ean L _ 3/19/2019	
19 feet			Signed: Date: Date:	
6. TYPE: Mud Rotary Jette Dug Air F Cable tool Othe	ed 🗆 Rotary 🗆 er Sonic	Bored Driven	If D Level Driller, provide supervising driller's name:	

	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Street Columbia SC 29201-1708: (803) 898-4300 or release			
1. WELL OWNER INFORMATION:	2000 Duii (7. PERMIT NUMBER	
Name: Duke Energy Carolinas, LLC.				
(last)	(fir	st)	8. USE:	
Address: 526 South Church Stree	t		Residential Public Supply Process	
City:Charlotte State: N	C Zip: 28202		□ Irrigation □ Air Conditioning □ Emergency □ Test Well □ Monitor Well □ Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/18/19	
2. LOCATION OF WELL: 0	COUNTY:Gree	nville	ft. Date Completed:3/18/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
Street Address: 411 East Bramle	ette Road		Diam.: Height: Above/Below	
City:Greenville	^{Zip:} 29611		I Steel C Other Weight Ib /ft	
Latitude: 34 860641 Longitud	de: -82 419900)	in. toft. depth Drive Shoe? □ Yes □ No	
	02.119900	,	in. to ft. depth	
3. PUBLIC SYSTEM NAME: P	UBLIC SYSTE	M NUMBER:	11. SCREEN:	
			Type: Diam.:	
4. ABANDONMENT:	🛛 No		Set Between: ft. and ft. NOTE: MULTIPLE SCREENS	
Give Details Below	1		ft. and ft. USE SECOND SHEET	
Grouted Depth: from	_ ft. to	Donth to	Sieve Analysis Ves (please enclose) No	
Formation Description	of	Bottom of	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
-	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface.	
FILL	8.5	8.5	ft. after nrs. Pumping G.P.M. Pumping Test: □ Yes (please enclose) □ No	
		1.5.7	Yield:	
ESIDUUM 8	16.5	14. WATER QUALITY		
SAPROLITE	2.5	19	Chemical Analysis □ Yes ☑No Bacterial Analysis □ Yes ☑ No Please enclose lab results.	
			15. ARTIFICIAL FILTER (filter pack) Yes No	
			Installed from ft. to ft.	
			Effective size Uniformity Coefficient	
			16. WELL GROUTED? ✓ Yes No □ Neat Cement Ø Bentonite Bentonite/Cement Other Depth: From 0 ft. ft. to 19 ft.	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			Type Well Disinfected □ Yes □ No _Type: Amount:	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			TYPE: Submersible Jet (shallow) Turbine	
			19. WELL DRILLER: David WILCOX CERT. NO.: U143 / Address: (Print) Level: A B C D (circle one)	
			825 S Main Street	
			New Ellenton SC 29809	
*Indicate Water Bearing Zones			Telephone No.: 803-220-3735 Fax No.:	
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.	
5. REMARKS:				
Soil Boring				
T4-SB3			Signed: Date: 3/18/2019	
19 feet			Well Driller	
6. TYPE: Mud Rotary Dug Air Rotary Cable tool			If D Level Driller, provide supervising driller's name:	

	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Street, Columbia, SC 29201-1708: (803) 898-4300 or release			
	2000 Dull 3	Sileei, Col	7 PERMIT NUMBER	
Name: Duke Energy Carolinas, LLC.			7. FERMIT NOWDER.	
(last)	(fir	st)	8. USE:	
Address: 526 South Church Stree	t		Residential Public Supply Process	
City:Charlotte State: N	C Zip: 28	3202	□ Irrigation □ Air Conditioning □ Emergency □ Test Well □ Monitor Well □ Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/18/19	
2. LOCATION OF WELL: 0	COUNTY:Gree	nville	ft. Date Completed:3/18/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
City a city of the	ette Road		Diam.: Height: Above/Below	
Greenville	^{21p:} 29611		String St	
Latitude: 34.860451 Longitud	de:-82.419636	5	in. toft. depth Drive Shoe? □ Yes □ No	
3 PUBLIC SYSTEM NAME: P			11. SCREEN:	
			Type: Diam.:	
4. ABANDONMENT:	🛛 No		Slot/Gauge: Length:	
Give Details Below	1		Set Between: ft. and ft. NOTE: MULTIPLE SCREENS	
Grouted Depth: from	_ ft. to	ft.	Sieve Analysis Set (please enclose) No	
	*Thickness	Depth to	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
Formation Description	of Stratum	Bottom of Stratum	13. PUMPING LEVEL Below Land Surface.	
FILI	9	9	ft. after hrs. Pumping G.P.M.	
	,	,	Pumping Test: Yes (please enclose) No	
RESIDUUM	9.5	18.5		
		10	14. WATER QUALITY Chemical Analysis □ Yes ☑ No Bacterial Analysis □ Yes ☑ No	
SAPROLITE	0.5	19	Please enclose lab results.	
			15. ARTIFICIAL FILTER (filter pack)	
			Installed from ft. to ft.	
			Effective size Uniformity Coefficient	
			16. WELL GROUTED? ✓ Yes □ No	
			Depth: From 0 ft. to 19 ft.	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			. Type Well Disinfected □ Ves □ No _Type: Amount:	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			TYPE: Submersible Jet (shallow) Turbine	
			Address: (Print) Level: A B C D (circle one)	
			825 S Main Street	
			New Ellenton SC 29809	
Tindicate vvater Bearing Zones			Ielephone No.: 8()3-22()-37/35 Fax No.: 20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under	
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.	
5. REMARKS:				
Soil Boring				
T5-SB1			Signed: Date: 3/18/2019	
171001			. Well Driller	
6. TYPE: Mud Rotary Jette	d 🗌	Bored	If D Level Driller, provide supervising driller's name:	
□ Dug □ Air Rotary □ Driven □ Cable tool □ Other Sonic				

