ROY COOPER
Governor
ELIZABETH S. BISER
Secretary
MICHAEL ABRACZINSKAS
Director

NORTH CAROLINA
Environmental Quality

TBD

Mr. Kristopher Eisenrieth
General Manager II
Duke Energy Corporation LCTS
1555 Dukeville Road
Salisbury, NC 28146

Dear Mr. Eisenrieth:

SUBJECT: Air Quality Permit No. 07171T14
Facility ID: 5500082
Duke Energy Corporation LCTS
Stanley, North Carolina
Lincoln County
Fee Class: Title V
PSD Class: Major

In accordance with your completed Air Quality Permit Applications for renewal of a Title IV permit, received October 8, 2020, renewal of a Title V permit, received October 23, 2020, and the 2nd step of a 2-step modification under 02Q .0501(b)(2), received March 29, 2021, we are forwarding herewith Air Quality Permit No. 07171T14 to Duke Energy Corporation LCTS, Stanley, Lincoln County, North Carolina, authorizing the construction and operation, of the emission source(s) and associated air pollution control device(s) specified herein. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant per 15A North Carolina Administrative Code 02Q .0503(8) have been listed for informational purposes as an "ATTACHMENT" to this cover letter. Please note the requirements for the annual compliance certification are contained in General Condition P in Section 3. The current owner is responsible for submitting a compliance certification for the entire year regardless of who owned the facility during the year.

As the designated responsible official, it is your responsibility to review, understand, and abide by all of the terms and conditions of the attached permit. It is also your responsibility to ensure that any person who operates any emission source and associated air pollution control device subject to any term or condition of the attached permit reviews, understands, and abides by the condition(s) of the attached permit that are applicable to that particular emission source.

If any parts, requirements, or limitations contained in this Air Quality Permit are unacceptable to you, you have the right to request a formal adjudicatory hearing within 30 days following receipt of this permit, identifying the specific issues to be contested. This hearing request must be in the form of a written petition, conforming to NCGS (North Carolina General Statutes) 150B-23, and filed with both the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, North Carolina 27699-6714 and the Division of Air Quality, Permitting Section, 1641 Mail Service Center, Raleigh, North Carolina 27699-1641. The form for requesting a formal adjudicatory hearing may be obtained upon request from the Office of Administrative Hearings. Please note that this permit will be stayed in its entirety upon receipt of the request for a hearing. Unless a request for a hearing is made pursuant to NCGS 150B-23, this Air Quality Permit shall be final and binding 30 days after issuance.

You may request modification of your Air Quality Permit through informal means pursuant to NCGS 150B-22. This request must be submitted in writing to the Director and must identify the specific provisions or issues for which the modification is sought. Please note that this Air Quality Permit will become final and binding regardless of a request for informal modification unless a request for a hearing is also made under NCGS 150B-23.

The construction of new air pollution emission source(s) and associated air pollution control device(s), or modifications to the emission source(s) and air pollution control device(s) described in this permit must be covered under an Air Quality Permit issued by the Division of Air Quality prior to construction unless the Permittee has fulfilled the requirements of NCGS 143-215.108A(b) and received written approval from the Director of the Division of Air Quality to commence construction. Failure to receive an Air Quality Permit or written approval prior to commencing construction is a violation of NCGS 143-215.108A and may subject the Permittee to civil or criminal penalties as described in NCGS 143-215.114A and 143-215.114B.

Lincoln County has triggered increment tracking under PSD for PM_{10}, $PM_{2.5}$, SO_2, and NOx. However, this permit renewal does not consume or expand increments for any pollutants.

This Air Quality Permit shall be effective from TBD until TBD +5 years, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein. Should you have any questions concerning this matter, please contact Russell Braswell at 919-707-8731 or russell.braswell@ncdenr.gov.

Sincerely,

Mark J. Cuilla, EIT, CPM, Chief, Permitting Section
Division of Air Quality, NCDEQ

Enclosure

c: Michael Sparks, EPA Region 4 (permit and review)
Mooresville Regional Office
Central Files
Connie Horne (cover letter only)

ATTACHMENT to Permit No. 07171T14

Insignificant Activities per 15A NCAC 02Q .0503(8)

Emission Source I.D.	Emission Source Description
I-1	Welding shop
I-2	Contained bead blast room
I-6	150-gallon sodium hydroxide storage tank
I-7	150-gallon sulfuric acid storage tank
I-8	250-gallon sulfuric acid storage/measuring tank
I-9	400-gallon sodium hydroxide storage/measuring tank
I-10	500-gallon diesel fuel storage tank and associated dispensing area
I-11	500-gallon gasoline fuel storage tank and associated dispensing area
I-12	560-gallon fuel oil storage/day tank
I-13	1,000-gallon used oil storage tank
I-14	Sixteen 3,300-gallon turbine lubricating oil storage tanks for units 1 through 16
I-15	4,000-gallon sulfuric acid bulk storage tank
I-16	4,500-gallon sodium hydroxide bulk storage tank
I-17	9,000-gallon turbine lubricating oil storage tank/holdup tank used for maintenance purposes only, normally empty
I-18 **MACT ZZZZ**	diesel-fired fire protection system (370 horsepower maximum capacity)
I-19	Main transformers containing oil with total capacity of 130,800 gallons
I-20	CCV transformers containing oil with total capacity of 400 gallons
I-22	Miscellaneous gas cylinders containing: acetylene, argon, chlorine, oxygen or sulfur dioxide for wastewater treatment de-chlorination
I-23	Miscellaneous CFC and HCFC refrigerant cylinders
I-24	Miscellaneous non-CFC and non-HCFC refrigerant cylinders
I –refueling	Gasoline Refueling Operations

1. Because an activity is insignificant does not mean that the activity is exempted from an applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement.

2. When applicable, emissions from stationary source activities identified above shall be included in determining compliance with the permit requirements for toxic air pollutants under 15A NCAC 2D .1100 "Control of Toxic Air Pollutants" or 2Q .0711 "Emission Rates Requiring a Permit".

3. For additional information regarding the applicability of MACT or GACT, see the DAQ page titled "Specific Permit Conditions Regulatory Guide." The link to this site is as follows: http://deq.nc.gov/about/divisions/airquality/air-quality-permits/specific-permit-conditions-regulatory-guide.

Summary of Changes to Permit

The following changes were made to the Duke Energy Corporation LCTS, Air Quality Permit No. 07171T13:

Page No(s).*	Section*	Changes
Throughout	Throughout	• Updated dates/permit numbers. • Fixed formatting. • Corrected typos. • Removed references to 02Q .0504 because the Permittee has completed this requirement. • Removed references to 40 CFR Part 97, Subpart BBBBB because this rule no longer applies. Subparts AAAAA and CCCCC still apply.
3	1.	• Removed references to 02Q .0501 additional applications because the Permittee has completed this requirement.
9	2.1 A.4	• Corrected the following issues with the CAM plan: o Changed the averaging period to hourly (was 4-hour block) in order to match the limit in NSPS Subpart GG. o Going below the accepted water-to-fuel ratio is an exceedance of NSPS Subpart GG because that rule defines excess emissions as periods where the water-to-fuel ratio is less than the tested value. Therefore, periods below the tested water-to-fuel ratio are exceedances, not excursions. Removed the QIP threshold because this CAM plan defines excursions and requires reporting of all excess emissions.
17	2.1 C.5	• Broke up former paragraph 2.1 C.5.a into subparagraphs for clarity. This change does not reflect a change in the Permittee's compliance requirements. • Clarified that the "ozone season" is May 1 to September 30 of each year.
n/a	2.1 C.6 (former)	• Removed the requirement to submit an updated acid rain permit application because the applicant has completed this requirement.
19	2.2 A.1	• Added clarification for "full load equivalent hours" as requested by the application. • Added requirement for NOx CEMS data substitution when demonstrating compliance with 15A NCAC 02D .0530. • Added information about cylinder gas audits and relative accuracy test audits for CO CEMS as requested by the Permittee. • Added requirement for CO CEMS data substitution when demonstrating compliance with 15A NCAC 02D .0530. • Added requirement for CO_2 CEMS data substitution when demonstrating compliance with 15A NCAC 02D .0530. • Added limit and definition of monitor downtime for CEMS. • Clarified that records of excess emissions and monitor downtime must be submitted in a format approved by DAQ. • Changed the time limit for submitting performance test results to 30 days (previously 60). Note that 30 days is the standard time limit, but General Condition JJ allows for the facility to request an extension. • Renumbered paragraphs to reflect above changes. • Removed references to steam from this condition because ES-19 does not use water or steam injection.
n/a	2.2 A.2 (former)	• Removed this section because the Permittee has completed all requirements under 02Q .0504.
27	3.	• Updated General Conditions to v5.5.

* This refers to the current permit unless otherwise stated.

State of North Carolina
Department of Environmental Quality
Division of Air Quality

AIR QUALITY PERMIT

Permit No.	Replaces Permit No.	Effective Date	Expiration Date
07171T14	07171T13	TBD	TBD+5 years

Until such time as this permit expires or is modified or revoked, the below named Permittee is permitted to construct and operate the emission source(s) and associated air pollution control device(s) specified herein, in accordance with the terms, conditions, and limitations within this permit. This permit is issued under the provisions of Article 21B of Chapter 143, General Statutes of North Carolina as amended, and Title 15A North Carolina Administrative Codes (15A NCAC), Subchapters 02D and 02Q, and other applicable Laws.

Pursuant to Title 15A NCAC, Subchapter 02Q, the Permittee shall not construct, operate, or modify any emission source(s) or air pollution control device(s) without having first submitted a complete Air Quality Permit Application to the permitting authority and received an Air Quality Permit, except as provided in this permit.

Permittee: Duke Energy Corporation LCTS

Facility ID: 5500082
Facility Site Location: 6769 Old Plank Road - SR 1511
City, County, State, Zip: Stanley, Lincoln County, NC 28164

Mailing Address: 1555 Dukeville Road
City, State, Zip: Salisbury, NC 28146

Application Numbers: 5500082.20A, 5500082.20B, and 5500082.21A
Complete Application Date: October 8, 2020 (.20A), October 23, 2020 (.20B), March 29, 2021 (.21A)
Primary SIC Code: 4911
Division of Air Quality, Regional Office Address: Mooresville Regional Office
610 East Center Avenue
Mooresville, NC 28115

Permit issued this the TBD.

_____
Mark J. Cuilla, EIT, CPM, Chief, Permitting Section
By Authority of the Environmental Management Commission

Table Of Contents

SECTION 1- PERMITTED EMISSION SOURCE(S) AND ASSOCIATED AIR POLLUTION CONTROL DEVICE(S)

The following table contains a summary of all permitted emission sources and associated air pollution control devices:

Page Nos.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
4-10, 26	ES-1 through ES-16 **PSD** **NSPS GG** **MACT YYYY**[1] **CAM**	sixteen natural gas/No. 2 fuel oil-fired simple-cycle internal combustion turbines (1,313-million Btu per hour heat input rate when firing natural gas, 1,247-million Btu per hour heat input rate when firing No. 2 fuel oil), each equipped with dual fuel multi-nozzle combustion burners with combustion air inlet humidification (cooling) system	CD-1 through CD-16	water injection system (one per turbine)
11	ES-17 and ES-18 **PSD**	two No. 2 fuel oil fixed-roof storage tanks (5.5-million gallon capacity, each) with atmospheric vents	N/A	N/A
12-17, 19-26	ES-19 **PSD** **NSPS KKKK** **NSPS TTTT** **MACT YYYY**	one natural gas/No. 2 fuel oil-fired simple cycle internal combustion turbine equipped with dry low-NOx (DLN) combustors Combustion Turbine Configurations Version A Maximum Nominal Heat Input Rate, million Btu per hour (HHV) 3,668 (natural gas) 3,028 (No. 2 fuel oil) Version B Maximum Nominal Heat Input Rate, million Btu per hour (HHV) 3,764 (natural gas) 3,104 (No. 2 fuel oil) Version C Maximum Nominal Heat Input Rate, million Btu per hour (HHV) 5,224 (natural gas) 4,375 (No. 2 fuel oil)	CD-19a CD-19b	dilution selective catalytic reduction (DSCR) system (as required) oxidation catalyst (as required)
19-25	ES-20 **PSD**	one No. 2 fuel oil fixed-roof storage tank (2.5-million gallon capacity) with conservation vent	N/A	N/A

[1] 40 CFR 63.6090(a)(1) defines "Existing stationary combustion turbine" as a unit that commenced construction or reconstruction before January 14, 2003. All of the turbines at this facility meet this definition. 40 CFR 63.6090(b)(4) states that existing turbines do not have to meet the requirements of 40 CFR Part 63, Subparts A or YYYY.

