ROY COOPER
Governor
ELIZABETH S. BISER
Secretary
MICHAEL ABRACZINSKAS
Director

NORTH CAROLINA
Environmental Quality

DRAFT

Mr. Antonio Price
Station Manager
Duke Energy Progress, LLC- Richmond County Combustion Turbine Facility
198 Energy Way
Hamlet, NC 28345

SUBJECT: Air Quality Permit No. 08759T23
Facility ID: 7700070
Duke Energy Progress, LLC- Richmond County Combustion Turbine Facility
Hamlet, Richmond County, North Carolina
Fee Class: Title V
PSD Class: Major

Dear Mr. Price:

In accordance with your completed Air Quality Permit Application for a 15A NCAC 02Q .0501(c)(1) significant permit modification, received July 6, 2021, we are forwarding herewith Air Quality Permit No. 08759T23 to Duke Energy Progress, LLC- Richmond County Combustion Turbine Facility, Hamlet, Richmond 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 "ATTACHMENT 1" 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.

Richmond County has triggered increment tracking under PSD for PM10, SO_2, and NOx. However, this permit modification does not consume or expand increments for any pollutants.

This Air Quality Permit shall be effective from _____ until July 31, 2026, 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 Edward L. Martin at 919-707-8739 or ed.martin@ncdenr.gov.

Sincerely yours,

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

Enclosure

c: Michael Sparks, EPA Region 4
Connie Horne (cover page only)
Fayetteville Regional Office
Central Files

ATTACHMENT to Air Quality Permit No. 08759T23
Duke Energy Progress, LLC- Richmond County Combustion Turbine Facility

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

Emission Source I.D.	Emission Source Description
I-2	Seven lube oil reservoirs (6,200 gallons maximum capacity, each)
I-3	Seven false start drain tanks (500 gallons maximum capacity, each)
I-4	Seven CT wash tanks (5,000 gallons maximum capacity, each)
I-6	One steam turbine lube oil reservoir (3,857 gallons maximum capacity)
I-7	One steam turbine oil drain tank (281 gallons maximum capacity)
I-8	One steam turbine seal oil vacuum tank (316 gallons maximum capacity)
I-9	Three fuel gas coalesce drain tanks (200 gallons maximum capacity, each)
I-11	One diesel storage tank (300 gallons maximum capacity)
I-12	One gasoline storage tank (300 gallons maximum capacity)
I-13	Two waterwash/false start drain tank (4,000 gallons maximum capacity, each)
I-14	Two lube oil reservoirs (5,000 gallons maximum capacity, each)
I-15	Two fuel gas coalesce drain tanks (500 gallons maximum capacity, each)
I-16	One steam turbine lube oil reservoir (4,000 gallons maximum capacity)
I-17	One steam turbine seal oil vacuum tank (300 gallons maximum capacity)
I-18	One steam turbine oil drain tank (250 gallons maximum capacity)
I-19 **MACT ZZZZ,** **NSPS IIII**	One diesel-fired fire water pump (250 horsepower maximum capacity)
I-20 **MACT DDDDD**	One natural gas-fired heater (4.0 million Btu per hour maximum heat input)
I-21 **MACT DDDDD**	One natural gas-fired heater (4.0 million Btu per hour maximum heat input)
I-23 **MACT DDDDD**	One natural gas-fired heater (12.4 million Btu per hour maximum heat input)
I-24 **MACT DDDDD**	One natural gas-fired heater (12.4 million Btu per hour maximum heat input)
I-25 **MACT DDDDD**	One natural gas-fired heater (12.4 million Btu per hour maximum heat input)
I-26	Heat Recovery Steam Generator exhaust stack drain pipe penetration seals' weep holes plugs removed for Unit 7 through Unit 10

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 02D .1100 "Control of Toxic Air Pollutants" or 02Q .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/air-quality/air-quality-permits/specific-permit-conditions-regulatory-guide

Table of Changes

The following changes were made to Air Quality Permit No. 08759T22:

Page*	Section*	Change
Throughout	Throughout	Amended permit numbers and dates.
3-4	1, table of permitted emission sources	Added "water injection when firing No. 2 fuel oil" in the control device column for Unit 1 through Unit 4, and Unit 6; Unit 7 and Unit 8; and Unit 9 and Unit 10.
5	2.1 A, regulation table	Removed Cross State Air Pollution Rule 40 CFR Part 97, Subpart BBBBB.
13 old page	2.1 A.4.i.ii.(A) old section	Removed option to determine nitrogen oxide emissions according to the requirements of 40 CFR Part 75 Appendix E.
16	2.1 B, regulation table	Removed Cross State Air Pollution Rule 40 CFR Part 97, Subpart BBBBB.
22	2.1 B.3.i	Revised the language for the ammonia injection rates to be used during NOx CEMS monitor downtime and malfunctions for turbines Unit 7 and Unit 8.
32	2.1 F, regulation table	Removed Cross State Air Pollution Rule 40 CFR Part 97, Subpart BBBBB.
42-43	2.1 F.4.j	Revised the language for the ammonia injection rates to be used during NOx CEMS monitor downtime and malfunctions for turbines Unit 9 and Unit 10.
55	2.4	Removed "Federal-Enforceable Only" designation. Removed Cross State Air Pollution Rule 40 CFR Part 97, Subpart BBBBB.

* Current page and section unless noted.

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

AIR QUALITY PERMIT

Permit No.	Replaces Permit No.	Effective Date	Expiration Date
08759T23	08759T22		July 31, 2026

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 Progress, LLC – Richmond County Combustion Turbine Facility**
Facility ID:	**7700070**
Facility Site Location:	**198 Energy Way**
City, County, State, Zip:	**Hamlet, Richmond County, NC 28345**
Mailing Address:	**198 Energy Way**
City, State, Zip:	**Hamlet, NC 28345**
Application Numbers:	**7700070.21A**
Complete Application Dates:	**July 6, 2021**
Primary SIC Code:	**4911**
Division of Air Quality Regional Office Address:	**Fayetteville Regional Office 225 Green Street, Suite 714, Fayetteville, NC 28301**

Permit issued this the ___ day of _____, 2021.

_____
Mark 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) AND APPURTENANCES

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

Page No(s).	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
5-16, 54, 55, 56	Unit 1 through Unit 4, and Unit 6 **PSD BACT,** **NSPS GG,** **NSPS KKKK,** **MACT YYYY[1]**	Five natural gas/No. 2 fuel oil-fired simple-cycle internal combustion turbines (1,628 million Btu per hour nominally rated heat input, each, when firing natural gas, and 1,819 million Btu per hour nominally rated heat input, each, when firing No. 2 fuel oil), each equipped with dual fuel dry Low-NOx combustors when firing natural gas and water injection when firing No. 2 fuel oil for NOx control	CD1-WI CD2-WI CD3-WI CD4-WI and CD6-WI	Water injection when firing No. 2 fuel oil
16-24, 54, 55, 56	Unit 7 and Unit 8 **PSD BACT,** **NSPS GG,** **MACT YYYY[1]**	Two natural gas/No. 2 fuel oil-fired combined-cycle internal combustion turbines (1,628 million Btu per hour nominally rated heat input, each, when firing natural gas, and 1,819 million Btu per hour nominally rated heat input, each, when firing No. 2 fuel oil), each equipped with a heat recovery steam generator and a steam turbine, and dual fuel dry Low-NOx combustors when firing natural gas and water injection when firing No. 2 fuel oil for NOx control	CD7-WI and CD8-WI Unit 7 SCR and Unit 8 SCR	Water injection when firing No. 2 fuel oil Two Selective Catalytic Reduction
25	TK-1 and TK-2 **PSD BACT**	Two No. 2 fuel oil, fixed-roof storage tanks (not to exceed 5 million gallons capacity each, actual capacity 3.1 million gallons each) with atmospheric vents.	N/A	N/A
26	Tower 4 **PSD BACT**	One cooling tower with drift eliminators (123,220 gallons per minute recirculating water flow rate)	N/A	N/A
27-31	ES-10 **PSD BACT,** **NSPS Dc,** **MACT DDDDD**	One natural gas fired auxiliary boiler (16.33 million Btu per hour nominally rated heat input)	N/A	N/A
46-47	Tower 5 **PSD BACT**	One multi-cell cooling tower with drift eliminators (150,000 gallons per minute recirculation water flow rate)	N/A	N/A
47	TK-5 **PSD BACT**	One No. 2 fuel oil fixed-roof storage tank with atmospheric vents (not to exceed 3.5 million gallons capacity)	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. Unit 1 through Unit 4 and Unit 6 through Unit 8 meet this definition. 40 CFR 63.6090(a)(4) states that existing turbines are subject to 40 CFR Part 63, but do not have to meet the requirements of 40 CFR Part 63, Subparts A or YYYY.