	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Street Columbia SC 29201-1708: (803) 898-4300 or release			
	2000 Dull 3	Sileei, Col	7 PERMIT NUMBER	
Name: Duke Energy Carolinas,	LLC.		7. TERMIT ROMBER.	
(last)	(fir	st)	8. USE:	
Address: 526 South Church Stree	et		Residential Public Supply Process	
City:Charlotte State: N	C Zip: 28	3202	□ Irrigation □ Air Conditioning □ Emergency □ Test Well □ Monitor Well □ Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/18/19	
2. LOCATION OF WELL:	COUNTY:Gree	nville	ft. Date Completed:3/18/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
Street Address: 411 East Bramle	ette Road		Diam.: Height: Above/Below	
City:Greenville	^{Zip:} 29611		I Steel C Other Weight Ib /ft	
Latitude: 34.860398 Longitud	de:-82.41958	l	ft. depth In to ft. depth Drive Shoe? Yes No	
			II. IO II. depth	
3. PUBLIC STSTEM NAME: F	OBLIC STOLE	M NUMBER:	Type: Diam.:	
			Slot/Gauge: Length:	
Give Details Below	v NO		Set Between:ft. andft. NOTE: MULTIPLE SCREENS	
Grouted Depth: from	ft. to	ft.	Sieve Analysis Ves (please enclose) No	
· · · · · · · · · · · · · · · · · · ·	*Thickness	Depth to	12 STATIC WATER EVEL ft below land surface after 24 hours	
Formation Description	of	Bottom of	13 PLIMPING EVEL Below and Surface	
	Stratum	Stratum	ft. after hrs. Pumping G.P.M.	
FILL	9	9	Pumping Test: 🔲 Yes (please enclose) 🔲 No	
RESIDUUM	7	16		
SAPROLITE	3	19	Chemical Analysis Yes No Bacterial Analysis Yes No Please enclose lab results.	
			15. ARTIFICIAL FILTER (filter pack)	
			Installed from ft. to ft.	
			Effective size Uniformity Coefficient	
			16. WELL GROUTED? ✓ Yes No □ Neat Cement Ø Bentonite □ Bentonite/Cement □ Other Depth: From 0 ft. to 19	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			Well Disinfected Yes No Type: Amount:	
			18. PUMP: Date installed: Not installed	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			TYPE: Submersible Jet (shallow) Turbine	
			Address: (Print) Level: A B C D (circle one)	
			825 S Main Street	
			New Ellenton SC 29809	
"Indicate Water Bearing Zones			Telephone No.: 8()3-22()-3735 Fax No.:	
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.	
5. REMARKS:				
Soil Boring				
T5-SB2			Signed: Date: 3/18/2019	
19 feet			Well Driller	
6. TYPE: □ Mud Rotary □ Jetted □ Bored □ Dug □ Air Rotary □ Driven □ Cable tool ☑ Other Sonic			If D Level Driller, provide supervising driller's name:	

	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Street Columbia SC 29201-1708: (803) 898-4300 or release			
	2000 Bull 3	Street, Cor	11101a, SC 29201-1706, (803) 896-4300 or release. 2 BERMIT NUMBED.	
Name: Duke Energy Carolinas,	LLC.		7. FERMIT NUMBER.	
(last)	(firs	st)	8. USE:	
Address: 526 South Church Stree	et		Residential Public Supply Process	
City:Charlotte State: N	IC Zip: 28	3202	Irrigation Information Informati	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/18/19	
2. LOCATION OF WELL:	COUNTY:Greet	nville	ft. Date Completed:3/18/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
City: a w	ette Road		Diam.: Height: Above/Below	
Greenville	^{21p.} 29611		Stridee it.	
Latitude: 34.860341 Longitu	de:-82.41954()	in. toft. depth Drive Shoe? □ Yes □ No in. toft. depth	
3. PUBLIC SYSTEM NAME:	PUBLIC SYSTE	M NUMBER:	11. SCREEN:	
			Type: Diam.:	
4. ABANDONMENT: Ves	🗹 No		Slot/Gauge: Length: Set Between: ft. and ft. NOTE: MULTIPLE SCREENS	
Give Details Below	N		ft. and ft. USE SECOND SHEET	
Grouted Deptn: from	_ TL TO	π. Depth to	Sieve Analysis 🛛 Yes (please enclose) 🗌 No	
Formation Description	of	Bottom of	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface. ft. after hrs. Pumping G.P.M.	
FILL	9	9	Pumping Test: Yes (please enclose) No	
RESIDUUM	7	16	Yield:	
SAPROLITE	3	19	Chemical Analysis □ Yes ☑No Bacterial Analysis □ Yes ☑ No Please enclose lab results.	
			15. ARTIFICIAL FILTER (filter pack)	
			Installed from ft. to ft.	
			16. WELL GROUTED? ✓ Yes □ No □ Neat Cement Ø Bentonite □ Bentonite/Cement □ Other Depth: From 0 ft. to 19 ft. ft.	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			I ype Well Disinfected I Yes I No Type: Amount:	
			18. PUMP: Date installed: Not installed	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			\Box Jet (deep) \Box Reciprocating \Box Centrifugal	
			19. WELL DRILLER: David Wilcox CERT. NO.: 01437	
			Address: (Print) Level: A B C D (circle one)	
			825 S Main Street	
*Indicate Water Bearing Zones			Telephone No.: 803-220-3735 Fax No.:	
(I lease and about if readed)			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under	
5. REMARKS:			my direction and this report is true to the best of my knowledge and belief.	
Soil Poring				
T5-SB3			2 2 1 east - 3/18/2019	
19 feet			Signed: Date: J/10/2017	
6. TYPE: Mud Rotary Dug Air I Cable tool Othe	ed 🛛 🖓 Rotary 🖓	Bored Driven	If D Level Driller, provide supervising driller's name:	

	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Street, Columbia, SC 29201-1708: (803) 898-4300 or release			
	2000 Bull 3	Sireel, Col	UTIDIA, SC 29201-1706, (603) 696-4300 or release.	
Name: Duke Energy Carolinas,	LLC.		7. PERMII NUMBER:	
(last)	(fir	st)	8. USE:	
Address. 526 South Church Stree	t		Residential Public Supply Process	
City:Charlotte State: N	C Zip: 28	3202	Irrigation Irrigation Interference Inte	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/18/19	
2. LOCATION OF WELL:	COUNTY:Gree	nville	ft. Date Completed:3/18/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
City a city of the	ette Road		Diam.: Height: Above/Below	
Greenville	^{Zip:} 29611		Stringer Stringer Stringer Stringer	
Latitude: 34.860272 Longitud	de:-82.419748	3	in. to ft. depth Drive Shoe? □ Yes □ No in. to ft. depth	
3. PUBLIC SYSTEM NAME: F	UBLIC SYSTE	M NUMBER:	11. SCREEN:	
			Type: Diam.:	
4. ABANDONMENT: Q Yes	🛛 No		Stot/Gauge: Length: Set Between: ft. and ft. NOTE: MULTIPLE SCREENS	
Give Details Below	1		ft. and ft. USE SECOND SHEET	
Grouted Depth: from	_ ft. to	ft.	Sieve Analysis Ves (please enclose) No	
Formation Description	of	Bottom of	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface.	
FILL	9	9	Pumping Test: Ves (please enclose) No	
RESIDUUM	9.5	18.5		
SAPROLITE	5.5	24	Chemical Analysis ☐ Yes ☑No Bacterial Analysis ☐ Yes ☑ No Please enclose lab results.	
			15. ARTIFICIAL FILTER (filter pack) Yes No	
			Installed from ft. to ft.	
			16. WELL GROUTED? Yes No □ Neat Cement Image: Bentonite Depth: Depth: Depth: From 0 ft. to	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			Well Disinfected Yes No Type: Amount:	
			18. PUMP: Date installed: Not installed	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal	
			19. WELL DRILLER: David Wilcox CERT. NO.: 01437	
			Address: (Print) Level: A B C D (circle one)	
			825 S Main Street	
*Indicate Water Bearing Zones			Telephone No.: 803-220-3735 Fax No.:	
			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under	
(Use a 2nd sneet if needed)			my direction and this report is true to the best of my knowledge and belief.	
Soil Doring				
T6-SB1			2 2 1 ean L 3/18/2019	
24 feet			Signed: Date: Date: Date:	
6. TYPE: Mud Rotary Dug Air Rotary Driven Cable tool Other Sonic			If D Level Driller, provide supervising driller's name:	