SECTION 2- SPECIFIC LIMITATIONS AND CONDITIONS

2.1 Emission Source(s) and Control Device(s) Specific Limitations and Conditions

The emission source(s) and associated air pollution control device(s) listed below are subject to the following specific terms, conditions, and limitations, including the monitoring, recordkeeping, and reporting requirements specifically identified herein as applicable requirements:

A. Sixteen natural gas/No. 2 fuel oil-fired simple-cycle internal combustion turbines (ID Nos. ES-1 through ES-16), each equipped with dual fuel multi-nozzle combustion burners with water injection capability (ID Nos CD-1 through CD-16) and combustion air inlet humidification (cooling) system

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Visible Emissions	20 percent opacity (except during startups, shutdowns, and malfunctions)	15A NCAC 02D .0521
Sulfur Dioxide	0.015 percent by volume at 15 percent oxygen and on a dry basis; -OR- shall not burn any fuel that contains total sulfur in excess of 0.8% by weight.	15A NCAC 02D .0524 (40 CFR Part 60 Subpart GG)
	Cross State Air Pollution Rule (CSAPR) requirements See Section 2.1 A.7	40 CFR Part 97, Subpart CCCCC
Nitrogen Oxides	$STD = 0.0075\left(\frac{14.4}{Y}\right) + F$ STD, Y, and F are defined by 40 CFR 60.332	15A NCAC 02D .0524 (40 CFR Part 60 Subpart GG)
	Comply with CAM procedures. See Section 2.1 A.4	15A NCAC 02D .0614
	Cross State Air Pollution Rule (CSAPR) requirements See Section 2.1 A.7	40 CFR Part 97, Subpart AAAAA
Various	Emission limits, operating limits, fuel standards. See Section 2.1 A.3	15A NCAC 02D .0530
Nitrogen Oxides	Emissions shall be less than 384.2 tons from the May 1 to September 30 of each year	15A NCAC 02Q .0317 (PSD Avoidance)

1. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from these turbines (**ID Nos. ES-1 through ES-16**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring [15A NCAC 02Q .0508(f)]

c. To ensure compliance, the Permittee shall perform a Method 9 test for 1 hour using a preapproved protocol to be submitted in accordance with General Condition JJ before the source operates more than 1,100 hours using No. 2 fuel oil. This monitoring protocol shall be repeated before each subsequent 1,100 hours of operation using No. 2 fuel oil from the last test. The hours operated while burning No. 2 fuel oil under the alternative operating scenario

as specified in Section 2.1 A.6 below shall count toward the 1,100 hours requirement. The hours of operation using natural gas do not count toward the 1,100 hours requirement. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these monitoring requirements are not met.

d. No opacity monitoring is required to demonstrate compliance with 15A NCAC 02D .0521 while these turbines (**ID Nos. ES-1 through ES-16**) are burning natural gas.

Recordkeeping [15A NCAC 02Q .0508(f)]

e. The results of the monitoring activities given in Section 2.1 A.1.c above shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
   iii. the results of any corrective actions performed.
   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not kept.

f. The Permittee shall keep records for each turbine (**ID Nos. ES-1 through ES-16**) of the time spent operating on No. 2 fuel oil. The record shall indicate the elapsed time since the previous Method 9 test and the number of hours remaining until another Method 9 test is required. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not kept.

Reporting [15A NCAC 02Q .0508(f)]

g. The Permittee shall submit the results of the Method 9 test as a part of the semiannual report described in Section 2.1 A.3.l below. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS

a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements in accordance with 15A NCAC 02D .0524, "New Source Performance Standards" (NSPS) as promulgated in 40 CFR Part 60, Subpart GG "Standards of Performance for Stationary Gas Turbines," including Subpart A "General Provisions."

NSPS Emissions Limitations [40 CFR 60.332 and 333]

b. The following permit limits shall not be exceeded:
   i. Nitrogen oxides (NOx):

$$STD = 0.0075\left(\frac{14.4}{Y}\right) + F$$

Where:
STD = allowable NOx emission concentration (percent by volume at 15 percent oxygen and on a dry basis), corrected as allowed by 40 CFR 60.335(b)(1)
Y = manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour
F = NOx emission allowance for fuel-bound nitrogen. See 40 CFR 60.332(a)(3) and (4).

   ii. Sulfur dioxide (SO_2):
      A. The Permittee shall not allow any turbine to emit SO_2 in excess of 0.015 percent by volume at 15 percent oxygen and on a dry basis;
      -OR-
      B. The Permittee shall not burn any fuel that contains total sulfur in excess of 0.8% by weight.

Testing [15A NCAC 02Q .0508(f), 40 CFR 60.335]

c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limits given in Section 2.1 A.2.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

d. In addition to any other monitoring requirements of the EPA, the Permittee is required to maintain records as follows:

i. The sulfur content of the fuel being fired in each combustion turbine shall be monitored as specified in 40 CFR 60.334(b) to demonstrate compliance with the sulfur dioxide standard in 40 CFR 60.333, using the test methods and procedures in 40 CFR 60.335, except as follows:
   A. When firing fuel oil, as an alternate to sampling each occasion that fuel oil is transferred to each storage tank from any other source (as specified in 40 CFR 60.334(b)(1)), the Permittee may sample each tank to determine sulfur content after all shipments have been transferred into the tank and prior to placing the tank in service for supply to the turbines. Samples shall be analyzed for sulfur content in accordance with 40 CFR Part 75, Appendix D or any other DAQ approved method.
   B. When firing natural gas, the procedures from 40 CFR Part 75, Appendix D or any other DAQ approved method shall be used to sample and analyze for sulfur content.

ii. As required by 40 CFR 60.334(a), using the test methods and procedures in 40 CFR 60.335(b) and (c), for each combustion turbine, a continuous monitoring device shall be installed, operated, calibrated, and maintained to monitor and record fuel consumption and the ratio of water-to-fuel being fired. This system shall be accurate to within ±5.0 percent and must be approved by the DAQ prior to installation. The Permittee shall comply with the requirements of 40 CFR Part 60, Appendix B, Performance Specifications and Appendix F, Quality Assurance Procedures for continuous monitoring systems, installed on the turbines (**ID Nos. ES-1 through ES-16**).

If the water-to-fuel ratio, sulfur content, and/or the fuel consumption is not monitored as specified above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

Reporting [15A NCAC 02Q .0508(f)]

e. In addition to any other reporting requirements to the EPA, the Permittee is required to REPORT the Regional Supervisor, DAQ, in WRITING, of the following:
   i. The reporting requirement for excess emissions for nitrogen oxides, as included in Section 2.1 A.3.l.iv below, shall be sufficient for the purpose of reports required under 40 CFR 60.7(c).
   ii. The reporting requirement for excess emissions for sulfur dioxide, as included in Section 2.1 A.3.l.v below, shall be sufficient for the purpose of reports required under 40 CFR 60.7(c).

Alternative Operating Scenario

f. The Permittee may comply with the requirements of the Alternative Operating Scenario (see Section 2.1 A.6) if the conditions listed in Paragraph 2.1 A.6.b are met.

3. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. The following Best Available Control Technology (BACT) limits shall not be exceeded:
   i. Short term maximum emission rates for each turbine, equipped with dual fuel multi-nozzle combustion burners and water injection for nitrogen oxides (NOx) emission control, when firing No. 2 fuel oil**,** shall not exceed:

POLLUTANT	BACT EMISSION LIMITS			
	lb/hr	lb/million Btu	other	BACT CONTROLS
Opacity	---	---	20 %	combustion control
Sulfur dioxide	240.70	0.193	---	0.2%w sulfur fuel oil
Particulate/PM-10	34.00	0.027	---	combustion control
NOx	287.00	0.23	58 ppm	multi-nozzle combustor and maximum water injection
Carbon Monoxide	60.00	0.048	---	combustion control
Volatile Organic Compounds	5.00	0.004	---	combustion control
Sulfuric Acid	25.10	0.02	---	0.2 %w sulfur fuel oil
Lead	0.075	0.00006	---	combustion control

   ii. Short term maximum emission rates for each turbine, equipped with dual fuel multi-nozzle combustion burners and water injection for NOx emission control, when firing natural gas, shall not exceed:

POLLUTANT	BACT EMISSION LIMITS			
	lb/hr	lb/million Btu	other	BACT CONTROLS
Opacity	---	---	20 %	combustion control
Sulfur dioxide	0.70	0.0005	---	combustion control
Particulate/PM-10	5.00	0.004	---	combustion control
NOx	119.00	0.095	25 ppm	multi-nozzle combustor and maximum water injection
Carbon Monoxide	59.00	0.05	---	combustion control
Volatile Organic Compounds	2.00	0.002	---	combustion control

iii. Long term total maximum emission rates from all turbines when firing either No. 2 fuel oil or natural gas shall not exceed:

POLLUTANT	BACT EMISSION LIMIT (tons/year)
Sulfur Dioxide	1,212.00
Particulate/PM-10	544.00
NOx	3,600.00
Carbon monoxide	848.00
Volatile Organic Compounds	72.00
Sulfuric Acid	128.00
Lead	0.94

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limits given in Section 2.1 A.3.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

c. The maximum annual hours of operation for each combustion turbine shall not exceed 2,500 hours per calendar year.
d. Total combined hours of operation for all turbines shall not exceed a maximum of 32,000 hours per calendar year.
e. The Permittee shall maintain records of the actual hours of operation for each combustion turbine. If the actual hours of operation for each combustion turbine are not maintained, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.
f. The maximum sulfur content of the No. 2 fuel oil used in each combustion turbine shall not exceed 0.2 percent sulfur by weight.
   i. The Permittee shall determine the No. 2 fuel oil sulfur content in accordance with 40 CFR 60.334 at least quarterly or in accordance with written approval of any U.S. EPA approved custom fuel monitoring schedule, and
   ii. The Permittee shall take representative No. 2 fuel oil samples from the fuel oil storage tank designated to supply fuel to the turbines, prior to combustion of the fuel.

   If the sulfur content of the No. 2 fuel oil is not monitored or the results of the monitored No. 2 fuel oil is above the limit included in Section 2.1 A.3.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.
g. The maximum fuel bound nitrogen (FBN) content of the No. 2 fuel oil, used in each combustion turbine, shall be less than 0.1 percent by weight (0.04 percent by volume),

i. The Permittee shall determine the No. 2 fuel oil nitrogen content in accordance with NSPS requirements contained in 40 CFR 60.334 at least quarterly or in accordance with written approval of any U.S. EPA approved custom fuel monitoring schedule, and
ii. The Permittee shall take representative No. 2 fuel oil samples from the fuel oil storage tank designated to supply fuel to the turbines, prior to combustion of the fuel.

If the nitrogen content of the No. 2 fuel oil is not monitored or the results of the monitored No. 2 fuel oil is above the limit included in Section 2.1 A.3.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

h. The maximum No. 2 fuel oil heat input shall not exceed 1,247 million Btu per hour for each combustion turbine.
i. The maximum natural gas heat input shall not exceed a maximum of 1,313 million Btu per hour for each combustion turbine.
j. The combined emissions for all 16 combustion turbines shall not exceed a maximum sulfur dioxide emissions rate of 1,540 pounds per hour. To ensure this emission rate is not exceeded, the Permittee is limited to the following operational conditions and stipulations:
   i. No. 2 fuel oil shall be supplied to the combustion turbines from only one of the two No. 2 fuel oil storage tanks at any one time,
   ii. Once a tank begins supplying No. 2 fuel oil to the combustion turbines, no additional fuel shall be added to that particular storage tank,
   iii. The sulfur content of the fuels shall be determined using American Society for Testing & Materials (ASTM) methods as follows:
      A. ASTM method D 2880-71, D 1552-90, or another method upon receipt of U.S. EPA written approval, shall be used to determine the sulfur content of the No. 2 fuel oil in each storage tank prior to combustion of the fuel in the combustion turbines, and
      B. ASTM D 1072-80, D 3031-81, D 4084-82, D 3246-81, ITT Barton M286, or another method upon receipt of U.S. EPA written approval shall be used to determine the sulfur content of the natural gas.
   iv. The maximum averaged facility-wide sulfur dioxide emissions rate for any 60-minute period beginning on the hour shall be based on:
      A. The actual recorded natural gas and No. 2 fuel oil consumption as determined by requirements of 40 CFR 60.334(a),
      B. The sulfur content of the natural gas and No. 2 fuel oil as determined by requirements of 40 CFR 60.335(d),
      C. No less than six computer-generated emission calculations per hour, and
      D. The combined sulfur dioxide emissions rate for the natural gas and No. 2 fuel oil.
   v. The Permittee shall determine and record the facility-wide sulfur dioxide emissions rate any time that five or more combustion turbines are being fired simultaneously.

   If the records of the facility-wide sulfur dioxide emissions rate are not maintained, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.
k. Whenever five or more combustion turbines are in operation, the Permittee shall record the number of combustion turbines operated each hour and the pounds of sulfur dioxide emitted during each hour. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

l. The Permittee shall submit in writing the following reports, postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June:
   i. The sulfur and nitrogen content in percent by weight of the No. 2 fuel oil;
   ii. The maximum number of hours of operation of each combustion turbine for the previous 12-month period;
   iii. The total combined hours of operation for all turbines for the previous 12 months period;
   iv. The periods of excess emissions for nitrogen oxides for any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with 40 CFR 60.332 by the performance test required in 40 CFR 60.8 or any period during which the fuel-bound nitrogen is greater than the maximum nitrogen content allowed by the fuel-bound nitrogen allowance used during the performance test required in 40 CFR 60.8. The excess emission report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, gas turbine load, nitrogen content of fuel during the period of excess emissions, and the graphs and figures developed during the initial performance test;

v. The periods of excess emissions for sulfur dioxide for any daily period during which the sulfur content of the fuel being fired exceeds 0.8 percent by weight; and
vi. The records associated with Section 2.1 A.3.k above.