Page No(s).	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
32-45, 54, 55, 56	Unit 9 and Unit 10 **PSD BACT, NSPS KKKK, MACT YYYY**	Two natural gas/No. 2 fuel oil-fired simple/combined cycle internal combustion turbines, each equipped with a heat recovery steam generator, dry Low-NO_x combustors and water injection control, both equipped with a common steam turbine Simple-cycle mode of operation: 2,084 million Btu per hour heat input rate, each, when firing natural gas, and 1,983 million Btu per hour heat input rate, each, when firing No. 2 fuel oil Combined-cycle mode of operation: 2,225 million Btu per hour heat input rate, each, for gas turbine when firing natural gas, and 390 million Btu per hour heat input rate, each, for duct burner when firing natural gas 1,983 million Btu per hour heat input rate, each, for gas turbine when firing No. 2 fuel and no duct burner firing in each heat recovery steam generator when firing No. 2 fuel oil	CD9-WI and CD10-WI CD9-SCR and CD10-SCR	Water injection when firing No. 2 fuel oil Two Selective Catalytic Reduction[2]
48-51	ES-19 **MACT DDDDD**	One natural gas-fired dew point heater for Unit 9 (3.0 million Btu per hour maximum heat input)	N/A	N/A
48-51	ES-20 **MACT DDDDD**	One natural gas-fired dew point heater for Unit 10 (3.0 million Btu per hour maximum heat input)	N/A	N/A

2 Applicable for combined-cycle mode of operation only

SECTION 2- SPECIFIC LIMITATIONS AND CONDITIONS

2.1- Emission Source(s) and Control Devices(s) Specific Limitations and Conditions

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

A. Five natural gas/No. 2 fuel oil-fired simple-cycle internal combustion turbines, each equipped with dual fuel dry Low-NOx combustors when firing natural gas and water injection when firing No. 2 fuel oil for NO_X control (ID Nos. Unit 1, Unit 2, Unit 3, Unit 4, and Unit 6)

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	15A NCAC 02D .0521
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)
Sulfur Dioxide	0.015 percent SO2 (at 15% oxygen, dry) -or- Fuel that is 0.8% sulfur by weight	
Nitrogen Oxides	15 ppm at 15 percent O_2, each [When firing natural gas] 42 ppm at 15 percent O_2, each [When firing No. 2 fuel oil] 96 ppm at 15 percent O_2, each [When operating at less than 75 percent peak load or operating at less than 0°F]	15A NCAC 02D .0524 (40 CFR Part 60, Subpart KKKK)
Sulfur Dioxide	0.060 lb/million Btu heat input each	
Nitrogen Oxides, Sulfur Dioxide, Carbon Monoxide, VOC, PM10, Sulfuric Acid, Greenhouse Gasses	See Section 2.1 A.3.	15A NCAC 02D .0530
Nitrogen Oxides, Sulfur Dioxide	Phase II Acid Rain Permit Requirements See Section 2.3.	15A NCAC 02Q .0402
Nitrogen Oxides, Sulfur Dioxide	Cross State Air Pollution Rule Requirements. See Section 2.4.	40 CFR Part 97, Subparts AAAAA and CCCCC
various	See Section 2.1 A.5.	15A NCAC 02D .0530(u)

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

a. Visible emissions from these **sources (ID Nos. Unit 1 through Unit 4, and Unit 6)** shall not be more than 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period.

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

b. If emission 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 assure compliance, the Permittee shall perform a Method 9 test for 1 hour, using a pre-approved 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 procedure shall be repeated before each subsequent 1,100 hours of operation, from the time of the last test, using No. 2 fuel oil. 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.

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

d. The Permittee shall keep records of the hours and associated dates when these sources are in operation, and the dates and results of performance of Method 9 tests. The records shall indicate the amount of time elapsed since the previous Method 9 test and how many hours of operation remain until the next Method 9 test will be required. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

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

e. The Permittee shall submit the results of the Method 9 test within 30 days of completion of the test or at the end of the quarter. 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, including Subpart A "General Provisions."
   i. The Permittee shall continue to comply with 40 CFR Part 60, Subpart GG in this Section 2.1 A.2 through the actual date of initial startup, for which notification is required in Section 2.1 A.3.j below, after the heat rate upgrade modification for each unit.
   ii. The Permittee shall be subject to the requirements of 40 CFR Part 60, Subpart KKKK in Section 2.1 A.3 starting on the actual date of initial startup, for which notification is required in Section 2.1 A.3.j below, after the heat rate upgrade modification for each unit.

NSPS Emissions Limitations [40 CFR 60.332 and 333]

b. The following permit limits shall not be exceeded:
   i. Oxides of nitrogen (*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 (*SO2)*:
(A) The Permittee shall not allow any turbine to emit SO2 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)]

c. If emission 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.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 monitor the following. The sulfur content of the fuel being fired in each combustion turbine shall be monitored as specified in 40 CFR 60.334(h) 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:
i. 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(i)(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.
ii. When firing natural gas, the procedures from 40 CFR Part 75, Appendix D shall be used to sample and analyze for sulfur content.
If the sulfur content of the fuel burned in each combustion turbine is not monitored as specified above or the sulfur dioxide emission rate of combustion turbine is above the limit given in Section 2.1 A.2.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

e. The Permittee shall demonstrate compliance with the NOx emissions limit through one of the alternative compliance methods (A or B) described below. Compliance Alternative B, as provided for in 40 CFR 60.334(b), shall be the mandatory method for compliance demonstration if, at any time, a unit is subject to Acid Rain provisions and is no longer classified as a “peaking unit” under 40 CFR 72.2.

Alternative A

i. The nitrogen content of the fuel being fired in each combustion turbine shall be monitored as specified in 40 CFR 60.334(h) to demonstrate compliance with the nitrogen oxides standard as specified in 40 CFR 60.332, 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(i)(1)), the Permittee may sample each tank to determine nitrogen 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 nitrogen content in accordance with ASTM Method D4629.
(B) Monitoring of fuel nitrogen content shall not be required while pipeline natural gas is the

only fuel being fired in the combustion turbines.

ii. As required by 40 CFR 60.334(a), using the test methods and procedures in 40 CFR 60.335, for each combustion turbine, a continuous monitoring system shall be installed and operated to monitor and record fuel consumption and the ratio of water-to-fuel being fired. The monitoring device shall be calibrated and maintained in accordance with the manufacturer's specifications. This system shall be accurate to within 5.0 percent and must be approved by the DAQ prior to installation.

Alternative B

iii. The Permittee shall demonstrate compliance with the NOx emission limit using a continuous emission monitoring system (CEMS) installed, certified, maintained, operated, and quality-assured in accordance with 40 CFR Part 75. The missing data substitution methodology provided in 40 CFR 75, subpart D, is not required for purposes of identifying excess emissions. Instead, periods of missing CEMS data are to be reported as monitor downtime in the excess emissions and monitoring performance report required in 40 CFR 60.7(c). A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour, for either NOx concentration or diluents (or both). The CEMS shall comply with all applicable requirements of 40 CFR 60.334 and 40 CFR 75.

If the Permittee does not demonstrate compliance with the NOx emissions limit through one of the alternative compliance methods (A or B) above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

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

f. Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction.

g. For the purpose of reports required under 40 CFR 60.7(c), periods of excess emissions for sulfur dioxide shall be reported for any daily period during which the sulfur content of the fuel being fired exceeds 0.8 percent by weight.

h. For the purpose of reports required under 40 CFR 60.7(c), periods of excess emissions for nitrogen oxides shall be reported:

i. 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.

ii. Where the Permittee has elected to install a CEMS according to Alternative B of 2.1 A.2.e above, reporting shall be in accordance with 40 CFR 60.334(j)(1)(iii). Data must be reduced to hourly averages as specified in 40 CFR 60.13(h). An hour of excess emissions shall be any unit operating hour in which the 4-hour rolling average NOx concentration exceeds the applicable emission limit in Section 2.1.A.2.b.i. A “4-hour rolling average NOx concentration” is the arithmetic average of the average NOx concentration measured by the CEMS for a given hour (corrected to 15 percent O2 and, if required under 40 CFR 60.335(b)(1), to ISO standard conditions) and the three-unit operating hour average NOx concentrations immediately preceding that unit operating hour. Each report shall include the ambient conditions (temperature, pressure, and humidity) at the time of the excess emission period and (if the owner or operator has claimed an emission allowance for fuel bound nitrogen) the nitrogen content of the fuel during the period of excess emissions. You do not have to report ambient conditions if you opt to use the worst-case ISO correction factor as specified in 40 CFR 60.334(b)(3)(ii), or if you are not using the ISO correction equation under the provisions of 40 CFR 60.335(b)(1). The Permittee shall comply with all applicable reporting requirements of 40 CFR 60.334.

i. The Permittee shall submit in writing the excess emissions of sulfur dioxide and nitrogen oxides as

well as the sulfur content and fuel-bound nitrogen content of the No. 2 fuel oil fired in the combustion turbines and the number of hours of operation of each combustion turbine postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September.
All instances of deviations from the requirements of this permit must be clearly identified.

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 KKKK, including Subpart A "General Provisions."
   i. The Permittee shall continue to comply with NSPS Subpart GG in Section 2.1 A.2 through the actual date of initial startup, for which notification is required in Section 2.1 A.3.j below, after the heat rate upgrade modification for each unit.
   ii. The Permittee shall be subject to the requirements of NSPS Subpart KKKK in this Section 2.1 A.3 starting on the actual date of initial startup, for which notification is required in Section 2.1 A.3.j below, after the heat rate upgrade modification for each unit.

Emission Limitations

b. NOx emissions (except during startup, shutdowns, and malfunction) from each combustion turbine (**ID Nos. Unit 1 through 4, and Unit 6**) shall not exceed the following: [§60.4320]

Fuel Type	Operating Conditions*	NOx Limit at 15 percent O_2
Natural Gas	75 percent of peak load or higher	15 ppm
	when operating at less than 75 percent of peak load or operating at less than 0°F	96 ppm
No. 2 Fuel Oil	75 percent of peak load or higher	42 ppm
	when operating at less than 75 percent of peak load or operating at less than 0°F	96 ppm

* peak load defined as the design capacity at ISO conditions

c. If the total heat input to each combustion turbine (**ID Nos. Unit 1 through 4, and Unit 6**) is greater than or equal to 50 percent natural gas, the Permittee shall meet the corresponding NOx emission limit in Section 2.1 A.3.b above for natural gas when the Permittee is burning that fuel. Similarly, when the total heat input to each combustion turbine is greater than 50 percent No. 2 fuel oil, the Permittee shall meet the corresponding emission limit in Section 2.1 A.3.b above for No. 2 fuel oil for the duration of the time that the Permittee burns No. 2 fuel oil. [40 CFR 60.4325]

d. SO_2 emissions (except during startup, shutdowns, and malfunction) from the combustion turbines shall not exceed 0.060 lb/million Btu heat input (fuel sulfur content limit). [40 CFR 60.4330]