	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Street Columbia SC 29201-1708: (803) 898-4300 or release			
	2000 Bull 3	Sireel, Col	UTIDIA, SC 29201-1706, (603) 696-4300 or release.	
Name: Duke Energy Carolinas, 1	LLC.		7. PERMIT NUMBER:	
(last)	(fir	st)	8. USE:	
Address. 526 South Church Stree	t		Residential Public Supply Process	
City:Charlotte State: N	C Zip: 28	3202	Irrigation Irrigation Interference Inte	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/18/19	
2. LOCATION OF WELL: 0	COUNTY:Gree	nville	ft. Date Completed:3/18/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
City a city of the	tte Road		Diam.: Height: Above/Below	
Greenville	^{21p.} 29611		Stride it.	
Latitude: 34.860187 Longitud	de: -82.419675	5	in. to ft. depth Drive Shoe? □ Yes □ No in. to ft. depth	
3. PUBLIC SYSTEM NAME: P	UBLIC SYSTE	M NUMBER:	11. SCREEN:	
			Type: Diam.:	
4. ABANDONMENT:	3 No		Stot/Gauge: Length: Set Between: ft. and ft. NOTE: MULTIPLE SCREENS	
Give Details Below			ft. and ft. USE SECOND SHEET	
Grouted Depth: from	_ft. to	ft.	Sieve Analysis Ves (please enclose) No	
Formation Description	of	Bottom of	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
· .	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface.	
FILL	9	9	Pumping Test: Yes (please enclose) No	
RESIDUUM	9	18	Yield:	
			14. WATER QUALITY	
SAPROLITE	1	19	Chemical Analysis □ Yes ☑No Bacterial Analysis □ Yes ☑ No Please enclose lab results.	
			15. ARTIFICIAL FILTER (filter pack) □ Yes □ No	
			Installed from ft. to ft. to ft.	
			□ Neat Cement ☑ Bentonite □ Bentonite/Cement □ Other	
			Depth: From 0 ft. to 19 ft.	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			Well Disinfected I Yes I No Type: Amount:	
			18. PUMP: Date installed: Not installed	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal	
			19. WELL DRILLER: David Wilcox CERT. NO.: 01437	
			Address: (Print) Level: A B C D (circle one)	
			825 S Main Street	
*Indicate Water Bearing Zones			Telephone No.: 803-220-3735 Fax No.:	
			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under	
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.	
S. REMARKS.				
Soil Boring T6-SB2			2 12/12/2010	
19 feet			Signed: Date: 3/10/2019	
6. TYPE: Mud Rotary	d □	Bored	If D Lovel Driller, provide ouper tising driller's name:	
	otary	Driven	ים וו Level Driller, provide supervising ariller's name:	
□ Cable tool				

	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Street, Columbia, SC 29201-1708: (803) 898-4300 or release			
	2000 Dull 3	Sileei, Col	7 PERMIT NUMBER	
Name: Duke Energy Carolinas,	LLC.		7. TERMIT ROMBER.	
(last)	(fir	st)	8. USE:	
Address: 526 South Church Stree	t		Residential Public Supply Process	
City:Charlotte State: N	C Zip: 28	3202	□ Irrigation □ Air Conditioning □ Emergency □ Test Well □ Monitor Well □ Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/18/19	
2. LOCATION OF WELL:	COUNTY:Gree	nville	ft. Date Completed:3/18/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
Street Address: 411 East Bramle	ette Road		Diam.: Height: Above/Below	
City:Greenville	^{Zip:} 29611		I Steel C Other Weight Ib /ft	
Latitude: 34 860112 Longitud	de: -82 419621	1	in. toft. depth Drive Shoe? □ Yes □ No	
	02.11902		in. to ft. depth	
3. PUBLIC SYSTEM NAME: P	UBLIC SYSTE	M NUMBER:	11. SCREEN:	
			Type: Diam.:	
4. ABANDONMENT:	🛛 No		Set Between: ft. and ft. NOTE: MULTIPLE SCREENS	
Give Details Below			ft. and ft. USE SECOND SHEET	
Grouted Depth: from	_ ft. to	Donth to	Sieve Analysis Ves (please enclose) No	
Formation Description	of	Bottom of	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
· .	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface.	
FILL	9	9	Pumping Test: Yes (please enclose) No	
	0.5	17.5	Yield:	
XESIDUUM 8.5	17.5	14. WATER QUALITY		
SAPROLITE	1.5	19	Chemical Analysis □ Yes	
			15. ARTIFICIAL FILTER (filter pack)	
			Installed from ft.	
			16. WELL GROUTED? ✓ Yes No □ Neat Cement ✓ Bentonite □ Bentonite/Cement □ Other Depth: From 0 ft. to 19	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			Type Well Disinfected □ Yes □ No Type: Amount:	
			18 PLIMP: Date installed:	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			TYPE: Submersible Jet (shallow) Turbine	
			10 WELL DRILLED David Wilcox	
			Address: (Print) Level: A B C D (circle one)	
			825 S Main Street	
XIndianto Mater Description Zerosa			New Ellenton SC 29809	
mulcale water Bearing Zones			Ielephone No.: X(13-220-37.55) Fax No.: 20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under	
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.	
5. REMARKS:				
Soil Boring				
T6-SB3			Signed: Date: 3/18/2019	
			Well Driller	
6. TYPE: □ Mud Rotary □ Jetted □ Bored □ Dug □ Air Rotary □ Driven □ Cable tool ☑ Other Sonic			If D Level Driller, provide supervising driller's name:	