Alternative Operating Scenario

m. The Permittee may comply with the requirements of the Alternative Operating Scenario (see Section 2.1 A.6) if the conditions listed in Paragraph 2.1 A.6.b are met.

4. 15A NCAC 02D .0614: COMPLIANCE ASSURANCE MONITORING

a. For the sixteen combustion turbines **(ID Nos. ES-1 through ES-16)** and their associated water injection systems **(ID Nos. CD-1 through CD-16)**, the Permittee shall comply with 40 CFR Part 64, pursuant to 15A NCAC 2D .0614, to assure that all listed emission sources and control devices comply with the NOx emission standards listed in Sections 2.1 A.2 (NSPS Subpart GG) and 2.1 A.3 (PSD).

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

b. The Permittee shall install a continuous monitoring device that monitors the water-to-fuel ratio, as required by Section 2.1 A.2.d.ii above.
c. The Permittee shall record continuously:
   i. the water-to-fuel ratio for each turbine, and
   ii. the load on each turbine
d. The Permittee shall calculate and record the hourly average water-to-fuel ratio for each turbine.
e. An exceedance has occurred if the hourly average water-to-fuel ratio is less than the ratio used to determine compliance during the most recent emission testing. Periods of operation when the applicable emission standard is excused will not be considered when determining if an excursion has occurred.
f. In the event of any exceedance, the Permittee shall take appropriate action to correct the exceedance as soon as practicable.
   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0614 if the monitoring and recordkeeping requirements in Sections 2.1 A.4.b through f are not followed.

Reporting [15A NCAC 2Q .0508(f)]

g. The Permittee shall submit a summary report of all monitoring and recordkeeping activities required by Sections 2.1 A.4.c through f above, postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations for the requirements of this permit must be clearly identified. The report shall also include the following information, as applicable:
   i. Summary information on the number, duration and cause (including unknown cause, if applicable) of exceedances (including periods of startup, shutdown, and AOS), as applicable, and the corrective actions taken; and
   ii. Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable)

5. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS for 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. In order to avoid the applicability of 15A NCAC 02D .0530 "Prevention of Significant Deterioration," as requested by the Permittee, nitrogen oxides (NOx) emissions from these turbines (**ID Nos. ES-1 through ES-16**), while using combustion air inlet cooling humidification systems, shall be less than 384.2 tons from the first of May to the end of September of each year.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.5.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

c. Combustion air inlet cooling humidification systems may only be used from the May 1 to September 30 of each year (i.e., "the restricted period"). The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the air inlet cooling humification systems are used outside of the restricted period.

d. The Permittee shall maintain records of NOx emissions from combustion turbines while using combustion air inlet humidification systems for each month during the restricted period. These records shall be derived from the Acid Rain monitoring data required by the Acid Rain Permit. The Permittee shall keep these records on file (electronic format acceptable) and make them available to DAQ personnel upon request. If the records of the NOx emissions are not maintained, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

Reporting [15A NCAC 02Q .0508(f)]

e. Each calendar year, the Permittee shall submit a report to the Regional Supervisor, DAQ, postmarked on or before October 30. The report shall include:
   i. The monthly NOx emissions from combustion turbines during combustion air humidification system use for each month of the restricted period,
   ii. The cumulative total of NOx emissions from combustion turbines during combustion air humidification system use for each of the five months during the restricted period.

6. ALTERNATIVE OPERATING SCENARIO

a. Under the alternative operating scenario (AOS), the Permittee shall be allowed to operate the following units at low load operation (1 - 27 MW) without the use of water injection control for intermittent periods of time over a 24-hour period.
   i. Up to four (4) combustion turbine units if fired on natural gas, OR
   ii. Up to four (4) combustion turbine units if fired on No. 2 fuel oil with a sulfur content ≤ 0.05% (by weight) verified by an analysis using ASTM methods, OR
   iii. One combustion turbine unit (except ES-1, ES-2, ES-9 and ES-10) if fired with sulfur content ≤ 0.2% (by weight) verified by an analysis using ASTM methods.

b. The AOS is necessitated in support of the Duke Power System Blackout Recovery Plan and shall be allowed only in the event of a catastrophic loss of all or a major part of the transmission grid, i.e., system blackout.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

c. The sulfur content of the fuels shall be determined using American Society for Testing & Materials (ASTM) method D 2880-71, D 1552-90, or another method upon receipt of U.S. EPA written approval, shall be used to determine the sulfur content of the No. 2 fuel oil in each storage tank prior to combustion of the fuel in the combustion turbines.

d. The hours of operation for each turbine operated under the AOS shall be applied against the turbine's maximum annual hours of operation listed in Section 2.1 A.3.c.

e. The combined hours of operation under the AOS shall be applied against the total combined hours of operation of listed in Section 2.1 A.3.d.

Reporting [15A NCAC 2Q .0508(f)]

f. The Permittee shall notify the Regional Supervisor by 9:00 a.m. Eastern Time of the Division's next business when initiating and terminating the AOS.

g. The Permittee shall submit in writing the following reports postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June:
   i. The maximum number of hours of operation of each combustion turbine operated under the AOS for the previous 12 months period, and
   ii. The total combined hours of operation for all turbines operated under the AOS for the previous 12 months period.

7. CROSS STATE AIR POLLUTION RULE (CSAPR) REQUIREMENTS

a. For the sixteen combustion turbines **(ID Nos. ES-1 through ES-16)**, the Permittee shall comply with all applicable requirements of 40 CFR Part 97, Subpart AAAAA "TR NOx Annual Trading Program" and Subpart CCCCC "TR SO_2 Group 1 Trading Program."

B. Two No. 2 fuel oil, fixed-roof storage tanks with atmospheric vents (ID Nos. ES-17 and ES-18)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Volatile Organic Compounds	13.30 tons per year, combined	15A NCAC 02D .0530

1. 15A NCAC 02D. 0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. The following Best Available Control Technology (BACT) limit shall not be exceeded:

i. Long term maximum emission rates for both storage tanks shall not exceed:

POLLUTANT	BACT EMISSION LIMIT (tons/year)
Volatile Organic Compounds	13.30 total

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

b. The requirements of Section 2.1 A.3.d and h shall be sufficient to ensure compliance with the emission limit indicated in Section 2.1 B.1.a.i above. No monitoring/recordkeeping/reporting is required for emissions of volatile organic compounds from this source.

C. One natural gas/No. 2 fuel oil-fired simple cycle internal combustion turbine equipped with dry low-NOx (DLN) combustors (ID No. ES-19) and associated dilution selective catalytic reduction (DSCR) system (ID No. CD-19a) and oxidation catalyst (ID No. CD-19b)

Combustion Turbine Configurations:

Version A
Maximum Nominal Heat Input Rate, million Btu per hour (HHV)
3,668 (natural gas)
3,028 (No. 2 fuel oil)

Version B
Maximum Nominal Heat Input Rate, million Btu per hour (HHV)
3,764 (natural gas)
3,104 (No. 2 fuel oil)

Version C
Maximum Nominal Heat Input Rate, million Btu per hour (HHV)
5,224 (natural gas)
4,375 (No. 2 fuel oil)

The following table provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Visible Emissions	Developmental Phases (Commissioning, Testing, and Validation) of Each Configuration (Versions A, B, and C) and Post-Developmental Operation 20 percent opacity	15A NCAC 02D .0521
Nitrogen Oxides	Developmental Phases (Commissioning, Testing, and Validation) of Each Configuration (Versions A, B, and C) None[2] Post-Developmental Operation 15 ppm at 15 percent O_2 each or 0.43 lb/MWh each [When firing natural gas] 42 ppm at 15 percent O_2 each or 1.3 lb/MWh each [When firing No. 2 fuel oil] 96 ppm at 15 percent O_2 each or 4.7 lb/MWh each [When firing natural gas or No. 2 fuel oil, turbine is operating at less than 75 percent peak load or turbine is operating at less than 0°F]	15A NCAC 02D .0524 [NSPS Subpart KKKK]

[2] Letter from William Willets, Chief, Permitting Section, Division of Air Quality, NCDEQ, to Michael Brissie, Station Manager, Duke Energy Corporation LCTS, June 8, 2017.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Sulfur Dioxide	Developmental Phases (Commissioning, Testing, and Validation) of Each Configuration (Versions A, B, and C) and Post-Developmental Operation 0.06 lb/million Btu heat input	15A NCAC 02D .0524 [NSPS Subpart KKKK]
Carbon Dioxide	Developmental Phases (Commissioning, Testing, and Validation) of Each Configuration (Versions A, B, and C) and Post-Developmental Operation 120 lb CO_2/million Btu for combustion turbine that supplies its design efficiency or 50 percent, whichever is less, times its potential electric output or less as net-electric sales on either a 12-operating month or a 3-year rolling average basis and combusts more than 90% natural gas on a heat input basis on a 12-operating-month rolling average basis 120 lb/million Btu to 160 lb/million Btu for combustion turbine that combusts 90% or less natural gas on a heat input basis on a 12-operating-month rolling average basis	15A NCAC 02D .0524 [NSPS Subpart TTTT]
Carbon Monoxide Volatile Organic Compounds (as methane) Nitrogen Oxides (as NO_2) Particulate Matter PM_{10} $PM_{2.5}$	Developmental Phases (Commissioning, Testing, and Validation) of Each Configuration (Versions A, B, and C) and Post-Developmental Operation See Section 2.2 A.1	15A NCAC 02D .0530
Greenhouse Gases (as CO_2e)	Developmental Phases (Commissioning, Testing, and Validation) of Each Configuration (Versions A, B, and C) and Post-Developmental Operation See Section 2.2 A.1	15A NCAC 02D .0544
Hazardous Air Pollutants	Developmental Phases (Commissioning, Testing, and Validation) of Each Configuration (Versions A, B, and C) and Post-Developmental Operation See Section 2.1 C.4	15A NCAC 02D .1111
Nitrogen Oxides	Developmental Phases (Commissioning, Testing, and Validation) of Each Configuration (Versions A, B, and C) and Post-Developmental Operation See Section 2.1 C.5	15A NCAC 02D .1418
Nitrogen Oxides Sulfur Dioxide	Developmental Phases (Commissioning, Testing, and Validation) of Each Configuration (Versions A, B, and C) and Post-Developmental Operation Cross-State Air Pollution Rule Requirements See Section 2.1 C.7	40 CFR 97, Subparts AAAAA and CCCCC

1. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions when burning natural gas or No. 2 fuel oil in combustion turbine (**ID No. ES-19**), during developmental phases (commissioning, testing, and validation) of each configuration (Versions A, B, and C) and post-developmental operation, shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 02Q .0308(a)(1)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 C.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0308(a)(1)]

c. No monitoring/recordkeeping/reporting is required for this source (**ID No. ES-19**) while the source is burning natural gas or No. fuel oil.

2. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS

a. The Permittee shall comply with all applicable provisions, including the requirements for emission standards, notification, testing, reporting, record keeping, and monitoring, contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards" (NSPS) as promulgated in 40 CFR Part 60, Subpart KKKK "Standards of Performance for Stationary Combustion Turbines," including Subpart A "General Provisions."

b. The combustion turbine (**ID No. ES-19**) shall be exempt from NOx standards during developmental phases (commissioning, testing, and validation) of each configuration (Versions A, B, and C) as per the determination.[3] [40 CFR 60.4310(b)]

c. Upon commencement of post-developmental operation of combustion turbine (**ID No. ES-19**), the Permittee shall comply with applicable NOx emission standards, testing, monitoring, record keeping, notifications, and reporting requirements. The Permittee shall obtain a revised air quality permit, in accordance with the appropriate provision in 15A NCAC 02Q .0500, before it becomes subject to the NOx emission standards in NSPS Subpart KKKK. [40 CFR 60.4305(a)]

Emission Standards [15A NCAC 02D .0524]

d. The Permittee shall not allow any fuel to be burned in the combustion turbine (**ID No. ES-19**), during developmental phases (commissioning, testing, and validation) of each configuration (Versions A, B, and C) and post-developmental operation, which contains total potential sulfur emissions in excess of 0.06 lb/million Btu heat input each (fuel sulfur content limit). [40 CFR 60.4330]

Testing [15A NCAC 02Q .0308(a)(1)]

e. The Permittee shall conduct the initial performance test for SO_2 on combustion turbine (**ID No. ES-19**) in accordance with General Condition JJ within 180 days of initial start-up, for both natural gas and fuel oil firing, or within 60 days after the unit achieves maximum production for either natural gas or No. 2 fuel oil firing, whichever occurs first, unless an alternate date is approved by the DAQ.