Testing [15A NCAC 02D .2601]

e. The Permittee shall demonstrate compliance with the NOx emission limits in Section 2.1 A.3.b above by conducting an initial performance test as required by 40 CFR 60.8 and 40 CFR 60.4400, in

accordance with General Condition JJ within 60 days after achieving the peak load, but not later than 180 days after initial startup (initial firing) for the first combustion turbine (**ID Nos. Unit 1 through Unit 4, and Unit 6**)[3] to operate with the Advanced Gas Path heat rate upgrade. A separate test shall be conducted both when firing natural gas and No. 2 fuel oil. Each performance tests must be done at any load condition within plus or minus 25 percent of 100 percent of peak load. Three separate test runs must be conducted for each performance test with a minimum time of 20 minutes per run and the ambient temperature for each test run shall be above 0ºF. Compliance is achieved if the three-run arithmetic average NO_X emission rate at each tested level meets the applicable emission limit. Subsequent annual NO_X performance testing is not required when using CEMS. If the results of this test are above the limit given in Section 2.1 A.3.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

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

f. The Permittee shall operate and maintain the combustion turbines, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown and malfunction in accordance with 40 CFR 60.4333. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524, specifically with requirements of 40 CFR 60.11(d), if the Permittee, to the extent practicable, does not maintain and operate combustion turbines including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions, at all times including periods of startup, shutdown, and malfunction.

g. The Permittee shall install, certify, maintain and operate a NOx continuous emissions monitoring system (CEMS) on each turbine stack or ductwork as described in 40 CFR 60.4340(b) when burning natural gas and in 40 CFR 60.4335(b)(1) when burning No. 2 fuel oil, to demonstrate compliance with the applicable NOx emission limit. If the NOx CEMS does not comply with the requirements of 40 CFR 60.4340(b) and 40 CFR 60.4345, or the NOx emissions (except during startup, shutdowns, and malfunction) exceeds the applicable emission limit, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

h. The Permittee shall demonstrate compliance with the applicable SO_2 emission limit by using one of the following:
   i. 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 0.060 lb SO_2/million Btu in accordance with 40 CFR 60.4365(a).
   ii. Representative fuel sampling data showing that the sulfur content of the fuel does not exceed 0.060 lb SO_2/million Btu in accordance with 40CFR 60.4365(b). 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.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524, if the Permittee does not make the above demonstration, if the demonstration indicates that the sulfur content of natural gas exceeds 20 grains of sulfur per 100 standard cubic feet, or if the SO_2 emissions (excluding the emissions during startup, shutdown, and malfunction) from the combustion turbines exceeds the applicable emission limit.

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

i. 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)]

j. The Permittee shall submit a notification of the actual date of initial startup of an affected facility

[3] DAQ is requiring initial performance test on only one of the five combustion turbines. This requirement is for identical turbines (with no manufacturer deviation) and contingent upon performance test results of the tested turbine showing that the margin of compliance with the NOx emission limit is high.

postmarked within 15 days after such date. [40 CFR 60.7(a)(3)]

k. The Permittee shall submit a written report of the results of each performance test required in 40 CFR 60.8 before the close of business on the 60th day following the completion of the performance test. [40 CFR 60.8]

l. The Permittee shall submit reports of excess emissions and monitor downtime postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September. Excess emissions must be reported for all periods of operation, including startup, shutdown, and malfunctions. [40 CFR 60.4375(a) and 40 CFR 60.4395]
Excess emissions and monitor downtime for NOx are defined as follows:
   i. Excess Emissions. To demonstrate compliance, an excess emission is any unit operating period in which the 4-hour rolling average NOx emission rate exceeds the applicable emission limit, as described in 40 CFR 60.4350 and 40 CFR 60.4380(b).
   ii Monitor Downtime. To demonstrate compliance, 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: NOx, CO_2 or O_2 concentration.
   iii. For operating periods during which multiple emissions standards apply, the applicable standard is the average of the applicable standards during each hour. For hours with multiple emissions standards, the applicable limit for that hour is determined based on the condition that corresponded to the highest emissions standard. [40 CFR 60.4380(b)(3)]
   iv. Excess emissions and monitor downtime for fuel sulfur content monitoring are 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 40CFR 60.4385(a). 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.

m. The Permittee shall submit a summary report of monitoring and record keeping activities 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 from the requirements of this permit must be clearly identified.

4. 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 simple-cycle combustion turbine (**ID Nos. Unit 1 through Unit 4, and Unit 6**) shall not exceed:

AFFECTED SOURCE	REGULATED POLLUTANT	BACT Limits[a]		Control Description
		Natural Gas	No. 2 Fuel Oil	
Combustion Turbines (**ID Nos. Unit 1 through Unit 4, and Unit 6**), per turbine	Nitrogen Oxides (as NO_2)	10.5 ppmvd[b] [CEM: 24 hour rolling average][c]	42 ppmvd[b] [CEM: 24 hour rolling average][c]	Natural Gas: Dry-Low NOx Fuel Oil: Water Injection
	Sulfur Dioxide	0.0006 lb/million Btu [Stack Test: 3 hour average]	0.054 lb/million Btu [Stack Test: 3 hour average]	0.05% Sulfur Fuel Oil
	Carbon Monoxide	9 ppmvd [Stack Test: 3 hour average]	20 ppmvd [Stack Test: 3 hour average]	Combustion Control
	VOC (as C)	1.4 ppmvw [Stack Test: 3 hour average]	3.5 ppmvw [Stack Test: 3 hour average]	Combustion Control
	$PM_{10}/PM_{2.5}$	Combustion Control and Use of Natural Gas and Low Sulfur Distillate Oil as Back-up Fuel	0.009 lb/million Btu (filterable only) [Stack Test: 3 hour average]	N/A
	Sulfuric Acid	Use of Natural Gas and Low Sulfur Distillate Oil as Back-up Fuel	0.05% Sulfur Fuel Oil	N/A
	GHG (as CO_2e)	Use of Natural Gas and Low Sulfur Distillate Oil as Back-up Fuel	Use of Natural Gas and Low Sulfur Distillate Oil as Back-up Fuel	N/A

a BACT limits shall apply at all times except as provided under Section 2.1 A.4.a.ii.
b ppmvd = parts per million by volume on a dry basis at 15% O_2.
c 24-hour rolling average is calculated using only actual operating hours (periods of zero emissions when not operating are not included). Emissions resulting from startup, shutdown, or malfunction shall not be included in the BACT averaging period.

   ii. Emissions resulting from start-up, shutdown, or malfunction above those given in Section 2.1 A.4.a.i are permitted provided that optimal operational practices are adhered to and periods of excess emissions are minimized. For the simple-cycle turbines, periods of excess emissions due to start-up and/or shutdown shall not exceed two hours in any 24-hour block period, beginning at midnight. When using natural gas, start-up shall be defined as the period from initial firing to mode 6/6Q (as defined by the manufacturer's dry low NOx control system information) and shutdown shall be defined as the period from mode 6/6Q to flame out. When using fuel oil,

start-up shall be the period from initial firing to "water injection in-service" and shutdown shall be from the cessation of water injection to flameout. The facility shall not operate the turbines outside of mode 6/6Q when firing natural gas or without water injection when firing fuel oil at any time after startup and prior to shutdown. Unit emissions shall comply with those given in Section 2.1 A.4.a.i once mode 6/6Q is reached or, when firing fuel oil, water injection is initiated. Any operation outside of these parameters shall be deemed a startup, shutdown, or malfunction event.

b. The following emission limits apply in order to demonstrate compliance with the National Ambient Air Quality Standards as required by 15A NCAC 02D .0530; 40 CFR 51.166(k):

AFFECTED SOURCE	POLLUTANT	EMISSION LIMIT				
		Annual (tons/yr)*	Pounds per 24-hour	Pounds per 8-hour	Pounds per 3-hour	Pounds per 1-hour
Combustion Turbines (**ID Nos. Unit 1 through Unit 4, and Unit 6 through Unit 8**), total	Nitrogen Dioxide	2,940.1				
	Sulfur Dioxide	3,73.9	16,632		2,079	
	Carbon Monoxide			3,640		455
	PM-10/PM-2.5 (Front Half)	303.1	2,856			

* Tons per rolling consecutive 12-month period. Annual emissions for the combustion turbines are for all seven turbines firing fuel oil for 1,000 hours per year, five simple-cycle turbines firing natural gas for 7,760 hours per year and two combined-cycle turbines firing natural gas for 7,760 hours per year, at 100% load.

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

c. If emission 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.4.a.i above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

d. The maximum annual hours of operation for each combustion turbine (**ID Nos. Unit 1 through Unit 4, and Unit 6**) shall not exceed 1,000 full load equivalent hours per rolling consecutive 12-month period when firing No. 2 fuel oil.
e. The Permittee shall record and maintain records of the actual number of hours of operation, and the amounts of each fuel burned during each day for each combustion turbine (**ID Nos. Unit 1 through Unit 4, and Unit 6**) in accordance with 40 CFR Part 75.
f. Only natural gas shall be burned during summer months (May 1 through September 30) except during operational curtailment of interruptible transportation, Force Majeure events, malfunctions, functional equipment testing (periods not to exceed four hours per calendar month per turbine), and during compliance testing.
g. The sulfur content of the No. 2 fuel oil shall not exceed 0.05 percent sulfur by weight.
h. Water injection shall be used when the combustion turbines are firing No. 2 fuel oil only.
i. The Permittee shall monitor operations to demonstrate compliance with the BACT emission limits as follows:
    i. Determine the sulfur content of the fuel being fired in each combustion turbine in accordance with Section 2.1 A.2.d or Section 2.1 A.3.h.i.
    ii. Determine nitrogen oxide emissions as follows:
        (A) Emissions of nitrogen oxides shall be determined using a continuous emissions monitoring system (CEMS) meeting the requirements of 15A NCAC 02D .0613 "Quality Assurance

Program" and 40 CFR Part 60 Appendix B "Performance Specifications" and Appendix F "Quality Assurance Procedures." If the Permittee has installed a NOx CEMS to meet the requirements of 40 CFR Part 75 and is continuing to meet the ongoing requirements of 40 CFR Part 75, that CEMS may be used to meet the requirements of this section.