Vidhec	Water Well Record Bureau of WaterNote: Personal information provided on this document is subject to public scrutiny or release.2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300or release.			
1. WELL OWNER INFORMATION:			7. PERMIT NUMBER:	
Name: Duke Energy Carolinas, LLC.				
Address: 526 South Church Stree	t	51)	8. USE:	
City:Charlotte State: N	C Zip: 28	3202	□ Irrigation □ Air Conditioning □ Emergency □ Test Well □ Monitor Well □ Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/15/19	
2. LOCATION OF WELL:	COUNTY:Green	nville	ft. Date Completed:3/15/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
Street Address: 411 East Bramle	ette Road		Diam.: Height: Above/Below	
City:Greenville	^{Zip:} 29611		Type: D PVC D Galvanized Surface ft.	
Latitude: 34.860051 Longitud	de:-82.41954()	in. toft_ depth Vergint No.	
3. PUBLIC SYSTEM NAME: F	PUBLIC SYSTE	M NUMBER:	11. SCREEN:	
	022.001012		Type: Diam.:	
4. ABANDONMENT: Ves	⊡ No		Slot/Gauge: Length:	
Give Details Below	v		Set Between: ft. and ft. NOTE: MULTIPLE SCREENS	
Grouted Depth: from	_ ft. to	ft.	Sieve Analysis Set (please enclose)	
Formation Description	*Thickness	Depth to	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
Formation Description	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface.	
FILL	9.5	9.5	ft. after hrs. Pumping G.P.M.	
			Yield:	
RESIDUUM	8.5	18	14. WATER QUALITY	
SAPROLITE	1	19	Chemical Analysis □ Yes ☑No Bacterial Analysis □ Yes ☑ No Please enclose lab results.	
			15. ARTIFICIAL FILTER (filter pack) □ Yes □ No	
			Installed from ft. to ft.	
			Effective size Uniformity Coefficient	
			16. WELL GROUTED? ✓ Yes □ No □ Neat Cement ✓ Bentonite □ Depth: From 0 ft. to 19	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			Type Well Disinfected □ Yes □ No □ Type: Amount:	
			18. PUMP: Date installed: Not installed	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			TYPE: Submersible Jet (shallow) Turbine	
			to well point ep. David Wilcox	
			Address: (Print) Certing Content Conte	
			825 S Main Street	
the directe Mater Description Zerose			New Ellenton SC 29809	
maicate vvater Bearing Zones			Ielephone No.: 8()3-22()-3/35 Fax No.: 20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under	
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.	
5. REMARKS:				
Soil Boring T7-SB1 19 feet			Signed: Date: 3/15/2019	
6. TYPE: Mud Rotary Dug Air F Cable tool Other	ed 🗆 Rotary 🗆 Pr Sonic	Bored Driven	If D Level Driller, provide supervising driller's name:	

	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Stroot, Columbia, SC 29201-1708: (803) 898-4300 or release			
1. WELL OWNER INFORMATION:	2000 Bull C	Sileel, COI	7. PERMIT NUMBER:	
Name: Duke Energy Carolinas,	LLC.			
(last) Address: 526 South Church Street	(firs	st)	8. USE:	
City:Charlotte State: N	C Zip: 28	3202	□ Irrigation □ Air Conditioning □ Emergency □ Test Well □ Monitor Well □ Replacement	
Telephone: Work: (980) 373-2663	Home.		9. WELL DEPTH (completed) Date Started: 3/15/19	
2. LOCATION OF WELL:	COUNTY:Green	nville	ft Date Completed: 3/15/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
Street Address: 411 East Bramle	ette Road		Diam.: Height: Above/Below	
City:Greenville	^{Zip:} 29611		Type: PVC Galvanized Surface ft.	
	da. 0 0 410 400	`	in toft denth Drive Shoe? ☐ Yes No	
Latitude: 34.860005 Longitu	de: -82.419498	5	in. toft. depth	
3. PUBLIC SYSTEM NAME:	PUBLIC SYSTE	M NUMBER:	11. SCREEN:	
			Type: Diam.:	
4. ABANDONMENT:	⊡ No		Slot/Gauge: Length:	
Give Details Below	v		ft. USE SECOND SHEET	
Grouted Depth: from	_ ft. to	ft.	Sieve Analysis 🛛 Yes (please enclose) 🗌 No	
Formation Description	*Thickness	Depth to Bottom of	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
Formation Description	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface.	
FILL	95	9.5	ft. after hrs. Pumping G.P.M.	
	7.5	7.5	Pumping Test: 🔲 Yes (please enclose) 🗌 No	
RESIDUUM	6.5	16		
SAPROLITE	3	19	14. WATER QUALITY Chemical Analysis □ Yes ☑ No Bacterial Analysis □ Yes ☑ No Please enclose lab results.	
			15. ARTIFICIAL FILTER (filter pack) Yes No	
			Installed from ft. to ft.	
			Effective size Uniformity Coefficient	
			16. WELL GROUTED? ✓ Yes No □ Neat Cement Ø Bentonite Bentonite/Cement Other	
			Depth: From <u>0</u> ft. to <u>19</u> ft.	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction Type	
			Well Disinfected U Yes U No Type: Amount:	
			18. PUMP: Date installed: Not installed	
			WIT. Name: Model No.: H P Volts Length of drop pipe ft Capacity gpm	
			TYPE: Submersible Jet (shallow) Turbine	
			Jet (deep) Reciprocating Centrifugal	
			19. WELL DRILLER: David Wilcox CERT. NO.: 01437	
			Address: (Print) Level: A B C D (circle one)	
			825 S Main Street	
*Indicate Water Bearing Zones			Telephone No.: 803-220-3735 Fax No.:	
			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under	
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.	
D. REMARKS:				
Soil Boring			2 11 1/2	
1/-SB2 19 feet			Signed: Date: 3/15/2019	
6. TYPE: Mud Rotary Dug Air F Cable tool Othe	ed 🗆 Rotary 🗆 Pr Sonic	l Bored Driven	weil Driller If D Level Driller, provide supervising driller's name:	

	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Street, Columbia, SC 29201-1708: (803) 898-4300 or release				
	2000 Dull C				
Name: Duke Energy Carolinas,	LLC.		7. PERMIT NUMBER:		
(last)	(firs	st)	8. USE:		
Address: 526 South Church Stree	t		Residential Public Supply Process		
City:Charlotte State: N	C Zip: 28	3202	Irrigation Air Conditioning Emergency Test Well Replacement		
Telephone: Work (980) 373-2663	Home.		9. WELL DEPTH (completed) Date Started: 3/15/19		
2. LOCATION OF WELL:	COUNTY:Greet	nville	ft Date Completed 3/15/19		
Name:CSXT Bramlette Site			10. CASING: Threaded Welded		
Street Address: 411 East Bramle	tte Road		Diam.: Height: Above/Below		
City:Greenville	Zip: 29611		Type: PVC Galvanized Surfaceft.		
	0 0 410 440	`	in toft_denthTypes No		
Latitude: 34.859956 Longitud	ie:-82.41944()	in. to ft. depth		
3. PUBLIC SYSTEM NAME: P	UBLIC SYSTE	M NUMBER:	11. SCREEN:		
			Type: Diam.:		
4. ABANDONMENT:	🛾 No		StorGauge: Length: Set Between: ft. and ft. NOTE: MULTIPLE SCREENS		
Give Details Below			ft. and ft. USE SECOND SHEET		
Grouted Depth: from	ft. to	ft.	Sieve Analysis 🛛 Yes (please enclose) 🗌 No		
Formation Description	of	Bottom of	12. STATIC WATER LEVEL ft. below land surface after 24 hours		
	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface.		
FILL	9.5	9.5	tt. atter hrs. Pumping G.P.M.		
			Yield:		
RESIDUUM	8	17.5	14. WATER QUALITY		
SAPROLITE	1.5	19	Chemical Analysis ☐ Yes ☑No Bacterial Analysis ☐ Yes ☑ No Please enclose lab results.		
			15. ARTIFICIAL FILTER (filter pack) Yes No		
			Installed from ft. to ft.		
			Effective size Uniformity Coefficient		
			16. WELL GROUTED? ✓ Yes No □ Neat Cement Ø Bentonite □ Bentonite/Cement □ Other Depth: From 0 ft. to		
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction		
			Well Disinfected ☐ Yes ☐ No Type: Amount:		
			18. PUMP: Date installed: Not installed		
			Mfr. Name: Model No.:		
			H.P Volts Length of drop pipe ft. Capacity gpm		
			TYPE: Submersible Jet (shallow) Turbine		
			10 WELL DRULLED. David Wilcox		
			Address: (Print) Ger I. NO.: U1457 Address: (Print) Level: A B C D (circle one)		
			825 S Main Street		
			New Ellenton SC 29809		
Indicate Water Bearing Zones			Telephone No.: 8()3-22()-3735 Fax No.:		
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.		
5. REMARKS:					
Soil Boring					
T7-SB3			Signed: Date: 3/15/2019		
19 ieet			Well Driller		
6. TYPE: Mud Rotary Dug Air R Cable tool	d 🗆 otary 🗆 r Sonic	Bored Driven	If D Level Driller, provide supervising driller's name:		