The Permittee shall conduct each subsequent test on combustion turbine (**ID Nos. ES-19**) in accordance with General Condition JJ for SO_2 on an annual basis (no more than 14 calendar months following the previous performance test) for both natural gas and fuel oil firing, unless an alternate date is approved by the DAQ.

The Permittee can opt for fuel sulfur determination as per Section 2.1 C.2.f below to comply with the SO_2 emission limit in lieu of stack testing requirements in this Section 2.1 C.2.e. If the Permittee chooses to opt for fuel sulfur determination to comply with the SO_2 emission limit, the Permittee shall perform monitoring in accordance with Section 2.1 C.2.f below.

[40 CFR 60.8, 60.4360, and 60.4415]

Monitoring/Recordkeeping [15A NCAC 02Q .0308(a)(1)]

f. If the Permittee opts to determine fuel sulfur to comply with the fuel sulfur content limit in Section 2.1 C.2.d above, the Permittee shall monitor total sulfur content of the fuel being fired in the combustion turbine (**ID No. ES-19**), except as provided in 40 CFR 60.4365 (See Section 2.1 C.2.g below).

[3] Letter from William Willets, Chief, Permitting Section, Division of Air Quality, NCDEQ, to Michael Brissie, Station Manager, Duke Energy Corporation LCTS, June 8, 2017.

The sulfur content of the fuel shall be determined using total sulfur methods in 40 CFR 60.4415. Alternatively, the Permittee can use methods in 40 CFR 60.4360 if the total sulfur content of the gaseous fuel during the most recent performance test was less than half the fuel sulfur content limit in Section 2.1 C.2.d above.

The Permittee shall determine sulfur content value of natural gas once per unit operating day if the fuel is supplied without intermediate bulk storage and the Permittee is not demonstrating fuel sulfur content using the options in 40 CFR 60.4365.

The Permittee can develop custom fuel schedules to determine total sulfur content of gaseous fuels or the Permittee can use one of two approved custom schedules without prior EPA approval as per 40 CFR 60.4360(c).

[40 CFR 60.4360, 60.4370, and 60.4415]

g. As an alternate to Section 2.1 C.2.f above, the Permittee can choose not to monitor the total potential sulfur emissions of the fuel combusted in the turbine (ID Nos. ES-19), if it can be demonstrated that the potential sulfur emissions do not exceed 0.06 lb SO_2/million Btu emission limit.

The Permittee can perform this demonstration by using the fuel quality characteristics in a current, valid purchase contract, tariff sheet, or transportation contract for the fuel, specifying that the maximum total sulfur content for oil use is 0.05 weight percent (500 ppmw), the total sulfur content for natural gas use is 20 grains of sulfur or less per 100 standard cubic feet and has the potential sulfur emissions of less than 0.06 lb SO_2/million Btu.

The other option for this demonstration is through representative fuel sampling data showing that the potential sulfur emissions of the fuel does not exceed 0.06 lb SO_2/million Btu. In this case, the Permittee shall provide at a minimum the amount of data in Section 2.3.1.4 or 2.3.2.4. of Appendix D of Part 75.

[40 CFR 60.4365]

Reporting [15A NCAC 02Q .0308(a)(1)]

h. The Permittee shall submit a notification of the date construction of an affected facility is commenced, postmarked no later than 30 days after such date. [40 CFR 60.7(a)(1)]

i. The Permittee shall submit a notification of the date of initial start-up of combustion turbine (**ID No. ES-19**) in configuration Version A, postmarked within 15 days after such date. [40 CFR 60.7(a)(3)]

j. The Permittee shall submit reports of excess emissions and monitor downtime in accordance with 40 CFR 60.7(c) for the combustion turbine (ID No. ES-19). The Permittee shall report excess emissions for all periods of operation, including start-up, shutdown, and malfunction. These reports shall be postmarked by the 30th day following the end of each 6-month period. [40 CFR 60.4375(a) and 60.4395]

(i) If the Permittee chooses the option to monitor the sulfur content of the fuel, excess emissions and monitoring downtime shall be defined as follows [40 CFR 60.4385]:

(A) For samples of gaseous fuel, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the combustion turbine exceeds the applicable limit and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit.

(B) If the option to sample each delivery of fuel oil has been selected, the Permittee shall immediately switch to one of the other oil sampling options (i.e., daily sampling, flow proportional sampling, or sampling from the unit's storage tank) if the sulfur content of a delivery exceeds 0.05 weight percent. The Permittee shall continue to use one of the other sampling options until all of the oil from the delivery has been combusted, and the Permittee shall evaluate excess emissions according to this Section 2.1 C.2.j(i). When all of the fuel from the delivery has been burned, the Permittee may resume using the as-delivered sampling option.

(C) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime ends on the date and hour of the next valid sample.

k. The Permittee shall submit a written report of the results of each performance test required in 40 CFR 60.4340(a) before the close of business on the 60th day following the completion of the performance test. [40 CFR 60.4375(b)]

3. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS

a. The Permittee shall comply with all applicable provisions, including the requirements for emission standards, notification, testing, reporting, record keeping, and monitoring, contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards" (NSPS) as promulgated in 40 CFR Part 60, Subpart TTTT "Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units," including Subpart A "General Provisions."

Emission Standards [15A NCAC 02D .0524]

b. The Permittee shall comply with the following standards for Greenhouse Gas emissions from combustion turbine (**ID No. ES-19**), during developmental phases (commissioning, testing, and validation) of each configuration (Versions A, B, and C) and post-developmental operation:

120 lb CO_2/million Btu for combustion turbine that supplies its design efficiency or 50 percent, whichever is less, times its potential electric output or less as net-electric sales on either a 12-operating month or a 3-year rolling average basis and combusts more than 90% natural gas on a heat input basis on a 12-operating-month rolling average basis

120 lb/million Btu to 160 lb/million Btu for combustion turbine that combusts 90% or less natural gas on a heat input basis on a 12-operating-month rolling average basis

[40 CFR 60.5520(a) and Table 2 to Subpart TTTT]

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0308(a)(1)]

c. The Permittee shall keep purchase records of natural gas and No. 2 fuel oil. [40 CFR 60.5520(d) and (d)(1), and 60.5535(a)]

d. The Permittee shall follow all applicable recordkeeping requirements and keep records as required under Subpart F of Part 75 (40 CFR), and submit notifications specified in 40 CFR 75.61, as applicable. [40 CFR 60.5550(b) and 60.5560(b)(1)]

e. The records required pursuant to Subpart TTTT shall be in a form suitable and readily available for expeditious review. In addition, the Permittee shall maintain each record for 3 years after the date of conclusion of each compliance period. The Permittee shall maintain each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 60.7. Records that are accessible from a central location by a computer or other means that instantly provide access at the site meet this requirement. The Permittee may maintain the records off site for the remaining year(s) as required by this Subpart. [40 CFR 60.5565(c)]

4. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

a. For combustion turbine (**ID No. ES-19**), the Permittee shall comply with all applicable provisions, including emission limitations, operating limitations, monitoring, recordkeeping, reporting, and notification, contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart YYYY "National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines" and Subpart A "General Provisions."

b. For the gas-fired subcategorized (lean pre-mix or diffusion flame, as applicable) combustion turbine (**ID No. ES-19**), the Permittee shall comply with the Initial Notification requirements set forth in 40 CFR 63.6145, but need not comply with any other requirement of this subpart until EPA takes final action to require compliance and publishes a document in the Federal Register. [40 CFR 63.6095(d)]

c. The Permittee shall submit an initial notification not later than 120 days after the start-up of combustion turbine (**ID No. ES-19**) in configuration Version A, as per 40 CFR 63.6145(c), meeting the requirements in 40 CFR 63.6145(d).

d. If all existing combustion turbines (**ID Nos. ES-1 through ES-16**) and the new combustion turbine (**ID No. ES-19**) fire fuel oil more than an aggregate total of 1,000 hours during any calendar year, combustion turbine (**ID No. ES-19**) shall become subject to all applicable oil-fired subcategory (lean pre-mix or diffusion flame, as applicable) emission limitations, operating limitations, monitoring, recordkeeping, reporting, and notification requirements. [40 CFR 63.6095(a)(2)]

5. 15A NCAC 02D .1418: NEW ELECTRIC GENERATING UNITS, LARGE BOILERS, AND LARGE I/C ENGINES

a. i. NOx emissions from combustion turbine (**ID No. ES-19**) shall not exceed 0.15 lb/million Btu when firing natural gas and 0.18 lb/million Btu when firing No. 2 fuel oil or the NOx emissions from this turbine shall not exceed BACT emission limits established under Section 2.2 A.1.b below, whichever requires the greater degree of reduction.

ii. The Permittee shall comply with the NOx emission limits (0.15 lb/million Btu and 0.18 lb/million Btu, as applicable), in Section 2.1 C.5.a for combustion turbine (**ID No. ES-19**) when firing natural gas or No. 2 fuel oil, during developmental phases (commissioning and testing only) of each configuration (Versions A, B, and C).

iii. The BACT emission limits in Section 2.2 A.1.b below for combustion turbine (**ID No. ES-19**), when firing natural gas and No. 2 fuel oil, for developmental phase (validation only) of each configuration (Versions A, B, and C) and post-developmental operation, are more stringent than NOx emission limits in Section 2.1 C.5.a above. The Permittee shall comply with NOx emission limits in Section 2.2 A.1.b below during developmental phase (validation only) of each configuration (Versions A, B, and C) and post-developmental operation, instead of emission limits in this Section 2.1 C.5.a.

Testing [15A NCAC 02D .0308(a)(1)]

b. The NOx testing requirements in Section 2.2 A.1.i below shall be sufficient to demonstrate compliance with 15A NCAC 02D .1418.

Monitoring/Recordkeeping [15A NCAC 02D .1418(d), and 15A NCAC 02D .1404(a) and (d)]

c. The NOx CEMS requirements in Section 2.2 A.1.m below shall be sufficient to ensure compliance with 15A NCAC 02D .1418. The Permittee shall determine nitrogen oxide emissions from May 1 to September 30 of each year (i.e., the "ozone season"). A 24-hour block average shall be recorded for each day to determine compliance, as described under 15A NCAC 02D .0606, beginning May 1 through September 30.

Reporting [15A NCAC 02D .1404(a)]

d. The Permittee shall submit the continuous emissions monitoring system data showing the 24-hour daily block values for periods of excess nitrogen oxide emissions postmarked on or before October 30 of each calendar year for the previous ozone season. If no excess emissions were measured during the ozone season, the Permittee shall submit a summary report stating that there were no excess emissions for the ozone season.

e. CEMS Monitor Availability - The Permittee shall submit the nitrogen oxide CEMS monitor downtime reports, including monitor availability values (as calculated for 40 CFR Part 75) for the last hour of the reporting period, postmarked on or before October 30 of each calendar year for the previous ozone season.

6. CROSS STATE AIR POLLUTION RULE (CSAPR) REQUIREMENTS

a. For combustion turbine (**ID No. ES-19**), the Permittee shall comply with all applicable requirements of 40 CFR Part 97, Subpart AAAAA "CSAPR NOx Annual Trading Program" and Subpart CCCCC "CSAPR SO_2 Group 1 Trading Program."