(B) 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.

(C) Monitor downtime shall
(I) not exceed 5.0 percent of the operating time in a calendar quarter, and
(II) 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, or filled with the missing data procedure.

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

Compliance using CEMs shall be the mandatory method for compliance demonstration if, at any time, a unit is subject to Acid Rain provisions and is no longer classified as a "peaking unit" under 40 CFR 72.2.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530, if the Permittee does not comply with the monitoring in Sections 2.1 A.4.d through i above, or the sulfur dioxide or nitrogen oxide emission limits in Section 2.1 A.4.a above are exceeded.

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

j. The Permittee shall submit the following reports of excess emissions and monitor downtime postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September. Excess emissions must be reported for all periods of operation, including startup, shutdown, and malfunctions.
   i. Periods of excess emissions for sulfur dioxide for any daily period during which the sulfur content of the No. 2 fuel oil being fired exceeds 0.05 percent by weight, within 30 days after each calendar year quarter for the previous 3-month period; and
   ii. Periods of excess emissions for nitrogen oxides for any 24-hour rolling averaging period during which the concentrations exceed 10.5 ppmvd when firing natural gas and 42 ppmvd when firing No. 2 fuel oil, postmarked within 30 days after each calendar year quarter for the previous 3-month period. The 24-hour rolling average is calculated using only actual operating hours (periods of zero emissions when not operating are not included). A valid hourly emission rate shall be calculated for each hour in which at least two NO_X concentrations are obtained at normal operating conditions as defined by 2.1.A.4.a.ii and at least 15 minutes apart.
   iii. Records of excess emissions and monitor downtime for the associated CEMS in the format approved by DAQ Technical Services Section. The Permittee shall report excess emissions for all periods of operation, including start-up, shutdown, and malfunction.

All instances of deviations from the requirements of this permit must be clearly identified.

5. 15A NCAC 02D .0530(u): USE OF PROJECTED ACTUAL EMISSIONS TO AVOID APPLICABILITY OF PREVENTION OF SIGNIFICANT DETERIORATION REQUIREMENTS

Monitoring/Recordkeeping/Reporting [15A NCAC 02D .0530(u)]

a. The Permittee has used projected actual emissions to avoid applicability of prevention of significant deterioration requirements, pursuant to Application 7700070.20A, for the heat rate improvement project for the turbines (**ID Nos. Unit 1 through Unit 4, and Unit 6)**. The Permittee shall perform the following:
   i. The Permittee shall maintain records of annual emissions in tons per year, on a calendar year basis related to the heat rate improvement project, for five years following resumption of regular operations after the change is made.
   ii. The Permittee shall submit a report to the director within 60 days after the end of each calendar year during which these records must be generated. The report shall contain the items listed in 40 CFR 51.166(r)(6)(v)(a) through (c).
   iii. The Permittee shall make the information documented and maintained under this condition available to the Director or the general public pursuant to the requirements in 40 CFR 70.4(b)(3)(viii).
   iv. The reported actual emissions (post-construction emissions) for each of the five calendar years will be compared to the projected actual emissions (pre-construction projection) as included below:

Regulated NSR Pollutant	Projected Actual Emissions* (tons per year)
NOx	623.86
SO_2	18.26
PM	94.88
PM_{10}	94.88
$PM_{2.5}$	94.88
CO	327.47
VOC	29.76
H_2SO_4	3.63E-03
Lead	1.31E-02
CO_2e	2,151,869

* The projected actual emissions are not enforceable limitations. If the reported actual emissions exceed the projected actual emissions, the Permittee shall include in its annual report an explanation as to why actual emissions exceeded the projected actual emissions. These projected actual emissions include the "could have accommodated" emissions as used in the application.

B. Two natural gas/No. 2 fuel oil-fired combined-cycle internal combustion turbines, each equipped with a heat recovery steam generator and a steam turbine, and dual fuel dry Low-NOx combustors when firing natural gas and water injection when firing No. 2 fuel oil for NO_X control (ID Nos. Unit 7 and Unit 8), and associated SCRs (ID No. Unit 7 SCR and Unit 8 SCR)

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	15A NCAC 02D .0521
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)
Sulfur Dioxide	0.015 percent SO2 (at 15% oxygen, dry) -or- Fuel that is 0.8% sulfur by weight	15A NCAC 02D .0524 (40 CFR Part 60, Subpart GG)
Nitrogen Oxides, Sulfur Dioxide, Carbon Monoxide, VOC, PM10, Sulfuric Acid, Greenhouse Gasses	See Section 2.1.B.3.	15A NCAC 02D .0530
	Projected Actual Emissions Reporting	15A NCAC 02D .0530(u)
Nitrogen Oxides, Sulfur Dioxide	Phase II Acid Rain Permit Requirements See Section 2.3.	15A NCAC 02Q .0402
Nitrogen Oxides, Sulfur Dioxide	Cross State Air Pollution Rule Requirements. See Section 2.4.	40 CFR Part 97, Subparts AAAAA and CCCCC

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

a. Visible emissions from these sources (**ID Nos. Unit 7 and Unit 8**) shall not be more than 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period.

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

b. If emission 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 B.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

c. To assure compliance, the Permittee shall perform a Method 9 test for 1 hour using a pre-approved 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 procedure shall be repeated before each subsequent 1,100 hours of operation, from the time of the last test, using No. 2 fuel oil. If the results of this test are above the limit given in Section 2.1 B.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

d. The Permittee shall keep records of the hours and associated dates, when these sources are in operation, and the dates and results of performance of Method 9 tests. The records shall indicate the amount of time elapsed since the previous Method 9 test and how many hours of operation remain until the next Method 9 test will be required. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

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

e. The Permittee shall submit the results of the Method 9 test within 30 days of completion of the test

or at the end of the quarter. 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, including Subpart A "General Provisions."

NSPS Emissions Limitations [40 CFR 60.332 and 333]

b. The following permit limits shall not be exceeded:
   i. Oxides of nitrogen (*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 (*SO2)*:
   (A) The Permittee shall not allow any turbine to emit SO2 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)]

c. If emission 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 B.2.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

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

d. The sulfur content of the fuel being fired in each combustion turbine shall be monitored as specified in 40 CFR 60.334(h) 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:
   i. 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(i)(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.
   ii. When firing natural gas, the procedures from 40 CFR Part 75, Appendix D shall be used to sample and analyze for sulfur content.

   If the sulfur content of the fuel burned in each combustion turbine is not monitored as specified above or the sulfur dioxide emission rate of combustion turbine is above the limit given in Section 2.1 B.2.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

e. The Permittee shall demonstrate compliance with the NOx emissions limit through one of the alternative compliance methods (A or B) described below. Compliance Alternative B as provided for in 40 CFR 60.334(b), shall be the mandatory method for compliance demonstration if at any time

a unit is subject to Acid Rain provisions and is no longer classified as a "peaking unit" under 40 CFR 72.2.

Alternative A

i. The nitrogen content of the fuel being fired in each combustion turbine shall be monitored as specified in 40 CFR 60.334(h) to demonstrate compliance with the nitrogen oxides standard as specified in 40 CFR 60.332, 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(i)(1)), the Permittee may sample each tank to determine nitrogen 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 nitrogen content in accordance with ASTM Method D4629.
   (B) Monitoring of fuel nitrogen shall not be required while pipeline natural gas is the only fuel being fired in the combustion turbines.
ii. As required by 40 CFR 60.334(a), using the test methods and procedures in 40 CFR 60.335, for each combustion turbine, a continuous monitoring system shall be installed and operated to monitor and record fuel consumption and the ratio of water-to-fuel being fired. The monitoring device shall be calibrated and maintained in accordance with the manufacturer's specifications. This system shall be accurate to within 5.0 percent and must be approved by the DAQ prior to installation.

Alternative B

iii. The Permittee shall demonstrate compliance with the NOx emission limit using a continuous emission monitoring system (CEMS) installed, certified, maintained, operated, and quality-assured in accordance with 40 CFR Part 75. The missing data substitution methodology provided in 40 CFR 75, subpart D, is not required for purposes of identifying excess emissions. Instead, periods of missing CEMS data are to be reported as monitor downtime in the excess emissions and monitoring performance report required in 40 CFR 60.7(c). A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour, for either NOx concentration or diluent (or both). The CEMS shall comply with all applicable requirements of 40 CFR 60.334 and 40 CFR 75.

If the Permittee does not demonstrate compliance with the NOx emissions limit through one of the alternative compliance methods (A or B) above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

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

f. Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction.
g. For the purpose of reports required under 40 CFR 60.7(c), periods of excess emissions for sulfur dioxide shall be reported for any daily period during which the sulfur content of the fuel being fired exceeds 0.8 percent by weight.
h. For the purpose of reports required under 40 CFR 60.7(c), periods of excess emissions for nitrogen oxides shall be reported:
   i. 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.
   ii. Where the Permittee has elected to install a CEMS according to Alternative B in Section 2.1 B.2.e above, reporting shall be in accordance with 40 CFR 60.334(j)(1)(iii). Data must be

reduced to hourly averages as specified in 40 CFR 60.13(h). An hour of excess emissions shall be any unit operating hour in which the 4-hour rolling average NOx concentration exceeds the applicable emission limit in Section 2.1 B.2.b. A "4-hour rolling average NOx concentration" is the arithmetic average of the average NOx concentration measured by the CEMS for a given hour (corrected to 15 percent O2 and, if required under 40 CFR 60.335(b)(1), to ISO standard conditions) and the three-unit operating hour average NOx concentrations immediately preceding that unit operating hour. Each report shall include the ambient conditions (temperature, pressure, and humidity) at the time of the excess emission period and (if the owner or operator has claimed an emission allowance for fuel bound nitrogen) the nitrogen content of the fuel during the period of excess emissions. You do not have to report ambient conditions if you opt to use the worst-case ISO correction factor as specified in 40 CFR 60.334(b)(3)(ii), or if you are not using the ISO correction equation under the provisions of 40 CFR 60.335(b)(1). The Permittee shall comply with all applicable reporting requirements of 40 CFR 60.334.

i. The Permittee shall submit in writing the excess emissions of sulfur dioxide and nitrogen oxides as well as the sulfur content and fuel-bound nitrogen content of the No. 2 fuel oil fired in the combustion turbines and the number of hours of operation of each combustion turbine postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September. All instances of deviations from the requirements of this permit must be clearly identified.