Vidhec	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Street, Columbia, SC 29201-1708: (803) 898-4300 or release			
	2000 Dull C		7 DEDMIT NI IMPED-	
Name: Duke Energy Carolinas,	LLC.		7. FERMIT NOWDER.	
(last)	(firs	st)	8. USE:	
S26 South Church Stree	et		Residential Public Supply Process	
City:Charlotte State: N	C Zip: 28	3202	Test Well Monitor Well Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/13/19	
2. LOCATION OF WELL:	COUNTY:Greet	nville	ft. Date Completed:3/13/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
City: C	ette Road		Diam.: Height: Above/Below	
Greenville	^{219.} 29611		□ Steel □ Other Weight lb./ft.	
Latitude: 34.859616 Longitud	de:-82.419335	5	in. toft. depth Drive Shoe? □ Yes □ No in. toft. depth	
3. PUBLIC SYSTEM NAME: F	PUBLIC SYSTE	M NUMBER:	11. SCREEN:	
			Type: Diam.:	
4. ABANDONMENT:	⊡ No		Stor/Gauge: Length: Set Between: ft. and ft. NOTE: MULTIPLE SCREENS	
Give Details Belov	V		ft. and ft. USE SECOND SHEET	
Grouted Depth: from	_ ft. to	ft.	Sieve Analysis Ves (please enclose) No	
Formation Description	of	Bottom of Stratum	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
	Stratum		13. PUMPING LEVEL Below Land Surface.	
FILL	9	9	Pumping Test: Yes (please enclose) No	
PESIDIUM	5	14	Yield:	
RESIDUOM		17	14. WATER QUALITY	
SAPROLITE	5	19	Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes ☑ No Please enclose lab results.	
			15. ARTIFICIAL FILTER (filter pack) Yes No	
			Installed from ft. to ft.	
			Neat Cement ☑ Bentonite ☐ Bentonite/Cement ☐ Other	
			Depth: From 0 ft. to 19 ft.	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			Vell Disinfected Yes No Type: Amount:	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal	
			19. WELL DRILLER: David Wilcox CERT. NO.: 01437	
			Address: (Print) Level: A B C D (circle one)	
			825 S Main Street	
*Indicate Water Bearing Zones			Telephone No.: 803-220-3735 Fax No.:	
(like a 2nd shoot if pooded)			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under	
5. REMARKS:			my direction and this report is true to the best of my knowledge and belief.	
Soil Boring				
T8-SB1			Signed 2012and Date: 3/13/2019	
19 feet			Well Driller	
6. TYPE: Mud Rotary Jette Dug Air F Cable tool Othe	ed 🛛 Rotary 🗆 er Sonic	Bored Driven	If D Level Driller, provide supervising driller's name:	

	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Street, Columbia, SC 20201, 1709: (202) 809, 4200 arrelease			
	2000 Bull 3	Sileel, Col	unibla, SC 29201-1708, (803) 898-4300 or release.	
1. WELLOWNER INFORMATION: Name: Duke Energy Carolinas	LLC		7. PERMITNUMBER:	
(last)	direction (fire	st)		
Address: 526 South Church Stree	t		Residential Public Supply Process	
City:Charlotte State: N	C Zip: 28	3202	□ Irrigation □ Air Conditioning □ Emergency	
			Test Well Monitor Well Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/12/19	
2. LOCATION OF WELL:	COUNTY:Green	nville	ft. Date Completed:3/12/19	
Street Address: 411 East Dramle	tta Daad		10. CASING: Inreaded I welded	
City:Greenville	Zip: 20611		Type: PVC Galvanized Surface ft.	
· Oreenvine	- 29011		□ Steel □ Other Weight lb./ft.	
Latitude: 34.859614 Longitud	de: -82.419262	2	in. to ft. depth Drive Shoe? □ Yes □ No in. to ft. depth	
3. PUBLIC SYSTEM NAME: F	UBLIC SYSTE	M NUMBER:	11. SCREEN:	
			Type: Diam.:	
4. ABANDONMENT: Q Yes	🛛 No		Stot/Gauge: Length: Set Between: ft, and ft, NOTE: MULTIPLE SCREENS	
Give Details Below	I		ft. andft. USE SECOND SHEET	
Grouted Depth: from	_ ft. to	ft.	Sieve Analysis 🛛 Yes (please enclose) 🗌 No	
Formation Description	tion *Thicknes	Bottom of	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface.	
FILL	9	9	tt. atter hrs. Pumping G.P.M. Pumping Test: □ Yes (please enclose) □ No	
			Yield:	
RESIDUUM	8	17	14. WATER QUALITY	
SAPROLITE	2.5	19.5	Chemical Analysis □ Yes ☑No Bacterial Analysis □ Yes ☑ No Please enclose lab results.	
PWR	4.5	24	15. ARTIFICIAL FILTER (filter pack)	
			Installed from ft. to ft.	
BEDROCK	10	34		
			16. WELL GROUTED? ✓ Yes □ No □ Neat Cement Ø Bentonite □ Bentonite/Cement □ Other Depth: From 0 ft. to 34	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			I ype Well Disinfected Yes No Type: Amount:	
			18. PUMP: Date installed: Not installed	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			TYPE: Submersible Jet (shallow) Turbine	
			Address: (Print) CAR GER I. NO.: U1457 Address: (Print) Level: A B C D (circle one)	
			825 S Main Street	
			New Ellenton SC 29809	
[^] Indicate Water Bearing Zones			Telephone No.: 8()3-22()-3735 Fax No.: 20 WATER WELL DRILLER'S CEPTIFICATION: This well was drilled upday	
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.	
5. REMARKS:				
Soil Boring				
T8-SB2			Signed: Date: 3/12/2019	
34 feet			Well Driller	
6. TYPE: Mud Rotary Jette Dug Air F Cable tool Othe	rd 🗆 Rotary 🗆 r Sonic	Bored Driven	If D Level Driller, provide supervising driller's name:	