D. One No. 2 fuel oil, fixed-roof storage tank (ID No. ES-20) with conservation vent

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Volatile Organic Compounds	See Section 2.2 A.1	15A NCAC 02D .0530

2.2- Multiple Emission Source(s) Specific Limitations and Conditions

A. The following Sources:

- **One natural gas/No. 2 fuel oil-fired simple cycle internal combustion turbine equipped with dry low-NOx (DLN) combustors (ID No. ES-19) and associated dilution selective catalytic reduction (DSCR) system (ID No. CD-19a) and oxidation catalyst (ID No. CD-19b)**
- **One No. 2 fuel oil, fixed-roof storage tank (ID No. ES-20) with conservation vent**

The following table provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Carbon Monoxide Volatile Organic Compounds (as CH_4) Nitrogen Oxides (as NO_2) Particulate Matter PM_{10} $PM_{2.5}$	See Section 2.2 A.1	15A NCAC 02D .0530
Greenhouse Gases	See Section 2.2 A.1	15A NCAC 02D .0544

1. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION, and 15A NCAC 02D .0544: PREVENTION OF SIGNIFICANT DETERIORATION FOR GREENHOUSE GASES

a. The Permittee shall comply with emission limits, testing, monitoring, recordkeeping, and reporting requirements, in accordance with 15A NCAC 02D .0530, "Prevention of Significant Deterioration of Air Quality" and 02D .0544 "Prevention of Significant Deterioration for Greenhouse Gases".

b. The Permittee shall comply with the following Best Available Control Technology (BACT):

EMISSION SOURCE	REGULATED NSR Pollutant	BACT	Control Description
Combustion Turbine (ID No. ES-19)	CO	10 ppmvd @ 15% O_2, 24-hour rolling average, using CEMS, natural gas or No. 2 fuel oil firing [Includes all periods of operation (normal, startup, shutdown, and malfunction) during all developmental phases (commissioning, testing, and validation) of each configuration (Versions A, B and C)]* 4 ppmvd @ 15% O_2, 24-hour rolling average, using CEMS, natural gas or No. 2 fuel oil firing [Includes all periods of operation (normal, startup, shutdown, and malfunction) during post-developmental operation]**	Good combustion control Good combustion control and oxidation catalyst
Combustion Turbine (ID No. ES-19)	VOC (as CH_4)	3 ppmvd @ 15% O_2, 3-run stack test average, natural gas or No. 2 fuel oil firing [Includes all periods of operation (normal, startup, shutdown, and malfunction) during all developmental phases (commissioning, testing, and validation) of each configuration (Versions A, B and C)] 2 ppmvd @ 15% O_2, 3-run stack test average, natural gas or No. 2 fuel oil firing [Includes all periods of operation (normal, startup, shutdown, and malfunction) during post-developmental operation]	Good combustion control Good combustion control and oxidation catalyst

EMISSION SOURCE	REGULATED NSR Pollutant	BACT	Control Description
Combustion Turbine (ID No. ES-19)	NOx (as NO_2)	45 ppmvd @ 15% O_2, 4-hour rolling average, using CEMS, natural gas or No. 2 fuel oil firing [Includes all periods of operation (normal, startup, shutdown, and malfunction) during developmental phases (commissioning and testing only) of each configuration (Versions A, B and C)]	DLN
		9 ppmvd @ 15% O_2, 4-hour rolling average, using CEMS, natural gas firing 12 ppmvd @ 15% O_2, 4-hour rolling average, using CEMS, No. 2 fuel oil firing [Includes all periods of operation (normal, startup, shutdown, and malfunction) during developmental phase (validation only) of each configuration (Versions A, B and C) and post-developmental operation]	DLN and DSCR
Combustion Turbine (ID No. ES-19)	PM_{10} / $PM_{2.5}$	20.9 lb/hr, 3-run stack test average, natural gas firing 38 lb/hr, 3-run stack test average, No. 2 fuel oil firing [Includes all periods of operation (normal, startup, shutdown, and malfunction) during all developmental phases (commissioning, testing, and validation) of each configuration (Versions A, B and C) and post-developmental operation]	use of clean fuels: natural gas and No. 2 fuel oil (ultra-low sulfur diesel with 15 ppm maximum fuel sulfur), and good combustion control
	PM[4]	12.54 lb/hr, 3-run stack test average, natural gas firing 22.80 lb/hr, 3-run stack test average, No. 2 fuel oil firing [Includes all periods of operation (normal, startup, shutdown, and malfunction) during all developmental phases (commissioning, testing, and validation) of each configuration (Versions A, B and C) and post-developmental operation]	use of clean fuels: natural gas and No. 2 fuel oil (ultra-low sulfur diesel with 15 ppm maximum fuel sulfur), and good combustion control

[4] Filterable only.

EMISSION SOURCE	REGULATED NSR Pollutant	BACT	Control Description
Combustion Turbine (ID No. ES-19)	GHG	120 lb CO_2 per million Btu, 3-run stack test average, natural gas firing (more than 90 percent natural gas on a heat input basis on a 12-month rolling basis) 120-160 lb CO_2 per million Btu, 3-run stack test average, multi-fuel firing (i.e., 90 percent or less natural gas firing on a 12-month rolling basis) 1,401,411 tons CO_2e per 12-month rolling average [Includes all periods of operation (normal, startup, shutdown, and malfunction) during all developmental phases (commissioning, testing, and validation) of each configuration (Versions A, B and C) and post-developmental operation]	use of clean fuels: natural gas and No. 2 fuel oil (ultra-low sulfur diesel with 15 ppm maximum fuel sulfur), and proper design and operation of combustion turbine
No. 2 Fuel Oil Storage Tank	VOC	1.4 tons per 12-month rolling average [Includes all periods of operation (normal, startup, shutdown, and malfunction)]	use of a light-colored fixed roof tank, submerged fill and a conservation vent, and storage of only low vapor pressure No. 2 fuel oil

* Emissions resulting from startup or shutdown exceeding the CO BACT are permitted provided that optimal operational practices are adhered to and periods of excess emissions are minimized. Periods of excess emissions due to startup and/or shutdown or operation below 50% load shall not exceed 4 hours in any 24-hour block period beginning at midnight when burning natural gas. Periods of excess emissions due to startup and/or shutdown or operation below 70% load shall not exceed 4 hours in any 24-hour block period beginning at midnight when burning fuel oil. Startup is defined as the period from initial firing to 50% load or 70% load, when burning natural gas or fuel oil, respectively. Shutdown is defined as the period from 50% load or 70% load to flame out when burning natural gas or fuel oil, respectively.

** Emissions resulting from startup or shutdown exceeding the CO BACT are permitted provided that optimal operational practices are adhered to and periods of excess emissions are minimized. Periods of excess emissions due to startup and/or shutdown or operation below 50% load shall not exceed 2 hours in any 24-hour block period beginning at midnight when burning natural gas. Periods of excess emissions due to startup and/or shutdown or operation below 70% load shall not exceed 2 hours in any 24-hour block period beginning at midnight when burning fuel oil. Startup is defined as the period from initial firing to 50% load or 70% load, when burning natural gas or fuel oil, respectively. Shutdown is defined as the period from 50% load or 70% load to flame out when burning natural gas or fuel oil, respectively.

c. The following emission limits shall apply for combustion turbine (ID No. ES-19), demonstrating compliance with the National Ambient Air Quality Standards and the PSD increments[5], as required by 15A NCAC 02D .0530 and 40 CFR 51.166(k):

Pollutant	Fuel	Emission Limit (lb/hr)					
		1-hr average					Annual average
		Base Load	80% Load	70% Load	Startup	Shutdown	
NO_2	Natural gas	857.8	635.3	251.4	458.8	134.7	N/A
	Fuel oil	719.4	524.97	513.1	679.4	406.0	

[5] No PSD increments currently exist for NO_2 (1-hour average) for Class I Area, Class II Area, or Class III Area, in accordance with 40 CFR 51.166(c) "Ambient Air Increments and Other Measures".

d. The Permittee shall minimize emissions to the maximum extent possible during startup and shutdown periods.
e. The Permittee shall limit the operation of combustion turbine (ID No. ES-19) to no more than 4,677 combined total full load equivalent hours of operation for natural gas and fuel oil for each configuration (Version A, B, and C) per consecutive 12-month period, during normal operations, startups, shutdowns, malfunctions, commissioning, testing, and validations.
f. The Permittee shall limit the operation of combustion turbine (ID No. ES-19) to no more than 4,677 combined total full load equivalent hours of operation for natural gas and fuel oil firing for post-development operation per consecutive 12-month period, during normal operations, startups, shutdowns, malfunctions, commissioning, testing, and validations.
g. The maximum throughput for No. 2 fuel oil for storage tank (ID No. ES-20) shall not exceed 59,400,000 gallons per consecutive 12-month period.

Testing [15A NCAC 02D .0308(a)(1)]
h. The Permittee shall demonstrate compliance with the BACT for CO, VOC, NOx, PM, PM10, PM2.5, and GHG, in Section 2.2 A.1.b above, by testing combustion turbine (ID No. ES-19) within 180 days of initial start-up of configuration Version A and post-developmental operation. Details of the emissions testing and reporting requirements can be found in General Condition JJ.
   i. Each performance test shall be conducted at ± 25 percent of 100 percent peak load or at the highest achievable load point if at least 75 percent peak load cannot be achieved in practice. Three runs shall be required for each performance test and each run shall last for a minimum 20 minutes. Separate performance testing is required for each fuel and each pollutant. The Permittee shall not conduct any test run if the ambient temperature is at or below 0°F.
   ii. During stack testing, the Permittee shall conduct an evaluation for a need to operate an oxidation catalyst, for demonstrating compliance with the BACTs for CO and VOC during each configuration (Versions A, B and C). If the Permittee determines that a continuous operation of oxidation catalyst is required to comply with the BACTs for CO and VOC, during each configuration (Versions A, B and C), the Permittee shall establish minimum inlet temperature to the oxidation catalyst for ensuring continuous compliance with the BACTs for these pollutants.
   iii. During stack testing, the Permittee shall, if required, establish minimum inlet temperature to the oxidation catalyst for ensuring continuous compliance with the CO and VOC BACTs in Section 2.2 A.1.b above, during all periods of operation (normal, startup, shutdown, and malfunction) in post-developmental operation.
   iv. No stack testing for VOC BACT shall be required for No. 2 fuel oil storage tank (ID No. ES-20).

Monitoring/Recordkeeping [15A NCAC 02Q .0308(a)(1)]
i. Pursuant to Section 2.2 A.1.e above, the Permittee shall record and maintain records of the actual number of hours of operation for combustion turbine (ID No. ES-19) for each configuration (Versions A, B, and C), during normal operations, startups, shutdowns, malfunctions, commissioning, testing, and validation.
j. Pursuant to Section 2.2 A.1.f above, the Permittee shall record and maintain records of the actual number of hours of operation for combustion turbine (ID No. ES-19) for post-developmental operation, during normal operations, startups, shutdowns, and malfunctions.
k. The Permittee shall monitor NOx emissions from the combustion turbine (ID No. ES-19) using a CEMS during all periods of operation (normal, startup, shutdown, and malfunction) in developmental phases (commissioning, testing, and validation) of each configuration (Versions A, B and C) and post-developmental operation. The NOx CEMS shall meet the requirements in 40 CFR 60.4335(b) and 60.4345.
l. In addition to the NOx emissions monitoring requirement in Section 2.2 A.1.k above, the Permittee shall comply with the following requirements for NOx emissions from the combustion turbine (ID Nos. ES-19), during developmental phase (validation only) of each configuration (Versions A, B and C) and post-developmental operation.
   i. The Permittee shall install and operate an ammonia flow meter to measure and record the ammonia injection rate to the DSCR system associated with the combustion turbine. The ammonia injection rate shall be established during the performance test in Section 2.2 A.1.h above, demonstrating compliance with the NOx BACT in Section 2.2 A.1.b above, and made available to the Division of Air Quality upon request.
   ii. The DSCR shall operate at all times that the turbine is operating, except during turbine start-up and shutdown periods, to the extent recommended by the manufacturer and operated in a manner so as to minimize ammonia slip.
   iii. During NOx CEMS downtimes or malfunctions, the Permittee shall operate at ammonia injection rates determined during the performance test in Section 2.2 A.1.h above. In the case of a missing hour in conjunction

with a Calibration Error Test or a Quarterly Linearity Test, the ammonia injection rate for the hour following the referenced test shall be adjusted to the injection rate determined during the performance test in Section 2.2 A.1.h above, until a valid data status has been achieved.

iv. NOx CEMS data reported to meet the requirements of this section shall include data substituted using the missing data procedures in Subpart D of 40 CFR Part 75 except that unbiased values may be used. The missing data procedure shall be used whenever the emission unit combusts any fuel.

m. The Permittee shall monitor CO emissions from combustion turbine (ID No. ES-19), during all periods of operation (normal, startup, shutdown, and malfunction) in developmental phases (commissioning, testing, and validation) of each configuration (Versions A, B and C) and post-developmental operation, using a CEMS, meeting the requirements in Performance Specification 4A, Appendix B, Part 60, Chapter 40, Code of Federal Regulation, and 15A NCAC 02D .0613.

i. A Cylinder Gas Audit ("CGA") shall be conducted at least once each QA operating quarter on the CO CEMS in accordance with 40 CFR Part 60, Appendix F – Procedure 1, 40 CFR 5.1.2 and 5.2.3(2) instead of once every calendar quarter. A QA operating quarter is defined as a calendar quarter in which the unit operates at least 168 unit operating hours, and an operating hour is a clock hour during which the unit combusts any fuel, either for part of or the entire hour. Regardless of the number of hours of operation, at a minimum, a CGA shall be conducted at least once every four calendar quarters on the CO CEMS consistent with the requirements in 40 CFR Part 75, Appendix B, 40 CFR 2.2.3(f). Notwithstanding these requirements, if the CO span value for a particular monitor range is less than or equal to 30 ppm, that range is exempted from CGA requirements for on-going quality assurance.

ii. A Relative Accuracy Test Audit ("RATA") shall be conducted once every four successive QA operating quarters (as defined above) on the CO CEMS in accordance with 40 CFR Part 60, Appendix F – Procedure 1 40 CFR 5.1.1 and 5.2.3(1) and 40 CFR Part 60, Appendix B - PS-4A 40 CFR 13.2 instead of once every four calendar quarters. Regardless of the number of hours of operation, at a minimum, a RATA shall be conducted at least once every eight calendar quarters on the CO CEMS consistent with the requirements in 40 CFR Part 75, Appendix B 40 CFR 2.3.1.1(a).

iii. In the event that a required CGA or RATA is missed on the CO CEMS, the grace period provisions specified by 40 CFR Part 75, Appendix B - 40 CFR 2.2.4 and 2.3.3 shall apply, where applicable.