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 combined-cycle combustion turbine (**ID Nos. Unit 7 and Unit 8**) shall not exceed:

AFFECTED SOURCE	POLLUTANT	BACT EMISSION LIMITS[a]		BACT CONTROLS
		Natural Gas	No. 2 Fuel Oil	
		lbs/million Btu ppm	lbs/million Btu ppm	
Combustion Turbines (**ID Nos. Unit 7 and Unit 8**), per turbine	Opacity	20%	20%	Combustion Control
	Nitrogen Oxides	0.010 2.5 ppmvd[b] (24-hour rolling average)[c,d]	0.054 13 ppmvd[b] (24-hour rolling average)[c,e]	Natural Gas: Dry-Low NOx And SCR Fuel Oil: Water Injection And SCR
	Sulfur Dioxide	0.0006	0.054	0.05% Sulfur Fuel Oil
	Carbon Monoxide	0.018 9 ppmvd	0.037 20 ppmvd	Combustion Control
	VOC	0.0017 1.4 ppmvw	0.004 3.5 ppmvw	Combustion Control
	Particulates/PM-10 (Front Half)	0.0055	0.009	Combustion Control
	Sulfuric Acid		Fuel Oil Sulfur Content	0.05% Sulfur Fuel Oil
	Ammonia	10 ppmvd		

a BACT limits shall apply at all times except as provided under Section 2.1 B.3.a.ii.
b ppmvd = parts per million by volume on a dry basis at 15% O_2.
c 24-hour rolling average is calculated using only actual operating hours (periods of zero emissions when not operating are not included). Emissions resulting from startup, shutdown, or malfunction shall not be included in the BACT averaging period.
d The NO_X emission limit is 2.5 ppmvd for the first 500 hours of operation (on a 24-hour rolling average basis). After 500 hours, the emission limit is 3.5 ppmvd (on a 24-hour rolling average basis). However, the ammonia injection rate shall not exceed that rate established per Section 2.1 B.3.i.i at each load point. Three months after the 24-hour rolling average exceeds 3.3 ppmvd three times within any rolling 50-hour period, the emission limit changes to 2.5 ppmvd for the next 500 hours of operation. However, the Permittee will not be deemed to be out of compliance until the 24-hour rolling average exceeds 3.5 ppmvd during this three-month period. After any 500-hour period where the 2.5 ppmvd is maintained without exceedance of the 3.3 ppmvd trigger level, the limit reverts back to 3.5 ppmvd.
e The NO_X emission limit is 13 ppmvd for the first 500 hours of operation (on a 24-hour rolling average basis). After 500 hours, the emission limit is 18 ppmvd (on a 24-hour rolling average basis). However, the ammonia injection rate shall not exceed that rate established per Section 2.1 B.3.i.i at each load point. Three months after the 24-hour rolling average

exceeds 17 ppmvd three times within any rolling 50 hour period, the emission limit changes to 13 ppmvd for the next 500 hours of operation. However, the Permittee will not be deemed to be out of compliance until the 24-hour rolling average exceeds 18 ppmvd during this three-month period. After any 500 hour period where the 13 ppmvd is maintained without exceedance of the 17 ppmvd trigger level, the limit reverts back to 18 ppmvd

ii. Emissions resulting from start-up, shutdown or malfunction above those given in Section 2.1 B.3.a.i are permitted provided that optimal operational practices are adhered to and periods of excess emissions are minimized. For the combined-cycle turbines, periods of excess emissions due to start-up and/or shutdown shall not exceed six hours in any 24-hour block period, beginning at midnight. When using natural gas, start-up shall be defined as the period from initial firing to mode 6/6Q (as defined by the manufacturers Dry low NOx control system information) and shutdown shall be defined as the period from mode 6/6Q to flame out. When using fuel oil, start-up shall be the period from initial firing to "water injection in-service" and shutdown shall be from the cessation of water injection to flameout. The facility shall not operate the turbines outside of mode 6/6Q when firing natural gas or without water injection when firing fuel oil at any time after startup and prior to shutdown. Unit emissions shall comply with those given in Section 2.1 B.3.a.i once mode 6/6Q is reached for natural gas or, when firing fuel oil, water injection is initiated. Any operation outside of these parameters shall be deemed a startup, shutdown, or malfunction event.

b. The following emission limits apply in order to demonstrate compliance with the National Ambient Air Quality Standards as required by 15A NCAC 02D .0530; 40 CFR 51.166(k):

AFFECTED SOURCE	POLLUTANT	EMISSION LIMIT				
		Annual (tons/yr) [a]	Pounds per 24-hour	Pounds per 8-hour	Pounds per 3-hour	Pounds per 1-hour
Combustion Turbines (**ID Nos. Unit 1 through Unit 4, Unit 6, Unit 7, and Unit 8**), total	Nitrogen Dioxide	2940.1				
	Sulfur Dioxide	373.9	16,632		2079	
	Carbon Monoxide			3640		455
	PM-10/PM-2.5 (Front Half)	303.1	2856			

a Tons per rolling consecutive 12-month period. Annual emissions for the combustion turbines are for all seven turbines firing fuel oil for 1,000 hours per year, five simple-cycle turbines firing natural gas for 7,760 hours per year, and two combined-cycle turbines firing natural gas for 7,760 hours per year, at 100% load.

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

c. If emission 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 B.3.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

d. The maximum annual hours of operation for each combustion turbine (**ID No. Unit 7 and Unit 8**) shall not exceed 1,000 full load equivalent hours per rolling consecutive 12-month period when firing No. 2 fuel oil.

e. The Permittee shall record and maintain records of the actual number of hours of operation, and the amounts of each fuel burned during each day for each combustion turbine (**ID Nos. Unit 7 and Unit 8**) in accordance with 40 CFR Part 75.

f. Only natural gas shall be burned during summer months (May 1 through September 30) except

during operational curtailment of interruptible transportation, Force Majeure events, malfunctions, functional equipment testing (periods not to exceed four hours per calendar month per turbine), and during compliance testing.

g. The sulfur content of the No. 2 fuel oil shall not exceed 0.05 percent sulfur by weight.
h. Water injection shall be used when the combustion turbines are firing No. 2 fuel oil only.
i. For each combined-cycle combustion turbine (**ID Nos. Unit 7 and Unit 8**) compliance with the BACT NO_X and ammonia limits shall be demonstrated as follows for the selective catalytic reduction (SCR) system:
    i. The Permittee shall install and operate an ammonia flow meter to measure and record the ammonia injection rate to the SCR system. The ammonia injection rates corresponding to maximum ammonia slip of 10 ppmvd and necessary to comply with the BACT NO_X limits in Section 2.1 B.3.a above shall be established (and made available to the Division of Air Quality upon request) during the initial performance tests when firing No. 2 fuel oil and natural gas at 50, 70, 85 and 100 percent of peak load.
    ii. The SCR 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 the following ammonia injection rates:
        (A) Natural Gas Combustion – at the ammonia injection rate determined during the initial performance test as specified in Section 2.1 B.3.i.i above for each load range. 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 test shall be adjusted to the injection rate corresponding to the appropriate load range until a valid data status has been achieved and the CEMS is restored to normal operation.
        (B) No. 2 Fuel Oil Combustion - at 100% of the ammonia injection rate determined during the initial performance test as specified in Section 2.1 B.3.i.i for each load range.

    The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the nitrogen oxide emissions are not monitored using CEMs, as required in Section 2.1 B.2.e above or the ammonia injection rate to the SCR system is not continuously measured and recorded, as required in Section 2.1 B.3.i.i above or nitrogen oxide or ammonia emission rate of combustion turbine is above the limit given in Section 2.1 B.3.a.i above.
j. The Permittee shall monitor operations to demonstrate compliance with the BACT emission limits as follows:
    i. Determine the sulfur content of the fuel being fired in each combustion turbine in accordance with Section 2.1 B.2.d.i.
    ii. Determine nitrogen oxide emissions as follows:
        (A) Emissions of nitrogen oxides shall be determined using a continuous emissions monitoring system (CEMS) meeting the requirements of 15A NCAC 02D .0613 "Quality Assurance Program" and 40 CFR Part 60 Appendix B "Performance Specifications" and Appendix F "Quality Assurance Procedures." If the Permittee has installed a NOx CEMS to meet the requirements of 40 CFR Part 75 and is continuing to meet the ongoing requirements of 40 CFR Part 75, that CEMS may be used to meet the requirements of this section.
        (B) 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.
        (C) Monitor downtime shall
            (1) not exceed 5.0 percent of the operating time in a calendar quarter, and
            (2) 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, or filled with the missing data procedure.

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

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the Permittee does not comply with the monitoring in Sections 2.1 B.3.d through j above or the sulfur dioxide or nitrogen oxide emission limits in Section 2.1 B.3.a above are exceeded.