Mohec	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Street, Columbia, SC 29201-1708: (803) 898-4300 or release			
	2000 Dull C		7 DEDMIT NUMPED:	
Name: Duke Energy Carolinas,	LLC.		7. FERMIT NUMBER.	
(last)	(firs	st)	8. USE:	
Address: 526 South Church Stree	et		Residential Public Supply Process	
City:Charlotte State: N	C Zip: 28	3202	□ Irrigation □ Air Conditioning □ Emergency □ Test Well □ Monitor Well □ Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/12/19	
2. LOCATION OF WELL:	COUNTY:Green	nville	ft. Date Completed:3/12/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
Street Address: 411 East Bramle	ette Road		Diam.: Height: Above/Below	
City:Greenville	^{Zip:} 29611		I Steel C Other Weight Ib./ft.	
Latitude: 34.859637 Longitud	de:-82.419234	Ļ	in. to ft. depth Drive Shoe? Yes No	
3 PUBLIC SYSTEM NAME: E			M. to N. to 11. SCREEN:	
	000000000		Type: Diam.:	
4. ABANDONMENT: Ves	⊡ No		Slot/Gauge: Length:	
Give Details Below	V		Set Between: ft. and ft. NOTE: MULTIPLE SCREENS ft. and ft USE SECOND SHEET	
Grouted Depth: from	_ ft. to	ft.	Sieve Analysis Yes (please enclose) No	
Formation Description	*Thickness	Depth to Bottom of Stratum	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
	Stratum		13. PUMPING LEVEL Below Land Surface.	
FILL	11	11	Pumping Test: Yes (please enclose) No	
RESIDUUM	6	17		
SAPROLITE/PWR	2	19	14. WATER QUALITY Chemical Analysis □ Yes ☑No Bacterial Analysis □ Yes ☑ No Please enclose lab results.	
			15. ARTIFICIAL FILTER (filter pack) Yes No	
			Installed from ft.	
			16. WELL GROUTED? ✓ Yes □ No □ Neat Cement Ø Bentonite □ Bentonite/Cement □ Other Depth: From 0 ft. to 19	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			Well Disinfected I Yes I No Type: Amount:	
			18. PUMP: Date installed: Not installed	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm TYPE: Submersible let (shallow) Turbine	
			☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal	
			19. WELL DRILLER: David Wilcox CERT. NO.: 01437	
			Address: (Print) Level: A B C D (circle one)	
			825 S Main Street	
*Indicate Water Bearing Zones			Telephone No.: 803-220-3735 Fax No.:	
			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under	
(Use a 2nd sneet if needed)			my direction and this report is true to the best of my knowledge and belief.	
T8-SB3			2 2 12 and 3/12/2019	
19 feet			Signed: Date: Date:	
6. TYPE: Mud Rotary Dug Air F Cable tool Other	ed 🗆 Rotary 🗆 er Sonic	Bored Driven	If D Level Driller, provide supervising driller's name:	

Mohec	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Street, Columbia, SC 29201-1708: (803) 898-4300 or release			
1. WELL OWNER INFORMATION:			7. PERMIT NUMBER:	
Name: Duke Energy Carolinas,	LLC.	- 4)		
Address: 526 South Church Stree	et	si)	8. USE:	
City:Charlotte State: N	IC Zip: 28	3202	Irrigation Air Conditioning Emergency Test Well Monitor Well Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/13/19	
2. LOCATION OF WELL:	COUNTY:Gree	nville	ft. Date Completed:3/13/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
Street Address: 411 East Braml	ette Road		Diam.: Height: Above/Below	
City:Greenville	^{Zip:} 29611		Type: D PVC D Galvanized Surface ft.	
Latitude: 34.860668 Longitu	de:-82.419384	1	in. toft_ depth Vergint No.	
3. TOBLIC STOTEM NAME.	OBEIC STOLE		Type: Diam.:	
	V No		Slot/Gauge: Length:	
Give Details Belov			Set Between:ft. andft. NOTE: MULTIPLE SCREENS	
Grouted Depth: from	_ ft. to	ft.		
	*Thickness	Depth to	12. STATIC WATER LEVEL ft below land surface after 24 hours	
Formation Description	of	Bottom of	13 PLIMPING EVEL Below Land Surface	
	Stratum	Stratum	G.P.M.	
FILL	6	6	Pumping Test: Yes (please enclose) No	
RESIDUUM	9.5	15.5		
SAPROLITE	3.5	19	Chemical Analysis ☐ Yes ☑No Bacterial Analysis ☐ Yes ☑ No Please enclose lab results.	
			15. ARTIFICIAL FILTER (filter pack)	
			Installed from ft. to ft.	
			Effective size Uniformity Coefficient	
			16. WELL GROUTED? ✓ Yes No □ Neat Cement ✓ Bentonite □ Bentonite/Cement □ Other Depth: From 0 ft. to 19	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			Well Disinfected Yes No Type: Amount:	
			18. PUMP: Date installed: Not installed	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			TYPE: Submersible Jet (shallow) Turbine	
			Jet (deep) Reciprocating Centrifugal	
			19. WELL DRILLER: D'AVIO W1ICOX CERT. NO.: 01437	
			R25 S Main Street	
			New Ellenton SC 29809	
*Indicate Water Bearing Zones			Telephone No.: 803-220-3735 Fax No.:	
(Use a 2nd sheet if needed)			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under	
5. REMARKS:			my direction and this report is true to the best of my knowledge and bellet.	
Soil Boring T9-SB1			Signed:	
6. TYPE: Mud Rotary Jette Dug Air I Cable tool Othe	ed 🗆 Rotary 🗆 er Sonic	Bored Driven	Well Driller If D Level Driller, provide supervising driller's name:	