iv. In the event that a non-redundant/like-kind CO monitor is used in lieu of the certified CO monitor, the non-redundant/like-kind analyzer provisions specified by 40 CFR Part 75 40 CFR 72.20(d)(2) shall apply, where applicable, except that a CGA will be performed on the non-redundant/like-kind CO monitor in lieu of a linearity, within 168 unit operating hours of being installed and used as a backup monitor.

v. Starting with the first hourly CO emission data that is missing, the Permittee shall substitute the data for that hour and any subsequent hours using the historical CEM data over the previous 2,160 operating hours when combusting the fuel or blend with the highest CO emission rate.

n. The Permittee shall estimate GHG emissions (tons) as CO_2e, on a monthly basis, for combustion turbine (ID No. ES-19), for developmental phases (commissioning, testing, and validation) of each configuration (Versions A, B and C) and post-developmental operation, as follows. The Permittee shall determine each month, consecutive 12-months' total GHG emissions, using the emissions data for the current month and the previous 11-months.

i. The Permittee shall monitor CO_2 emissions from the combustion turbine (ID No. ES-19) using a CEMS, meeting the requirements in Appendix G to 40 CFR 75, or monitor CO_2 emissions in accordance with 40 CFR 60.5535(b), (c)(2) or (c)(5) and fuel flow in accordance with 40 CFR 60.5535(c).

ii. The Permittee shall monitor N_2O and CH_4 emissions from this combustion turbine, using applicable emissions factors in Table C-2 to Subpart C of 40 CFR 98.

iii. The Permittee shall use Global Warming Potentials of N_2O and CH4, in accordance with Table A-1 to Subpart A of 40 CFR 98, to covert emissions of these gases in the unit of CO_2e.

iv. CO_2 CEMS data reported to meet the requirements of this section shall include data substituted using the missing data procedures in Subpart D of 40 CFR Part 75 except that unbiased values may be used. The missing data procedure shall be used whenever the emission unit combusts any fuel.

o. Monitor downtime:
For each CEMS required by Sections 2.2 A.1.k, m, and n above, monitor downtime:
(A) shall not exceed 5.0 percent of the operating time in a calendar quarter;
(B) shall be calculated using the following equation:

$$\%MD = \left(\frac{\text{Total Monitor Downtime}}{\text{Total Source Operating Time}}\right) \times 100$$

Where:

"Total Monitor Downtime" is the number of hours in a calendar quarter where an emission source was operating but data from the associated CEMS are invalid, not available, and/or filled with missing data procedure; and

"Total Source Operating Time" is the number of hours in a calendar quarter where the emission source associated with the CEMS was operating.

p. If operation of oxidation catalyst is required to comply with the CO and VOC BACTs in Section 2.2 A.1.b above, the Permittee shall continuously monitor the inlet temperature to oxidation catalyst and maintain the 3-hour rolling average of the inlet temperature higher than the minimum inlet temperature established in Section 2.2 A.1.h above.

q. No monitoring or recordkeeping shall be required for emissions of PM, PM_{10}, and $PM_{2.5}$, from combustion turbine (**ID No. ES-19**), during all periods of operation (normal, startup, shutdown, and malfunction) in developmental phases (commissioning, testing, and validation) of each configuration (Versions A, B and C) and post-developmental operation.

r. The Permittee shall keep records for No. 2 fuel oil throughput for storage tank (**ID No. ES-20**) on a monthly basis in a written or electronic format. The Permittee shall determine each month, consecutive 12-months' total No. 2 fuel oil throughput, using the fuel oil throughput data for the current month and the previous 11-months.

Reporting [15A NCAC 02Q .0308(a)(1)]

s. The Permittee shall submit a written report of the results of each performance test required in Section 2.2 A.1.h above, before the close of business on the 30th day following the completion of the performance test unless otherwise extended as allowed by General Condition JJ.

t. For combustion turbine (**ID No. ES-19**), the Permittee shall submit reports of excess emissions and monitor downtime in accordance with 40 CFR 60.7(c). The Permittee shall report excess emissions for all periods of operation, including start-up, shutdown, and malfunction. These reports shall be postmarked by the 30th day following the end of each 6-month period. Records of excess emissions and monitor downtime for the associated CEMS in the format approved by DAQ Technical Services Section for the combustion turbine (**ID No. ES-19**).

i. For NOx CEM, excess emissions and monitor downtime for combustion turbine (**ID No. ES-19**) firing natural gas or No. 2 fuel oil, shall be defined as below:

(A) An excess emission is any unit operating period in which the 4-hour rolling average NO_X emission rate exceeds the emission limit in Section 2.2 A.1.b above. 4-hour rolling average NO_X emission rate is the arithmetic average of the average NO_X emission rate in ppm measured by the continuous emission monitoring equipment for a given hour and the three unit operating hour average NO_X emission rates immediately preceding that unit operating hour. Calculate the rolling average if a valid NO_X emission rate is obtained for at least 3 of the 4 hours. The 4-hour rolling average is calculated using only actual operating hours (periods of non-operations shall not be considered in emissions averaging).

(B) A period of monitor downtime is any unit operating hour in which the data for any of the following parameters are either missing or invalid: NO_X concentration, CO_2 or O_2 concentration, fuel flow rate, or megawatts. The steam flow rate, steam temperature, and steam pressure are only required if you will use this information for compliance purposes.

ii. For CO CEM, excess emissions and monitor downtime shall be defined as below:

(A) An excess emission is any unit operating period in which the 24-hour rolling average CO emission rate exceeds the emission limit in Section 2.2 A.1.b above. A "24-hour rolling average CO emission rate" is the arithmetic average of all hourly CO emission data in ppm measured by the continuous emission monitoring equipment for a given hour and the twenty-three unit operating hours immediately preceding that unit operating hour. A new 24-hour average is calculated each unit operating hour as the average of all hourly CO emissions rates for the preceding 24 unit operating hours if a valid CO emission rate is obtained for at least 75 percent of all operating hours. The 24-hour rolling average is calculated using only actual operating hours (periods of non-operations shall not be considered in emissions averaging).

(B) A period of monitor downtime is any unit operating hour in which the data for any of the following parameters are either missing or invalid: CO concentration, CO_2 or O_2 concentration, fuel flow rate, or megawatts. The steam flow rate, steam temperature, and steam pressure are only required if you will use this information for compliance purposes.

iii. For VOC emissions, excess emissions and monitor downtime shall be defined as below:

(A) Excess emissions for VOC shall be defined any unit operating hour for which the 3-hour rolling average of the catalyst inlet temperature is below the minimum inlet temperature es tablished in Section 2.2 A.1.h

above. The 3-hour rolling average is calculated using only actual operating hours (periods of non-operations shall not be considered in temperatures averaging).

(B) A period of monitor downtime shall be defined as any unit operating hour in which catalyst inlet temperature data are unavailable or invalid.

u. The Permittee shall submit a written report, postmarked on or before the 30th day following the end of each 6-month period:
   i. Emissions (tons) of GHG as CO_2e per consecutive 12-month periods, for combustion turbine (**ID No. ES-19**), during developmental phases (commissioning, testing, and validation) of each configuration (Versions A, B, and C) and post-developmental operation. Excess emissions and monitor downtimes for CO_2 (lb/million Btu) in accordance with 40 CFR 60.5535, 60.5540, and 60.5555, as applicable.
   ii. No. 2 fuel oil throughput per consecutive 12-month periods for storage tank (**ID No. ES-20**).
   iii. Combined total hours of operations for both natural gas and fuel oil firing for combustion turbine (**ID No. ES-19**) for each configuration (Versions A, B, and C) per consecutive 12-month period, during normal operations, startups, shutdowns, malfunctions, commissioning, testing, and validation.
   iv. Combined total hours of operations for both natural gas and fuel oil firing for post-developmental operation for combustion turbine (**ID No. ES-19**) per consecutive 12-month period, during normal operations, startups, shutdowns, malfunctions, commissioning, testing, and validation.
   v. No reporting for PM, PM10, and PM2.5 emissions from combustion turbine (**ID No. ES-19**) shall be required.

w. The Permittee shall submit to the DAQ sufficient design data for emission control systems, DSCR (**ID No. CD-19a**) and oxidation catalyst (**ID No. CD-19b**), to evaluate their environmental performance, before commencing construction of combustion turbine **(ID No. ES-19**) in configuration Version A. The Permittee shall also provide to the DAQ any revisions to the design data for these environmental controls (**ID Nos. CD-19a and CD-19b**), for the subsequent configuration Versions B and C of the combustion turbine, before commencing construction. The DAQ may require a permit revision pursuant to an appropriate provision in 15A NCAC 02Q .0500, upon its review of the design parameters of the environmental controls (**ID Nos. CD-19a and CD-19b**) for each of the Versions A, B, and C.

2.3- Phase II Acid Rain Permit Requirements

ORIS code: 7277
Effective: TBD until TBD+5 years, same as TV permit

1. Statement of Basis

   Statutory and Regulatory Authorities: In accordance with the provisions of Article 21B of Chapter 143, General Statutes of North Carolina as amended and Titles IV and V of the Clean Air Act, the Division of Air Quality issues this permit pursuant to Title 15A North Carolina Administrative Codes, Subchapter 02Q .0400 and 02Q .0500, and other applicable Laws.

2. SO_2 Allowance Allocations and NO_x Requirements for each affected unit

Unit ID Nos. 1 through 16 (**ID Nos. ES-1 through ES-16**), and Unit ID No. 17 (**ID No. ES-19**)	SO_2 allowances, under Tables 2, 3, or 4 of 40 CFR part 73.	SO_2 allowances are not allocated by U.S. EPA for new units under 40 CFR Part 72.
	NO_x limit	Does not apply to gas or oil-fired units.

3. Comments, Notes and Justifications

   None.

SECTION 3 - GENERAL CONDITIONS (version 5.5, 08/25/2020)

This section describes terms and conditions applicable to this Title V facility.

A. **General Provisions** [NCGS 143-215 and 15A NCAC 02Q .0508(i)(16)]
1. Terms not otherwise defined in this permit shall have the meaning assigned to such ter0ms as defined in 15A NCAC 02D and 02Q.
2. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are binding and enforceable pursuant to NCGS 143-215.114A and 143-215.114B, including assessment of civil and/or criminal penalties. Any unauthorized deviation from the conditions of this permit may constitute grounds for revocation and/or enforcement action by the DAQ.
3. This permit is not a waiver of or approval of any other Department permits that may be required for other aspects of the facility which are not addressed in this permit.
4. This permit does not relieve the Permittee from liability for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted facility, or from penalties therefore, nor does it allow the Permittee to cause pollution in contravention of state laws or rules, unless specifically authorized by an order from the North Carolina Environmental Management Commission.
5. Except as identified as state-only requirements in this permit, all terms and conditions contained herein shall be enforceable by the DAQ, the EPA, and citizens of the United States as defined in the Federal Clean Air Act.
6. Any stationary source of air pollution shall not be operated, maintained, or modified without the appropriate and valid permits issued by the DAQ, unless the source is exempted by rule. The DAQ may issue a permit only after it receives reasonable assurance that the installation will not cause air pollution in violation of any of the applicable requirements. A permitted installation may only be operated, maintained, constructed, expanded, or modified in a manner that is consistent with the terms of this permit.

B. **Permit Availability** [15A NCAC 02Q .0507(k) and .0508(i)(9)(B)]
The Permittee shall have available at the facility a copy of this permit and shall retain for the duration of the permit term one complete copy of the application and any information submitted in support of the application package. The permit and application shall be made available to an authorized representative of Department of Environmental Quality upon request.

C. **Severability Clause** [15A NCAC 02Q .0508(i)(2)]
In the event of an administrative challenge to a final and binding permit in which a condition is held to be invalid, the provisions in this permit are severable so that all requirements contained in the permit, except those held to be invalid, shall remain valid and must be complied with.

D. **Submissions** [15A NCAC 02Q .0507(e) and 02Q .0508(i)(16)]
Except as otherwise specified herein, two copies of all documents, reports, test data, monitoring data, notifications, request for renewal, and any other information required by this permit shall be submitted to the appropriate Regional Office. Refer to the Regional Office addresson the cover page of this permit. For continuous emissions monitoring systems (CEMS) reports, continuous opacity monitoring systems (COMS) reports, quality assurance (QA)/quality control (QC) reports, acid rain CEM certification reports, and NOx budget CEM certification reports, one copy shall be sent to the appropriate Regional Office and one copy shall be sent to:

Supervisor, Stationary Source Compliance
North Carolina Division of Air Quality
1641 Mail Service Center
Raleigh, NC 27699-1641

All submittals shall include the facility name and Facility ID number (refer to the cover page of this permit).

E. **Duty to Comply** [15A NCAC 02Q .0508(i)(3)]
The Permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Noncompliance with any permit condition except conditions identified as state-only requirements constitutes a violation of the Federal Clean Air Act. Noncompliance with any permit condition is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

F. **Circumvention** - STATE ENFORCEABLE ONLY
The facility shall be properly operated and maintained at all times in a manner that will effect an overall reduction in air pollution. Unless otherwise specified by this permit, no emission source may be operated without the concurrent operation of its associated air pollution control device(s) and appurtenances.