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

k. The Permittee shall submit the following reports of excess emissions and monitor downtime postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September. Excess emissions must be reported for all periods of operation, including startup, shutdown, and malfunctions.
   i. Periods of excess emissions for sulfur dioxide for any daily period during which the sulfur content of the No. 2 fuel oil being fired exceeds 0.05 percent by weight, within 30 days after each calendar year quarter for the previous 3-month period; and
   ii. Periods of excess emissions for nitrogen oxides for any 24-hour rolling averaging period during which the concentrations exceed 0.010 lb/million Btu (2.5 ppmvd) when firing natural gas and 0.054 lb/million Btu (13 ppmvd) when firing No. 2 fuel oil, postmarked within 30 days after each calendar year quarter for the previous 3-month period. The 24-hour rolling average is calculated using only actual operating hours (periods of zero emissions when not operating are not included). A valid hourly emission rate shall be calculated for each hour in which at least two NO_X concentrations are obtained at normal operating conditions as defined by 2.1 B.3.a.ii and at least 15 minutes apart.
   iii. Records of excess emissions and monitor downtime for the associated CEMS in the format approved by DAQ Technical Services Section. The Permittee shall report excess emissions for all periods of operation, including start-up, shutdown, and malfunction.

All instances of deviations from the requirements of this permit must be clearly identified.

4. 15A NCAC 02D. 0530(u): PREVENTION OF SIGNIFICANT DETERIORATION
(USE OF PROJECTED ACTUAL EMISSIONS TO AVOID APPLICABILITY OF PREVENTION OF SIGNIFICANT DETERIORATION REQUIREMENTS)

Pursuant to Application 7700070.12A for a modification to repair/replace equipment and parts associated with Unit 7 and Unit 8, the Permittee shall perform the following:

Monitoring/Recordkeeping [15A NCAC 02D .0530(u)]

a. The Permittee shall maintain records of annual emissions sufficient to determine if repair and/or replacement of equipment described in the above modification application resulted in a major modification based on projected actual emissions methodology. These records shall be maintained on a calendar year basis for 10 years following the date regular operations commence after these

changes are made.[4] The Permittee may use continuous emissions monitoring data, operational levels, fuel usage data, source test results, or any other readily available data of sufficient accuracy to document actual annual emissions of these sources.

b. The Permittee shall make the information documented and maintained under this condition available to the Director pursuant to the requirements in 40 CFR 70.4(b)(3)(viii).
c. If the Director determines that actual emissions rate exceeds the projected actual emissions rate in any calendar year and would have resulted in a major modification at the time the application was submitted, the Permittee shall be deemed in non-compliance with 15A NCAC 02D .0530.
d. The reported actual emissions (post-construction emissions) for each of the 10 calendar years will be compared to the projected actual emissions (pre-construction projection) as used in the application.

Reporting [15A NCAC 02D .0530(u)]

e. The Permittee shall submit a report to the director postmarked within 60 days after the end of each calendar year during which these records must be generated. The report shall contain the items listed in 40 CFR 51.166(r)(6)(v)(a) through (c).

4 These sources resumed regular operations in December 2012.

C. Two No. 2 fuel oil, fixed-roof storage tanks atmospheric vents (ID Nos. TK-1 and TK-2)

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
VOC	5.79 tons of VOC emitted per year, combined; and Throughput less than 45,480,000 gallons year, combined	15A NCAC 02D .0530

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

a. The following Best Available Control Technology (BACT) limits shall not be exceeded:
   i. Long term maximum emission rates for fuel oil storage tanks (**ID Nos. TK1 and TK2**) shall not exceed:

AFFECTED SOURCE	POLLUTANT	EMISSION LIMIT Annual (tons/yr)[a]
Fuel Oil Storage Tanks (**ID Nos. TK1 and TK2**), total	VOC	5.79

a Tons per rolling consecutive 12-month period.

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

b. The combined maximum throughput for No. 2 fuel oil for two storage tanks shall not exceed 45,480,000 gallons per year.

c. The Permittee shall keep records for fuel consumed from each storage tank on a monthly basis for No. 2 fuel oil in a written or electronic format. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the amount of fuel oil used is not monitored or the combined annual throughput for two storage tanks exceeds the limit included above in Section 2.1 C.1.b.

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

d. The Permittee shall submit a summary report of recordkeeping activities 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 from the requirements of this permit must be clearly identified.

D. One cooling tower with drift eliminators (ID No. Tower 4)

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

Regulated Pollutant		Applicable Regulation
Particulate Matter	$E = 4.10 \times P^{0.67}$, For $P \leq 30$ $E = 55.0 \times P^{0.11} - 40$, For $P > 30$, Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Particulates/PM-10	6.0 tons per year, and 33.12 pounds per day	15A NCAC 02D .0530

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

a. Emissions of particulate matter from this source shall not exceed an allowable emission rate as calculated by the following equation:

$E = 4.10 \times P^{0.67}$ (for process rates less than or equal to 30 tons per hour), or
$E = 55.0 \times P^{0.11} - 40$ (for process rates greater than 30 tons per hour)

Where E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

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

b. If emission 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 D.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

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

c. No monitoring/recordkeeping/reporting is required for particulate matter emissions from this source.

2. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. The following emission limits apply in order to demonstrate compliance with the National Ambient Air Quality Standards as required by 15A NCAC 02D .0530; 40 CFR 51.166(k):

AFFECTED SOURCE	POLLUTANT	EMISSION LIMIT	
Cooling Tower (**ID No. Tower 4**)	Particulate/PM-10	**Annual** (tons/year)[a]	**Daily** lb/day
		6.0	33.12

a Tons per rolling consecutive 12-month period.

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

b. No monitoring/recordkeeping/reporting is required for particulate emissions from this source.

E. One natural gas-fired auxiliary boiler (ID No. ES-10)

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	0.19 pound per million Btu heat input	15A NCAC 02D .0503
Sulfur Dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible Emissions	20 percent opacity	15A NCAC 02D .0521
Sulfur Dioxide	Recordkeeping	15A NCAC 02D .0524 (40 CFR 60 Subpart Dc)
Nitrogen Oxides	0.035 lb/million Btu	15A NCAC 02D .0530
Carbon Monoxide	0.037 lb/million Btu	
VOC	0.016 lb/million Btu	
PM/PM_{10}	0.01 lb/million Btu	
HAP	See Section 2.1.E.6	15A NCAC 02D .1111 (40 CFR Part 63, Subpart DDDDD)

1. 15A NCAC 02D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

a. Emissions of particulate matter from the combustion of natural gas that are discharged from this source (**ID No. ES-10**) into the atmosphere, shall not exceed 0.19 pounds per million Btu heat input.

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

b. If emission testing is required, the testing shall be performed in accordance General Condition JJ. If the results of this test are above the limit given in Section 2.1 E.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503.

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

c. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas in this source (**ID No. ES-10**).

2. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

a. Emissions of sulfur dioxide from this source (**ID No. ES-10**) shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

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

b. If emission testing is required, the testing shall be performed in accordance General Condition JJ. If the results of this test are above the limit given in Section 2.1 E.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

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

c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from natural gas for this source (**ID No. ES-10**).

3. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from this source **(ID No. ES-10) shall** not be more than 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period except that

six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period.

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

b. If emission 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 E.3.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

c. No monitoring/recordkeeping/reporting is required for visible emissions from this source (**ID No. ES-10**).

4. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS

a. The Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart Dc, including Subpart A "General Provisions."

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f), 40 CFR 60.48c(g)]

b. The Permittee shall record and maintain records of the amounts each fuel combusted during each month. Such records shall be maintained for a period of two years following the date of such record. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these records are not maintained.

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

c. The Permittee shall submit a summary report of the monitoring and recordkeeping activities 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 from the requirements of this permit must be clearly identified.

5. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

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

EMISSION SOURCE	POLLUTANT	EMISSION LIMITS	CONTROL TECHNOLOGY
ID No. ES-10	Nitrogen Oxides (as NO_2)	0.035 lb/million Btu	Low-NOx burner
	Carbon Monoxide	0.037 lb/million Btu	Good combustion control
	VOC (as CH_4)	0.016 lb/million Btu	Good combustion control
	PM/PM10 (Filterable and condensable)	0.01 lb/million Btu	Good combustion control

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

b. No monitoring/recordkeeping/reporting is required for emissions of NOx, CO, VOC, and PM/PM10 from the firing of natural gas in this source **(ID No. ES-10)**.

6. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

Applicability [40 CFR 63.7485, 40 CFR 63.7490(d), 40 CFR 63.7499(l)]

a. For the existing boiler (**ID No. ES-10**, boiler designed to burn "gas 1 fuels"[5] with a heat input capacity equal to or greater than 10 million Btu per hour), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart DDDDD "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" and Subpart A "General Provisions".

Definitions and Nomenclature [40 CFR 63.7575]

b. For the purpose of this permit condition, the definitions and nomenclature contained in 40 CFR 63.7575 shall apply.

40 CFR Part 63 Subpart A General Provisions [40 CFR 63.7565]

c. The Permittee shall comply with the requirements of 40 CFR 63 Subpart A General Provisions according to the applicability of Subpart A to such sources as identified in Table 10 to 40 CFR Part 63, Subpart DDDDD.

Compliance Date [40 CFR 63.7510(e), 40 CFR 63.56(b)]

d. The Permittee shall complete the initial tune up and the one-time energy assessment no later than May 20, 2019.

Notifications [40 CFR 63.7545(e)(8), 40 CFR 63.7530(d),(e),(f)]

e. The Permittee shall submit a Notification of Compliance Status. The notification must be signed by a responsible official and sent before the close of business on the 60th day following the completion of the initial tune up and one time energy assessment (whichever is later). The notification shall contain the following:
   i. A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, and description of the fuel(s) burned.
   ii. the following certification(s) of compliance, as applicable:
      A. "This facility complies with the required initial tune-up according to the procedures in 40 CFR 63.7540(a)(10)(i) through (vi)' [i.e., Sections 2.1 E.6.g.i through 2.1 E.6.g.v and 2.1 E.6.l.ii below]; and
      B. "This facility has had an energy assessment performed according to 40 CFR 63.7530(e)" [i.e., Section 2.1 E.6.k below] and is an accurate depiction of the facility at the time of the assessment.

General Compliance Requirements [§63.7505(a), §63.7500(f)]

f. The Permittee shall be in compliance with the work practice standards in this subpart. These standards apply at all times the affected unit is operating.