Vidhec	Water Well Record Bureau of WaterNote: Personal information provided on this document is subject to public scrutiny or release.2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300or release.			
1. WELL OWNER INFORMATION:			7. PERMIT NUMBER:	
Name: Duke Energy Carolinas,	LLC.	- 4)		
Address: 526 South Church Stree	(firs	St)	8. USE:	
City:Charlotte State: N	C Zip: 28	3202	□ Irrigation □ Air Conditioning □ Emergency □ Test Well □ Monitor Well □ Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/13/19	
2. LOCATION OF WELL:	COUNTY:Green	nville	ft. Date Completed:3/13/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
Street Address: 411 East Bramle	ette Road		Diam.: Height: Above/Below	
City:Greenville	^{Zip:} 29611		Type: PVC Galvanized Surface ft.	
Latitude: 34.860594 Longitu	de:-82.419354	1	in. toft. depth Drive Shoe? ☐ Yes ☐ No	
3 PUBLIC SYSTEM NAME:			II. to II. depth	
	35210 0101E		Type: Diam.:	
			Slot/Gauge: Length:	
Give Details Below	v		Set Between:ft. andft. NOTE: MULTIPLE SCREENS	
Grouted Depth: from	_ ft. to	ft.	π and π and π . Use Second Sheet	
	*Thickness	Depth to	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
Formation Description	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface.	
FILL	6.5	6.5	ft. after hrs. Pumping G.P.M. Pumping Test: Yes (please enclose) No	
RESIDUUM	10.5	17		
SAPROLITE	7	24	Chemical Analysis □ Yes ☑No Bacterial Analysis □ Yes ☑ No Please enclose lab results.	
			15. ARTIFICIAL FILTER (filter pack) Yes No	
			Installed from ft. to ft.	
			16. WELL GROUTED? ✓ Yes No □ Neat Cement ✓ Bentonite □ Bentonite/Cement □ Other Depth: From 0 ft. to 24 ft.	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			Well Disinfected I Yes I No Type: Amount:	
			18. PUMP: Date installed: Not installed	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal	
			19. WELL DRILLER: David Wilcox CERT. NO.: 01437	
			Address: (Print) Level: A B C D (circle one)	
			825 S Main Street	
*Indicate Water Bearing Zones			Telephone No.: 80.3-220-37.3.5 Fax No.:	
(Use a 2nd sheet if needed)			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief	
5. REMARKS:			my direction and this report is true to the best of my knowledge and belief.	
Soil Boring				
T9-SB2			Signed: Jack 3/13/2019	
24 feet			Well Driller	
6. TYPE: Mud Rotary Jette Dug Air F Cable tool Othe	ed 🛛 Rotary 🗆 er Sonic	Bored Driven	If D Level Driller, provide supervising driller's name:	

	Water Well Record Note: Personal information Bureau of Water provided on this document 2600 Bull Street Columbia SC 29201-1708: (803) 898-4300 or release			
1. WELL OWNER INFORMATION:	2000 Dull (7. PERMIT NUMBER	
Name: Duke Energy Carolinas,	LLC.			
(last)	(fir	st)	8. USE:	
Address: 526 South Church Stree	t		Residential Public Supply Process	
City:Charlotte State: N	C Zip: 28	3202	Irrigation Air Conditioning Emergency Test Well Monitor Well Replacement	
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/13/19	
2. LOCATION OF WELL: 0	COUNTY:Gree	nville	ft. Date Completed:3/13/19	
Name:CSXT Bramlette Site			10. CASING: Threaded Welded	
Street Address: 411 East Bramle	ette Road		Diam.: Height: Above/Below	
City: Greenville	^{Zip:} 29611		Type: □ PVC □ Galvanized Surface π.	
Latitude: 34.860540 Longitud	de: -82.41931	1	in. toft_ depth Drive Shoe? □ Yes □ No	
3 PUBLIC SYSTEM NAME: P				
			Type: Diam.:	
4. ABANDONMENT: Ves	7 No		Slot/Gauge: Length:	
Give Details Below	1		Set Between: ft. and ft. NOTE: MULTIPLE SCREENS	
Grouted Depth: from	_ ft. to	ft.	Sieve Analysis Set (please enclose) No	
	*Thickness	Depth to	12. STATIC WATER LEVEL ft. below land surface after 24 hours	
Formation Description	of Stratum	Bottom of Stratum	13. PUMPING LEVEL Below Land Surface.	
	0	0	ft. after hrs. Pumping G.P.M.	
	9	,	Pumping Test: Yes (please enclose) No	
RESIDUUM	7.5	16.5	Yield:	
			14. WATER QUALITY	
SAPROLITE	2.5	19	Please enclose lab results.	
			15. ARTIFICIAL FILTER (filter pack)	
			Installed from ft. to ft.	
			Neat Cement IP Bentonite □ Bentonite/Cement □ Other	
			Depth: From 0 ft. to 19 ft.	
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction	
			Well Disinfected Ves No Type: Amount:	
			18. PUMP: Date installed: Not installed	
			Mfr. Name: Model No.:	
			H.P Volts Length of drop pipe ft. Capacity gpm	
			IYPE: Submersible Jet (shallow) Iurbine	
			19 WELL DRILLER: David Wilcox	
			Address: (Print) Level: A B C D (circle one)	
			825 S Main Street	
*Indicate Water Papering Zanas			New Ellenton SC 29809	
muicale waler bearing zones			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under	
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.	
5. REMARKS:				
Soil Boring				
T9-SB3			Signed: Date: 3/13/2019	
171001			Well Driller	
6. TYPE: Mud Rotary Jette	d 🗌	Bored	If D Level Driller, provide supervising driller's name:	
☐ Dug ☐ Air R	r Sonic	Driven		



Mohec	2600 Bull S	V Street Col	Vater Well Record Bureau of Water umbia SC 29201-1708: (803) 898-4300
1. WELL OWNER INFORMATION:	2000 Duil C		7. PERMIT NUMBER:
Name: Duke Energy Carolinas,	LLC.		Site ID #00801
(last) Address: 526 South Church Stree	(firs et	st)	8. USE:
City:Charlotte State: N	C Zip: 28	3202	□ Irrigation □ Air Conditioning □ Emergency □ Test Well □ Monitor Well □ Replacement
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/26/19
2. LOCATION OF WELL:	COUNTY:Green	nville	19 ft. Date Completed: 3/26/19
Name:CSXT Bramlette Site			10. CASING: I Threaded U Welded
Street Address: 411 East Bramb	ette Road		Diam.: <u>2 in.</u> Height: Above/Below
City:Greenville	^{Zip:} 29611		Type:
Latitude: 34.860892 Longitu	de:-82.419521		□ Steel □ Other Weight lb./tt. in. to ft. depth Drive Shoe? □ Yes □ No
			in. to ft. depth
3. PUBLIC SYSTEM NAME:	PUBLIC SYSTE	M NUMBER:	11. SUKEEN: Type: Diam ·
			Slot/Gauge: Length:
4. ABANDONMENT: Ves Give Details Below	□ No v		Set Between: ft. and ft. NOTE: MULTIPLE SCREENS
Grouted Depth: from 0	_ ft. to <u>19</u>	ft.	Sieve Analysis 🛛 Yes (please enclose) 🗹 No
Formation Description	*Thickness	Depth to	12. STATIC WATER LEVEL 6.11 ft. below land surface after 24 hours
Formation Description	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface.
			ft. after hrs. Pumping G.P.M.
			Pumping Test: Yes (please enclose) No
			Yield:
			14. WATER QUALITY
			Please enclose lab results.
			15. ARTIFICIAL FILTER (filter pack) □ Yes □ No
			Installed from ft. to ft.
			10. WELL GROUTED? ✓ Yes No ✓ Neat Cement □ Bentonite □ Bentonite/Cement □ Other
			Depth: From 0 ft. to 19 ft.
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction
			Well Disinfected I Yes I No Type: Amount:
			18. PUMP: Date installed: Not installed
			Mfr. Name: Model No.:
			H.P Volts Length of drop pipe ft. Capacity gpm
			☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal
			19. WELL DRILLER: Vernon Dale Olsen Jr. CERT. NO.: 2265
			114 Craven Ln.
*Indicate Water Bearing Zonos			Carthage, NC 28327
			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.
5. REMARKS:			2
MW-19			11 and A Ame he
			Signed: Date: 4/3/19
6. TYPE: Mud Rotary Jette Dug Air I Cable tool Othe	ed 🗌 Rotary 🔲	Bored Driven	Well Driller If D Level Driller, provide supervising driller's name:

Mohec	2600 Bull S	V Street, Col	Vater Well Record Bureau of Water umbia_SC 29201-1708: (803) 898-4300 Note: Personal information provided on this document is subject to public scrutiny or release
1. WELL OWNER INFORMATION:	2000 Duii C		7. PERMIT NUMBER:
Name: Duke Energy Carolinas,	LLC.		Site ID #00801
(last) Address: 526 South Church Stree	(firs et	st)	8. USE:
City:Charlotte State: N	C Zip: 28	3202	□ Irrigation □ Air Conditioning □ Emergency □ Test Well ☑ Monitor Well □ Replacement
Telephone: Work: (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/26/19
2. LOCATION OF WELL:	COUNTY:Green	nville	20 ft. Date Completed:3/26/19
Name:CSXT Bramlette Site			10. CASING: Threaded Uvelded
Street Address: 411 East Bramle	ette Road		Diam.: <u>2 III.</u> Height: Above/Below
City:Greenville	^{Zip:} 29611		Type: PVC □ Galvanized Surface ft. Steel □ Other Weight lb /ft
Latitude: 34.860091 Longitu	de:-82.419586	ō	in. toft. depth Drive Shoe? □ Yes □ No
3. PUBLIC SYSTEM NAME:	PUBLIC SYSTE		11. SCREEN:
			Type: Diam.:
4. ABANDONMENT: Ves	□No		Slot/Gauge: Length:
Give Details Below	v		Set Between: ft. and ft. NOTE: MULTIPLE SCREENS
Grouted Depth: from $\underline{0}$	_ ft. to <u>20</u>	ft.	Sieve Analysis Set (please enclose)
	*Thickness		12. STATIC WATER LEVEL 10.12 ft. below land surface after 24 hours
Formation Description	n of Stratum	Bottom of Stratum	13. PUMPING LEVEL Below Land Surface.
			ft. after hrs. Pumping G.P.M.
			Pumping Test: 🗌 Yes (please enclose) 🗌 No
			Yield:
			14. WATER QUALITY
			Chemical Analysis I Yes MNO Bacterial Analysis I Yes MNO Please enclose lab results.
			15. ARTIFICIAL FILTER (filter pack) Yes No
			Installed from ft. to ft.
			✓ Neat Cement □ Bentonite □ Bentonite/Cement □ Other Depth: From 0 ft. to 20 ft.
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction Type
			Well Disinfected I Yes I No Type: Amount:
			18. PUMP: Date installed: Not installed [
			Mfr. Name: Model No.:
			п.н voits Length of drop pipe tt. Capacity gpm ТҮРБ: П Submersible П.let (shallow) П Turbine
			☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal
			19. WELL DRILLER: Vernon Dale Olsen Jr. CERT. NO. : 2265
			114 Craven Ln. Carthage NC 28327
*Indicate Water Bearing Zones			Telephone No.: 910-639-3978 Fax No.: 20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.
5. REMARKS:			
MW-3D			11 Anon h
			Signed: Date: 4/3/19
6. TYPE: Mud Rotary Jette Dug Air F Cable tool Othe	ed 🗌 Rotary 🔲	Bored Driven	Well Driller If D Level Driller, provide supervising driller's name:

Vidhec	2600 Bull S	V Street Col	Vater Well Record Bureau of Water umbia. SC 29201-1708: (803) 898-4300 Note: Personal information provided on this document is subject to public scrutiny or release
			7. PERMIT NUMBER:
Name: Duke Energy Carolinas,	LLC.		Site ID #00801
	(firs	st)	8. USE:
Address: 526 South Church Stree	t		Residential Public Supply Process
City: Charlotte State: N	C Zip: 28	3202	Irrigation ∐ Air Conditioning ∐ Emergency ☐ Test Well [7] Monitor Well ☐ Replacement
Telephone: Work (980) 373-2663	Home:		9. WELL DEPTH (completed) Date Started: 3/26/19
2. LOCATION OF WELL:	COUNTY:Greet	nville	14.3 ft Date Completed 3/26/19
Name:CSXT Bramlette Site			10. CASING: Threaded Welded
Street Address: 411 East Bramle	tte Road		Diam.: 2 in. Height: Above/Below
City:Greenville	Zip: 29611		Type: I PVC Galvanized Surfaceft.
			in to ff depth Drive Shoe? The No.
Latitude: 34.858753 Longitud	le:-82.418833	5	in. to ft. depth
3. PUBLIC SYSTEM NAME: F	UBLIC SYSTE	M NUMBER:	11. SCREEN:
			Type: Diam.:
4. ABANDONMENT: 17 Yes] No	···- ···	Slot/Gauge: Length:
Give Details Below			Set Between: ft. and ft. NOTE: MULTIPLE SCREENS
Grouted Depth: from 0	_ ft. to <u>14.3</u>	ft.	Sieve Analysis Ses (please enclose) Sieve Analysis
	*Thickness		12. STATIC WATER LEVEL 7.77 ft. below land surface after 24 hours
Formation Description	Formation Description of Stratum	Bottom of Stratum	13. PUMPING LEVEL Below Land Surface.
· · · · ·			ft. after hrs. Pumping G.P.M.
			Pumping Test: 📋 Yes (please enclose) 🔲 No
l			Yield:
			14. WATER QUALITY
			Chemical Analysis 🗋 Yes 🗹 No Bacterial Analysis 📋 Yes 🗹 No Please enclose lab results
			Installed from ft. to ft.
			Effective size Uniformity Coefficient
			16. WELL GROUTED? Z Yes D No
			☑ Neat Cement □ Bentonite □ Bentonite/Cement □ Other
			Depth: From <u>U</u> tt. to <u>14.3</u> tt.
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction
			Well Disinfected
			18. PUMP: Date installed: Not installed
			Mfr. Name: Model No.:
			H.P Volts Length of drop pipe ft. Capacity gpm
			TYPE: Submersible Jet (shallow) Turbine
			19. WELL DRILLER: V CHIOII Date Olsen J1. CERT. NO.: 2205 Address: (Print)
			114 Craven I n
			Carthage, NC 28327
*Indicate Water Bearing Zones			Telephone No.: 910-639-3978 Fax No.:
(Use a 2nd sheet if needed)			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief
5. REMARKS:			
MW-6A			
			Signed Jak Cler pfr A/3/19
			Well Dniler
J. TYPE: 🛛 Mud Rotary 🛛 Jette	d 🗆	Bored	If D Level Driller, provide supervising driller's name
🗆 Dug 🛛 Air F	totary	Driven	The Lover Shine, provide supervising units a fiding.
Cable tool Othe	r		