G. **Permit Modifications**
1. Administrative Permit Amendments [15A NCAC 02Q .0514]
The Permittee shall submit an application for an administrative permit amendment in accordance with 15A NCAC 02Q .0514.
2. Transfer in Ownership or Operation and Application Submittal Content [15A NCAC 02Q .0524 and 02Q .0505]
The Permittee shall submit an application for an ownership change in accordance with 15A NCAC 02Q.0524 and 02Q .0505.
3. Minor Permit Modifications [15A NCAC 02Q .0515]
The Permittee shall submit an application for a minor permit modification in accordance with 15A NCAC 02Q .0515.
4. Significant Permit Modifications [15A NCAC 02Q .0516]
The Permittee shall submit an application for a significant permit modification in accordance with 15A NCAC 02Q .0516.
5. Reopening for Cause [15A NCAC 02Q .0517]
The Permittee shall submit an application for reopening for cause in accordance with 15A NCAC 02Q .0517.

H. **Changes Not Requiring Permit Modifications**
1. Reporting Requirements
Any of the following that would result in new or increased emissions from the emission source(s) listed in Section 1 must be reported to the Regional Supervisor, DAQ:
   a. changes in the information submitted in the application;
   b. changes that modify equipment or processes; or
   c. changes in the quantity or quality of materials processed.

   If appropriate, modifications to the permit may then be made by the DAQ to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause a violation of the emission limitations specified herein.

2. Section 502(b)(10) Changes [15A NCAC 02Q .0523(a)]
   a. "Section 502(b)(10) changes" means changes that contravene an express permit term or condition. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
   b. The Permittee may make Section 502(b)(10) changes without having the permit revised if:
      i. the changes are not a modification under Title I of the Federal Clean Air Act;
      ii. the changes do not cause the allowable emissions under the permit to be exceeded;
      iii. the Permittee notifies the Director and EPA with written notification at least seven days before the change is made; and
      iv. the Permittee shall attach the notice to the relevant permit.
   c. The written notification shall include:
      i. a description of the change;
      ii. the date on which the change will occur;
      iii. any change in emissions; and
      iv. any permit term or condition that is no longer applicable as a result of the change.
   d. Section 502(b)(10) changes shall be made in the permit the next time that the permit is revised or renewed, whichever comes first.
3. Off Permit Changes [15A NCAC 02Q .0523(b)]
The Permittee may make changes in the operation or emissions without revising the permit if:
   a. the change affects only insignificant activities and the activities remain insignificant after the change; or
   b. the change is not covered under any applicable requirement.
4. Emissions Trading [15A NCAC 02Q .0523(c)]

To the extent that emissions trading is allowed under 15A NCAC 02D, including subsequently adopted maximum achievable control technology standards, emissions trading shall be allowed without permit revision pursuant to 15A NCAC 02Q .0523(c).

I.A **Reporting Requirements for Excess Emissions and Permit Deviations** [15A NCAC 02D .0535(f) and 02Q .0508(f)(2)]
"Excess Emissions" - means an emission rate that exceeds any applicable emission limitation or standard allowed by any rule in Sections .0500, .0900, .1200, or .1400 of Subchapter 02D; or by a permit condition; or that exceeds an emission limit established in a permit issued under 15A NCAC 02Q .0700. *(Note: Definitions of excess emissions under 02D .1110 and 02D .1111 shall apply where defined by rule.)*

"Deviations" - for the purposes of this condition, any action or condition not in accordance with the terms and conditions of this permit including those attributable to upset conditions as well as excess emissions as defined above lasting less than four hours.

Excess Emissions

1. If a source is required to report excess emissions under NSPS (15A NCAC 02D .0524), NESHAPS (15A NCAC 02D .1110 or .1111), or the operating permit provides for periodic (e.g., quarterly) reporting of excess emissions, reporting shall be performed as prescribed therein.
2. If the source is not subject to NSPS (15A NCAC 02D .0524), NESHAPS (15A NCAC 02D .1110 or .1111), or these rules do NOT define "excess emissions," the Permittee shall report excess emissions in accordance with 15A NCAC 02D .0535 as follows:
    a. Pursuant to 15A NCAC 02D .0535, if excess emissions last for more than four hours resulting from a malfunction, a breakdown of process or control equipment, or any other abnormal condition, the owner or operator shall:
        i. notify the Regional Supervisor or Director of any such occurrence by 9:00 a.m. Eastern Time of the Division's next business day of becoming aware of the occurrence and provide:
            - name and location of the facility;
            - nature and cause of the malfunction or breakdown;
            - time when the malfunction or breakdown is first observed;
            - expected duration; and
            - estimated rate of emissions;
        ii. notify the Regional Supervisor or Director immediately when corrective measures have been accomplished; and
        iii. submit to the Regional Supervisor or Director within 15 days a written report as described in 15A NCAC 02D .0535(f)(3).

Permit Deviations

3. Pursuant to 15A NCAC 02Q .0508(f)(2), the Permittee shall report deviations from permit requirements (terms and conditions) as follows:
    a. Notify the Regional Supervisor or Director of all other deviations from permit requirements not covered under 15A NCAC 02D .0535 quarterly. A written report to the Regional Supervisor shall include the probable cause of such deviation and any corrective actions or preventative actions taken. The responsible official shall certify all deviations from permit requirements.

I.B Other Requirements under 15A NCAC 02D .0535
The Permittee shall comply with all other applicable requirements contained in 15A NCAC 02D .0535, including 15A NCAC 02D .0535(c) as follows:

1. Any excess emissions that do not occur during start-up and shut-down shall be considered a violation of the appropriate rule unless the owner or operator of the sources demonstrates to the Director, that the excess emissions are a result of a malfunction. The Director shall consider, along with any other pertinent information, the criteria contained in 15A NCAC 02D .0535(c)(1) through (7).
2. 15A NCAC 02D .0535(g). Excess emissions during start-up and shut-down shall be considered a violation of the appropriate rule if the owner or operator cannot demonstrate that excess emissions are unavoidable.

J. Emergency Provisions [40 CFR 70.6(g)]
The Permittee shall be subject to the following provisions with respect to emergencies:

1. An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the facility, including acts of God, which situation requires immediate corrective action to restore normal operation, and

that causes the facility to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.

2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions specified in 3. below are met.
3. The affirmative defense of emergency shall be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that include information as follows:
   a. an emergency occurred and the Permittee can identify the cause(s) of the emergency;
   b. the permitted facility was at the time being properly operated;
   c. during the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the standards or other requirements in the permit; and
   d. the Permittee submitted notice of the emergency to the DAQ within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
5. This provision is in addition to any emergency or upset provision contained in any applicable requirement specified elsewhere herein.

K. Permit Renewal [15A NCAC 02Q .0508(e) and 02Q .0513(b)]
This 15A NCAC 02Q .0500 permit is issued for a fixed term not to exceed five years and shall expire at the end of its term. Permit expiration terminates the facility's right to operate unless a complete 15A NCAC 02Q .0500 renewal application is submitted at least six months before the date of permit expiration. If the Permittee or applicant has complied with 15A NCAC 02Q .0512(b)(1), this 15A NCAC 02Q .0500 permit shall not expire until the renewal permit has been issued or denied. Permit expiration under 15A NCAC 02Q .0400 terminates the facility's right to operate unless a complete 15A NCAC 02Q .0400 renewal application is submitted at least six months before the date of permit expiration for facilities subject to 15A NCAC 02Q .0400 requirements. In either of these events, all terms and conditions of these permits shall remain in effect until the renewal permits have been issued or denied.

L. Need to Halt or Reduce Activity Not a Defense [15A NCAC 02Q .0508(i)(4)]
It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

M. Duty to Provide Information (submittal of information) [15A NCAC 02Q .0508(i)(9)]
1. The Permittee shall furnish to the DAQ, in a timely manner, any reasonable information that the Director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit.
2. The Permittee shall furnish the DAQ copies of records required to be kept by the permit when such copies are requested by the Director. For information claimed to be confidential, the Permittee may furnish such records directly to the EPA upon request along with a claim of confidentiality.

N. Duty to Supplement [15A NCAC 02Q .0507(f)]
The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the DAQ. The Permittee shall also provide additional information as necessary to address any requirement that becomes applicable to the facility after the date a complete permit application was submitted but prior to the release of the draft permit.

O. Retention of Records [15A NCAC 02Q .0508(f) and 02Q .0508 (l)]
The Permittee shall retain records of all required monitoring data and supporting information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring information, and copies of all reports required by the permit. These records shall be maintained in a form suitable and readily available for expeditious inspection and review. Any records required by the conditions of this permit shall be kept on site and made available to DAQ personnel for inspection upon request.

P. Compliance Certification [15A NCAC 02Q .0508(n)]
The Permittee shall submit to the DAQ and the EPA (Air and EPCRA Enforcement Branch, EPA, Region 4, 61 Forsyth Street SW, Atlanta, GA 30303) postmarked on or before March 1 a compliance certification (for the preceding calendar year) by a responsible official with all federally-enforceable terms and conditions in the permit, including emissions limitations, standards, or work practices. It shall be the responsibility of the current owner to submit a compliance certification for the entire year regardless of who owned the facility during the year. The compliance certification shall comply with additional requirements as may be specified under Sections 114(a)(3) or 504(b) of the Federal Clean Air Act. The compliance certification shall specify:
1. the identification of each term or condition of the permit that is the basis of the certification;
2. the compliance status (with the terms and conditions of the permit for the period covered by the certification);
3. whether compliance was continuous or intermittent; and
4. the method(s) used for determining the compliance status of the source during the certification period.

Q. Certification by Responsible Official [15A NCAC 02Q .0520]
A responsible official shall certify the truth, accuracy, and completeness of any application form, report, or compliance certification required by this permit. All certifications shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

R. Permit Shield for Applicable Requirements [15A NCAC 02Q .0512]
1. Compliance with the terms and conditions of this permit shall be deemed compliance with applicable requirements, where such applicable requirements are included and specifically identified in the permit as of the date of permit issuance.
2. A permit shield shall not alter or affect:
   a. the power of the Commission, Secretary of the Department, or Governor under NCGS 143-215.3(a)(12), or EPA under Section 303 of the Federal Clean Air Act;
   b. the liability of an owner or operator of a facility for any violation of applicable requirements prior to the effective date of the permit or at the time of permit issuance;
   c. the applicable requirements under Title IV; or
   d. the ability of the Director or the EPA under Section 114 of the Federal Clean Air Act to obtain information to determine compliance of the facility with its permit.
3. A permit shield does not apply to any change made at a facility that does not require a permit or permit revision made under 15A NCAC 02Q .0523.
4. A permit shield does not extend to minor permit modifications made under 15A NCAC 02Q .0515.

S. Termination, Modification, and Revocation of the Permit [15A NCAC 02Q .0519]
The Director may terminate, modify, or revoke and reissue this permit if:
1. the information contained in the application or presented in support thereof is determined to be incorrect;
2. the conditions under which the permit or permit renewal was granted have changed;
3. violations of conditions contained in the permit have occurred;
4. the EPA requests that the permit be revoked under 40 CFR 70.7(g) or 70.8(d); or
5. the Director finds that termination, modification, or revocation and reissuance of the permit is necessary to carry out the purpose of NCGS Chapter 143, Article 21B.

T. Insignificant Activities [15A NCAC 02Q .0503]
Because an emission source or activity is insignificant does not mean that the emission source or activity is exempted from any applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement. The Permittee shall have available at the facility at all times and made available to an authorized representative upon request, documentation, including calculations, if necessary, to demonstrate that an emission source or activity is insignificant.

U. Property Rights [15A NCAC 02Q .0508(i)(8)]
This permit does not convey any property rights in either real or personal property or any exclusive privileges.

V. Inspection and Entry [15A NCAC 02Q .0508(l) and NCGS 143-215.3(a)(2)]
1. Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow the DAQ, or an authorized representative, to perform the following:
   a. enter the Permittee's premises where the permitted facility is located or emissions-related activity is conducted, or where records are kept under the conditions of the permit;
   b. have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
   c. inspect at reasonable times and using reasonable safety practices any source, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
   d. sample or monitor substances or parameters, using reasonable safety practices, for the purpose of assuring compliance with the permit or applicable requirements at reasonable times.

   Nothing in this condition shall limit the ability of the EPA to inspect or enter the premises of the Permittee under Section 114 or other provisions of the Federal Clean Air Act.
2. No person shall refuse entry or access to any authorized representative of the DAQ who requests entry for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or interfere with any such authorized representative while in the process of carrying out his official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

W. Annual Fee Payment [15A NCAC 02Q .0508(i)(10)]
1. The Permittee shall pay all fees in accordance with 15A NCAC 02Q .0200.
2. Payment of fees may be by check or money order made payable to the N.C. Department of Environmental Quality. Annual permit fee payments shall refer to the permit number.
3. If, within 30 days after being billed, the Permittee fails to pay an annual fee, the Director may initiate action to terminate the permit under 15A NCAC 02Q .0519.