Work Practice Standards [15A NCAC 02Q .0508(f)]

g. The Permittee shall conduct a tune-up of the boiler annually, as specified below.
   i. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the Permittee may delay the burner inspection until the next scheduled or unscheduled unit shutdown;
   ii. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame

5 "gas 1 fuels" is a category defined by 40 CFR Part 63, Subpart DDDDD.

pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

iii. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown);

iv. Optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_X requirement to which the unit is subject; and

v. Measure the concentrations in the effluent stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.

[40 CFR 63.7500(a), (e), 40 CFR 63.7540(a)(10)]

h. Each annual tune-up shall be conducted no more than 13 months after the previous tune-up. [40CFR 63.7515(d)]

i. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.
[40 CFR 63.7540(a)(13), 40 CFR 63.7515(g)]

j. At all times, you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.
[40 CFR 63.7500(a)(3)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in Sections 2.1 E.6.c through j. are not met.

Energy Assessment Requirements [15A NCAC 02Q .0508(f)]

k. The Permittee shall have a one-time energy assessment performed by a qualified energy assessor. The energy assessment must address the requirements in 40 CFR 63 Subpart DDDDD, Table 3, with the extent of the evaluation for items (a) to (e) in Table 3 appropriate for the on-site technical hours listed in 40 CFR 63.7575: [40 CFR 63.7500(a)(1), Table 3]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in Section 2.1 E.6.k are not met.

Recordkeeping Requirements [15A NCAC 02Q .0508(f), 40 CFR 63.7555]

l. The Permittee shall keep the following:

i. A copy of each notification and report submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status, or semiannual compliance report that has been submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv).
[40 CFR 63.7555(a)(1)]

ii. Maintain on-site and submit, if requested by the Administrator, a report containing the information in paragraphs (A) through (C) below:
(A) the concentrations of carbon monoxide in the effluent stream in parts per million by volume, and oxygen in volume percent, measured before and after the adjustments of the source;
(B) a description of any corrective actions taken as a part of the combustion adjustment; and
(C) the type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units

sharing a fuel meter may estimate the fuel use by each unit.
[40 CFR 63.7540(a)(10)(vi)]

m. The Permittee shall:
   i. maintain records in a form suitable and readily available for expeditious review;
   ii. keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record; and
   iii. keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee can keep the records offsite for the remaining 3 years.
   [40 CFR 63.7560, 63.10(b)(1)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if records are not maintained as described in Sections 2.1 E.6.l through m.

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

n. Pursuant to 40 CFR 63.7550(b), the Permittee shall submit compliance reports to the DAQ on an annual basis. The Permittee shall submit the compliance report postmarked on or before January 30 of each calendar year for the preceding 12-month period. The first report shall be postmarked on or before January 30, 2020.This report must also be submitted electronically through the EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due the report the Permittee submit the report to the at the appropriate address listed in 40 CFR 63.13. [40 CFR 63.7550(h)(3)]
o. The compliance report must contain the following information:
   i. Company name and address;
   ii. Process unit information, emissions limitations, and operating parameter limitations;
   iii. Date of report and beginning and ending dates of the reporting period; and
   iv. Include the date of the most recent tune-up for each unit required according to Section 2.1 E.6.g. Include the date of the most recent burner inspection if it was not done as scheduled and was delayed until the next scheduled or unscheduled unit shutdown.
   [40 CFR 63.7550(a) and (c), Table 9]

F. Two natural gas/No. 2 fuel oil-fired simple/combined cycle internal combustion turbines, each equipped with a heat recovery steam generator, dry Low-NO_x combustors and water injection control, both equipped with a common steam turbine (ID Nos. Unit 9 and Unit 10), and associated SCRs (ID Nos. CD9-SCR and CD10-SCR)

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	0.19 lb/million Btu each [When duct burners are operating in heat recovery units]	15A NCAC 02D .0503
Visible Emissions	20 percent opacity each	15A NCAC 02D .0521
Nitrogen Oxides	15 ppm at 15 percent O_2, each [When firing natural gas] 42 ppm at 15 percent O_2, each [When firing No. 2 fuel oil] 96 ppm at 15 percent O_2, each [When operating at less than 75 percent peak load or operating at less than 0ºF]	15A NCAC 02D .0524 (40 CFR Part 60, Subpart KKKK)
Sulfur Dioxide	0.06 lb/million Btu heat input, each	15A NCAC 02D .0524 (40 CFR Part 60, Subpart KKKK)
Nitrogen Oxides (as NO_2) Carbon Monoxide VOC PM/PM_{10}	See Section 2.1 F.4	15A NCAC 02D .0530
Hazardous Air Pollutants	No requirements if firing fuel oil for less than 1,000 hours per year.	15A NCAC 02D .1111 (40 CFR Part 63, Subpart YYYY)
Sulfur Dioxide Nitrogen Oxides	Phase II Acid Rain Permit Requirements See Section 2.3.	15A NCAC 02Q .0402
Nitrogen Oxides, Sulfur Dioxide	Cross State Air Pollution Rule Requirements. See Section 2.4.	40 CFR Part 97, Subparts AAAAA and CCCCC

1. 15A NCAC 02D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

a. Emissions of particulate matter from the combustion of natural gas and No. 2 fuel oil that are discharged from these sources (**ID Nos. Unit 9 and Unit 10**) into the atmosphere shall not exceed 0.19 pound per million Btu heat input.

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 F.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503.

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

c. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas and No. 2 fuel oil in these sources (**ID Nos. Unit 9 and Unit 10**).

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from these sources (**ID Nos. Unit 9 and Unit 10**) 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 F.2.a, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

c. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of natural gas and No. 2 fuel oil in these sources (**ID Nos. Unit 9 and Unit 10**).

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 KKKK, including Subpart A "General Provisions."

Emission Limitations [40 CFR 60.4320, .4325, 4330, and Table 1 to 40 CFR Part 60, Subpart KKKK]

b. NOx emissions (except during startup, shutdowns, and malfunction) from each combustion turbine (**ID Nos. Unit 9 and Unit 10**) when either combustion turbine only or when both combustion turbine and heat recovery unit are operating, shall not exceed the limitations contained in the following table:

Excerpt from Table 1 to 40 CFR Part 60, Subpart KKKK

Fuel Type	Operating Conditions*	NO_x Limit at 15 Percent O_2	Duct Firing Allowed?	Averaging Period	
				Simple Cycle	Combined Cycle
Natural Gas	≥ 75 Percent of Peak Load	15 ppm	Yes	4 hour rolling average	30 day rolling average
	< 75 Percent of Peak Load or operating at less than 0°F	96 ppm	Yes	4 hour rolling average	30 day rolling average
Fuel Oil	≥ 75 Percent of Peak Load	42 ppm	No	4 hour rolling average	30 day rolling average
	< 75 Percent of Peak Load or operating at less than 0°F	96 ppm	No	4 hour rolling average	30 day rolling average

* Peak Load defined as the design capacity at ISO conditions

c. If the total heat input to each combustion turbine (**ID Nos. Unit 9 and Unit 10**) is greater than or equal to 50 percent natural gas, the Permittee shall meet the corresponding NOx emission limit in

Section 2.1 F.3.b above for natural gas when the Permittee is burning that fuel. Similarly, when the total heat input to each combustion turbine is greater than 50 percent No. 2 fuel oil, the Permittee shall meet the corresponding emission limit in Section 2.1 F.3.b above for No. 2 fuel oil for the duration of the time that the Permittee burns No. 2 fuel oil. [40 CFR 60.4325]

d. The Permittee shall not allow any fuel to be burned in the combustion turbines (**ID Nos. Unit 9 and Unit 10**), which contains total potential sulfur emissions in excess of 0.06 lb SO_2/million Btu heat input each (fuel sulfur content limit). [§60.4330]

Testing [15A NCAC 02Q .0508(f), 40 CFR 60.4340, .4360, .4400, .4405, and .4415]

NOx Testing for Simple-cycle Operation

e. i. The Permittee is required to perform annual testing (no more than 14 calendar months following the previous performance test) for NOx in accordance with General Condition JJ, if the Permittee is not using water injection to comply with NOx emission limit in Section 2.1 F.3.b above.

ii. (A) As an alternate to subsequent annual tests requirement when the Permittee is not using water injection to comply with NOx emission limit in Section 2.1 F.3.b above, the Permittee may install, calibrate, maintain and operate either continuous emission monitoring or continuous parameter monitoring for NOx on combustion turbines (**ID Nos. Unit 9 and Unit 10**).

(B) If the Permittee elects to install NOx CEMs on combustion turbines (**ID Nos. Unit 9 and Unit 10**), the performance evaluation of the CEMS may either be conducted separately or (as described in 40 CFR 60.4405), as part of the initial performance test. Data collected during the CEMS RATA may be used to demonstrate compliance for NOx. The CEMS shall be certified according to 40 CFR 60.4345. A NOx CEMS that is installed and certified according to Appendix A of Part 75 is also acceptable for use under this Subpart.

iii. If the NOx emission result from any annual performance test is less than or equal to 75 percent of the NOx emission limit in Section 2.1 F.3.b above, the frequency of testing can be reduced to once every two years for subsequent performance tests. If the results of any subsequent performance test exceed 75 percent of the NOx emission limit, the Permittee shall resume the annual performance tests.

iv. Each performance test for NOx 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 (initial and subsequent) and each run shall last for a minimum 20 minutes. Separate performance testing is required for each fuel. The ambient temperature for each test run shall be above 0^0F.

If the three-run arithmetic average of NOx emissions from any performance test is above the emission limit for NOx in Section 2.1 F.3.b above or fuel consumption for each test run of initial performance test are not determined (when firing No. 2 fuel oil) or initial and subsequent stack tests (when required) are not performed, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

NOx Testing for Combined-cycle Operation

f. i. The Permittee is required to perform annual testing (no more than 14 calendar months following the previous performance test) for NOx in accordance with General Condition JJ, if the Permittee is not using water injection to comply with NOx emission limit in Section 2.1 F.3.b above.

ii. (A) As an alternate to subsequent annual tests requirement when the Permittee is not using water injection to comply with NOx emission limit in Section 2.1 F.3.b above, the Permittee may

install, calibrate, maintain and operate either continuous emission monitoring or continuous parameter monitoring for NOx on combustion turbines (**ID Nos. Unit 9 and Unit 10**).