X. Annual Emission Inventory Requirements [15A NCAC 02Q .0207]
The Permittee shall report by June 30 of each year the actual emissions of each air pollutant listed in 15A NCAC 02Q .0207(a) from each emission source within the facility during the previous calendar year. The report shall be in or on such form as may be established by the Director. The accuracy of the report shall be certified by a responsible official of the facility.

Y. Confidential Information [15A NCAC 02Q .0107 and 02Q .0508(i)(9)]
Whenever the Permittee submits information under a claim of confidentiality pursuant to 15A NCAC 02Q .0107, the Permittee may also submit a copy of all such information and claim directly to the EPA upon request. All requests for confidentiality must be in accordance with 15A NCAC 02Q .0107.

Z. Construction and Operation Permits [15A NCAC 02Q .0100 and .0300]
A construction and operating permit shall be obtained by the Permittee for any proposed new or modified facility or emission source which is not exempted from having a permit prior to the beginning of construction or modification, in accordance with all applicable provisions of 15A NCAC 02Q .0100 and .0300.

AA. Standard Application Form and Required Information [15A NCAC 02Q .0505 and .0507]
The Permittee shall submit applications and required information in accordance with the provisions of 15A NCAC 02Q .0505 and .0507.

BB. Financial Responsibility and Compliance History [15A NCAC 02Q .0507(d)(3)]
The DAQ may require an applicant to submit a statement of financial qualifications and/or a statement of substantial compliance history.

CC. Refrigerant Requirements (Stratospheric Ozone and Climate Protection) [15A NCAC 02Q .0501(d)]
1. If the Permittee has appliances or refrigeration equipment, including air conditioning equipment, which use Class I or II ozone-depleting substances such as chlorofluorocarbons and hydrochlorofluorocarbons listed as refrigerants in 40 CFR Part 82 Subpart A Appendices A and B, the Permittee shall service, repair, and maintain such equipment according to the work practices, personnel certification requirements, and certified recycling and recovery equipment specified in 40 CFR Part 82 Subpart F.
2. The Permittee shall not knowingly vent or otherwise release any Class I or II substance into the environment during the repair, servicing, maintenance, or disposal of any such device except as provided in 40 CFR Part 82 Subpart F.

3. The Permittee shall comply with all reporting and recordkeeping requirements of 40 CFR 82.166. Reports shall be submitted to the EPA or its designee as required.

DD. Prevention of Accidental Releases - Section 112(r) [15A NCAC 02Q .0508(h)]
If the Permittee is required to develop and register a Risk Management Plan with EPA pursuant to Section 112(r) of the Clean Air Act, then the Permittee is required to register this plan in accordance with 40 CFR Part 68.

EE. Prevention of Accidental Releases General Duty Clause - Section 112(r)(1) – FEDERALLY-ENFORCEABLE ONLY
Although a risk management plan may not be required, if the Permittee produces, processes, handles, or stores any amount of a listed hazardous substance, the Permittee has a general duty to take such steps as are necessary to prevent the accidental release of such substance and to minimize the consequences of any release.

FF. Title IV Allowances [15A NCAC 02Q .0508(i)(1)]
This permit does not limit the number of Title IV allowances held by the Permittee, but the Permittee may not use allowances as a defense to noncompliance with any other applicable requirement. The Permittee's emissions may not exceed any allowances that the facility lawfully holds under Title IV of the Federal Clean Air Act.

GG. Air Pollution Emergency Episode [15A NCAC 02D .0300]
Should the Director of the DAQ declare an Air Pollution Emergency Episode, the Permittee will be required to operate in accordance with the Permittee's previously approved Emission Reduction Plan or, in the absence of an approved plan, with the appropriate requirements specified in 15A NCAC 02D .0300.

HH. Registration of Air Pollution Sources [15A NCAC 02D .0202]
The Director of the DAQ may require the Permittee to register a source of air pollution. If the Permittee is required to register a source of air pollution, this registration and required information will be in accordance with 15A NCAC 02D .0202(b).

II. Ambient Air Quality Standards [15A NCAC 02D .0501(c)]
In addition to any control or manner of operation necessary to meet emission standards specified in this permit, any source of air pollution shall be operated with such control or in such manner that the source shall not cause the ambient air quality standards in 15A NCAC 02D .0400 to be exceeded at any point beyond the premises on which the source is located. When controls more stringent than named in the applicable emission standards in this permit are required to prevent violation of the ambient air quality standards or are required to create an offset, the permit shall contain a condition requiring these controls.

JJ. **General Emissions Testing and Reporting Requirements** [15A NCAC 02Q .0508(i)(16)]
Emission compliance testing shall be by the procedures of Section .2600, except as may be otherwise required in Rules .0524, .1110, or .1111 of Subchapter 02D. If emissions testing is required by this permit or the DAQ or if the the Permittee submits emissions testing to the DAQ to demonstrate compliance for emission sources subject to Rules .0524, .1110, or .1111, the Permittee shall provide and submit all notifications, conduct all testing, and submit all test reports in accordance with the requirements of 15A NCAC 02D .0524, .1110, or ,1111, as applicable. Otherwise, if emissions testing is required by this permit or the DAQ or if the Permittee submits emissions testing to the DAQ to demonstrate compliance, the Permittee shall perform such testing in accordance with 15A NCAC 02D .2600 and follow the procedures outlined below:

1. The owner or operator of the source shall arrange for air emission testing protocols to be provided to the Director prior to air pollution testing. Testing protocols are not required to be pre-approved by the Director prior to air pollution testing. The Director shall review air emission testing protocols for pre-approval prior to testing if requested by the owner or operator at least **45 days** before conducting the test.
2. Any person proposing to conduct an emissions test to demonstrate compliance with an applicable standard shall notify the Director at least **15 days** before beginning the test so that the Director may at his option observe the test.
3. The owner or operator of the source shall arrange for controlling and measuring the production rates during the period of air testing. The owner or operator of the source shall ensure that the equipment or process being tested is operated at the production rate that best fulfills the purpose of the test. The individual conducting the emission test shall describe the procedures used to obtain accurate process data and include in the test report the average production rates determined during each testing period.
4. Two copies of the final air emission test report shall be submitted to the Director not later than **30 days** after sample collection unless otherwise specified in the specific conditions. The owner or operator may request an extension to

submit the final test report. The Director shall approve an extension request if he finds that the extension request is a result of actions beyond the control of the owner or operator.

a. The Director shall make the final determination regarding any testing procedure deviation and the validity of the compliance test. The Director may:
   i. Allow deviations from a method specified under a rule in this Section if the owner or operator of the source being tested demonstrates to the satisfaction of the Director that the specified method is inappropriate for the source being tested.
   ii. Prescribe alternate test procedures on an individual basis when he finds that the alternative method is necessary to secure more reliable test data.
   iii. Prescribe or approve methods on an individual basis for sources or pollutants for which no test method is specified in this Section if the methods can be demonstrated to determine compliance of permitted emission sources or pollutants.
b. The Director may authorize the Division of Air Quality to conduct independent tests of any source subject to a rule in this Subchapter to determine the compliance status of that source or to verify any test data submitted relating to that source. Any test conducted by the Division of Air Quality using the appropriate testing procedures described in Section 02D .2600 has precedence over all other tests.

KK. Reopening for Cause [15A NCAC 02Q .0517]

1. A permit shall be reopened and revised under the following circumstances:
   a. additional applicable requirements become applicable to a facility with remaining permit term of three or more years;
   b. additional requirements (including excess emission requirements) become applicable to a source covered by Title IV;
   c. the Director or EPA finds that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or
   d. the Director or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
2. Any permit reopening shall be completed or a revised permit issued within 18 months after the applicable requirement is promulgated. No reopening is required if the effective date of the requirement is after the expiration of the permit term unless the term of the permit was extended pursuant to 15A NCAC 02Q .0513(c).
3. Except for the state-enforceable only portion of the permit, the procedures set out in 15A NCAC 02Q .0507, .0521, or .0522 shall be followed to reissue the permit. If the State-enforceable only portion of the permit is reopened, the procedures in 15A NCAC 02Q .0300 shall be followed. The proceedings shall affect only those parts of the permit for which cause to reopen exists.
4. The Director shall notify the Permittee at least 60 days in advance of the date that the permit is to be reopened, except in cases of imminent threat to public health or safety the notification period may be less than 60 days.
5. Within 90 days, or 180 days if the EPA extends the response period, after receiving notification from the EPA that a permit needs to be terminated, modified, or revoked and reissued, the Director shall send to the EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate.

LL. Reporting Requirements for Non-Operating Equipment [15A NCAC 02Q .0508(i)(16)]

The Permittee shall maintain a record of operation for permitted equipment noting whenever the equipment is taken from and placed into operation. When permitted equipment is not in operation, the requirements for testing, monitoring, and recordkeeping are suspended until operation resumes.

MM. Fugitive Dust Control Requirement [15A NCAC 02D .0540]

As required by 15A NCAC 02D .0540 "Particulates from Fugitive Dust Emission Sources," the Permittee shall not cause or allow fugitive dust emissions to cause or contribute to substantive complaints or excess visible emissions beyond the property boundary. If substantive complaints or excessive fugitive dust emissions from the facility are observed beyond the property boundaries for six minutes in any one hour (using Reference Method 22 in 40 CFR, Appendix A), the owner or operator may be required to submit a fugitive dust plan as described in 02D .0540(f).

"Fugitive dust emissions" means particulate matter from process operations that does not pass through a process stack or vent and that is generated within plant property boundaries from activities such as: unloading and loading areas, process areas, stockpiles, stock pile working, plant parking lots, and plant roads (including access roads and haul roads).

NN. Specific Permit Modifications [15A NCAC 02Q .0501 and .0523]

1. For modifications made pursuant to 15A NCAC 02Q .0501(b)(2), the Permittee shall file a Title V Air Quality Permit Application for the air emission source(s) and associated air pollution control device(s) on or before 12 months after commencing operation.
2. For modifications made pursuant to 15A NCAC 02Q .0501(c)(2), the Permittee shall not begin operation of the air emission source(s) and associated air pollution control device(s) until a Title V Air Quality Permit Application is filed and a construction and operation permit following the procedures of Section .0500 (except for Rule .0504 of this Section) is obtained.
3. For modifications made pursuant to 502(b)(10), in accordance with 15A NCAC 02Q .0523(a)(1)(C), the Permittee shall notify the Director and EPA (EPA - Air Planning Branch, 61 Forsyth Street SW, Atlanta, GA 30303) in writing at least seven days before the change is made. The written notification shall include:
   a. a description of the change at the facility;
   b. the date on which the change will occur;
   c. any change in emissions; and
   d. any permit term or condition that is no longer applicable as a result of the change.

In addition to this notification requirement, with the next significant modification or Air Quality Permit renewal, the Permittee shall submit a page "E5" of the application forms signed by the responsible official verifying that the application for the 502(b)(10) change/modification, is true, accurate, and complete. Further note that modifications made pursuant to 502(b)(10) do not relieve the Permittee from satisfying preconstruction requirements.

OO. Third Party Participation and EPA Review [15A NCAC 02Q .0521, .0522 and .0525(7)]

For permits modifications subject to 45-day review by the federal Environmental Protection Agency (EPA), EPA's decision to not object to the proposed permit is considered final and binding on the EPA and absent a third party petition, the failure to object is the end of EPA's decision-making process with respect to the revisions to the permit. The time period available to submit a public petition pursuant to 15A NCAC 02Q .0518 begins at the end of the 45-day EPA review period.

ATTACHMENT 1

List of Acronyms

AOS	Alternative Operating Scenario
BACT	Best Available Control Technology
BAE	Baseline Actual Emissions
Btu	British thermal unit
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEM	Continuous Emission Monitor
CFR	Code of Federal Regulations
CSAPR	Cross-State Air Pollution Rule
DAQ	Division of Air Quality
DEQ	Department of Environmental Quality
EMC	Environmental Management Commission
EPA	Environmental Protection Agency
FR	Federal Register
GACT	Generally Available Control Technology
GHGs	Greenhouse Gases
HAP	Hazardous Air Pollutant
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
NAA	Non-Attainment Area
NAAQS	National Ambient Air Quality Standards
NCAC	North Carolina Administrative Code
NCGS	North Carolina General Statutes
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_X	Nitrogen Oxides
NSPS	New Source Performance Standard
NSR	New Source Review
OAH	Office of Administrative Hearings
PAE	Projected Actual Emissions
PAL	Plantwide Applicability Limitation
PM	Particulate Matter
$PM_{2.5}$	Particulate Matter with Nominal Aerodynamic Diameter of 2.5 Micrometers or Less
PM_{10}	Particulate Matter with Nominal Aerodynamic Diameter of 10 Micrometers or Less
POS	Primary Operating Scenario
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
RACT	Reasonably Available Control Technology
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
TAP	Toxic Air Pollutant
tpy	Tons Per Year
VOC	Volatile Organic Compound

ATTACHMENT 2

Phase II Acid Rain Permit Application (attached)

The Phase II Permit Application submitted for this facility, as approved by the Division of Air Quality, is part of this permit. The owners and operators of these Phase II acid rain sources must comply with the standard requirements and special provisions set forth in the following attached application.