(B) If the Permittee elects to install NOx CEMs on combustion turbines (**ID Nos. Unit 9 and Unit 10**), the performance evaluation of the CEMS may either be conducted separately or (as described in 40 CFR 60.4405), as part of the initial performance test. Data collected during the CEMS RATA may be used to demonstrate compliance for NOx. The CEMS shall be certified according to 40 CFR 60.4345. A NOx CEMS that is installed and certified according to Appendix A of Part 75 is also acceptable for use under this Subpart.

iii. If the NOx emission result from any annual performance test is less than or equal to 75 percent of the NOx emission limit in Section 2.1 F.3.b above, the frequency of testing can be reduced to once every two years for subsequent performance tests. If the results of any subsequent performance test exceed 75 percent of the NOx emission limit, the Permittee shall resume the annual performance tests.

iv. Each performance test for NOx 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 (initial and subsequent) and each run shall last for a minimum 20 minutes. Separate performance testing is required for each fuel. The ambient temperature for each test run shall be above 0^0F.

v. Compliance with the applicable NOx emission limit shall be demonstrated by measuring the combined emissions of both units (**ID Nos. Unit 9 and Unit 10**) utilizing a common HRSG steam header (as described in 40 CFR 60.4333(b)). Alternatively, the Permittee can develop, demonstrate, and provide information satisfactory to the EPA Administrator on methods for apportioning the combined gross energy output from the heat recovery unit for each of the affected combustion turbines (**ID Nos. Unit 9 and Unit 10**). The EPA Administrator may approve such demonstrated substitute methods for apportioning the combined gross energy output measured at the steam turbine whenever the demonstration ensures accurate estimation of emissions related under this part.

vi. For combined cycle turbine systems with supplemental heat (duct burner), the Permittee shall measure the total NO_X emissions after the duct burner rather than directly after the turbine. The duct burner shall be in operation during the performance test.

If the three-run arithmetic average of NOx emissions from any performance test is above the emission limit for NOx in Section 2.1 F.3.b above or fuel consumption for each test run of initial performance test are not determined (when firing No. 2 fuel oil) or initial and subsequent stack tests (when required) are not performed, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

g. The fuel sulfur determination as per Section 2.1 F.3.k below shall be used to comply with the SO_2 emission limit.

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

h. The Permittee shall operate and maintain the combustion turbines (**ID Nos. Unit 9 and Unit 10**) including dry low NOx burners, selective catalytic reduction systems, and any other monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions and in accordance with manufacturer's guidelines at all times including during start-up, shutdown, and malfunction. [40 CFR 60.4333]

i. The Permittee shall install, certify, maintain, and operate a continuous emission monitoring system (CEMS) consisting of a NO_X monitor and a diluent gas (oxygen (O_2) or carbon dioxide (CO_2)) monitor, to determine the hourly NO_X emission rate in parts per million (ppm) or pounds per million British thermal units (lb/million Btu).

If NOx CEMs do not comply with the requirements of 40 CFR 60.4335(b) and 40 CFR 60.4345 or the NO_x emissions (except during startup, shutdowns, and malfunction) from the combustion turbines (ID No. Unit 9 and Unit 10) exceed the emission limit in Section 2.1 F.3.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

j. As an alternate to the annual performance tests to demonstrate continuous compliance in Section 2.1 F.e and f above for NOx (i.e., when water injection is not used to comply with NOx emission limit in Section 2.1 F.3.b above), the Permittee may install, calibrate, maintain and operate a NOx CEM as per 40 CFR 60.4335(b) and 40 CFR 60.4345 or the Permittee can install, calibrate, maintain and operate NOx continuous parameter monitoring system measuring appropriate parameters to determine whether the combustion turbines (**ID Nos. Unit 9 and Unit 10**) are operating in low-NOx mode and to verify the proper operation of SCRs, or instead upon DAQ approval, the Permittee can perform parametric monitoring described in Section 2.3 of Part 75 appendix E or in 40 CFR 75.19(c)(1)(iv)(H), if the combustion turbine (**ID Nos. Unit 9 and Unit 10**) are also regulated under Part 75.

If the Permittee does not comply with the requirements in Section 2.3 of Part 75 Appendix E or §75.19(c)(1)(iv)(H) or if the NOx emissions (except during startup, shutdowns, and malfunction) from combustion turbines (**ID Nos. Unit 9 and Unit 10**) exceed the NOx emission limit in Section 2.1 F.3.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524. [40 CFR 60.4335 and 40 CFR 60.4340]

k. i. The Permittee may demonstrate the fuel sulfur content 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.

ii. Or, the Permittee may demonstrate the fuel sulfur content through representative fuel sampling data showing that 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.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524, if the Permittee does not make the above demonstration for natural gas and fuel oil, or the demonstration indicate that the total sulfur content of natural gas and fuel oil exceed the sulfur content limit of 20 grains per 100 standard cubic feet and 0.05 weight percent (500 ppmw), respectively, or the SO_2 emissions excluding the emissions during start-up, shutdown, and malfunction, from the combustion turbines (**ID Nos. Unit 9 and Unit 10**) exceed the emission limit in Section 2.1 F.3.c above. [40 CFR 60.4365]

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

l. The Permittee shall submit reports of excess emissions and monitor downtime in accordance with §60.7(c) for the combustion turbines (**ID Nos. Unit 9 and Unit 10**). The Permittee shall report excess emissions for all periods of operation, including start-up, shutdown, and malfunction. These reports shall be postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September. [40 CFR 60.4375(a) and 40 CFR 60.4395]

i. If the combustion turbine is using NOx CEM as described in 40 CFR 60.4335(b), and 40 CFR 60.4345 excess emissions and monitor downtime shall be determined as follows:
(A) Combined Cycle Operation: Excess emissions are any combined cycle operating period in

which the 30-day rolling average NO_x emission rate exceeds the applicable emission limit in 40 CFR 60.4320. For the purposes of this Subpart, a "30-day rolling average NO_x emission rate" is the arithmetic average of all hourly NO_x emission data in ppm or ng/J (lb/MWh) measured by the CEM equipment for a given day and the twenty-nine unit operating days immediately preceding that unit operating day, where the unit is in combined cycle mode. A new 30-day average is calculated each unit operating day as the average of all hourly NO_x emissions rates for the preceding 30-unit operating days if a valid NO_x emission rate is obtained for at least 75 percent of all operating hours.

(B) Simple Cycle Operation: Excess emissions are any simple cycle operating period in which the 4-hour exceeds the applicable emissions limit in 40 CFR 60.4320. A "4-hour rolling average NO_x emissions rate" is the arithmetic average of the average NO_x emissions rate in ppm or ng/J (lb/MWh) measured by the CEM equipment for a given hour and the three-unit operating hour average NO_x emissions rate immediately preceding that unit operating hour, where the unit is in simple cycle mode. Calculate the rolling average if a valid NO_x emissions rate is obtained for at least 3 of the 4 hours.

(C) 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, steam flow rate, steam temperature, steam pressure, or megawatts. The steam flow rate, steam temperature, and steam pressure are only required if you will use this information for compliance purposes.

(D) For operating periods during which multiple emissions standards apply, the applicable standard is the average of the applicable standards during each hour. For hours with multiple emissions standards, the applicable limit for that hour is determined based on the condition that corresponded to the highest emissions standard. [40 CFR 60.4380(b)]

ii. 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 F.3.o.ii. 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.

m. 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)]

n. The Permittee shall submit a summary report of monitoring and record keeping activities 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 from the requirements of this permit must be clearly identified.

4. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

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

Emission Source	Pollutant	Mode Of Operation	Emission Limits*,**		Control Technology
			Natural Gas	No. 2 Fuel Oi.	
ID Nos. Unit 9 and Unit 10 (per turbine)	NOx (as NO_2)	Combined Cycle, With Duct Firing	2 ppmvd at 15% O_2 [30-day rolling average] [First 500 hours of operation of SCR] 2.5 ppmvd at 15% O_2 [30-day rolling average] [After 500 hours of operation of SCR]	N/A	Dry-low NOx Combustors and Selective Catalytic Reduction
		Combined Cycle, Without Duct Firing	2 ppmvd at 15% O2 [30-day rolling average] [First 500 hours of operation of SCR] 2.5 ppmvd at 15% O2 [30-day rolling average] [After 500 hours of operation of SCR]	10 ppmvd at 15% O_2 [24-hour rolling average]	Dry-low NOx Combustors (natural gas only), Water Injection (No. 2 fuel oil only), and Selective Catalytic Reduction
		Simple Cycle	9 ppmvd at 15% O_2 [24-hour rolling average]	42 ppmvd at 15% O_2 [24-hour rolling average]	Dry-low NOx Combustors (natural gas only) and Water Injection (No. 2 fuel oil only)

Emission Source	Pollutant	Mode Of Operation	Emission Limits*,**		Control Technology
			Natural Gas	No. 2 Fuel Oi.	
ID Nos. Unit 9 and Unit 10 (per turbine)	CO	Combined Cycle, With Duct Firing	8 ppmvd at 15% O_2 at 60%-100% load (Stack Test, 3 run average)	N/A	good combustion control
		Combined Cycle, Without Duct Firing	4 ppmvd at 15% O_2 at 70%-100% load (Stack Test, 3 run average) 10 ppmvd at 15% O_2 at 60%-70% load (Stack Test, 3 run average)	10 ppmvd at 15% O_2 at 90%-100% load (Stack Test, 3 run average) 20 ppmvd at 15% O_2 at 80%-90% load (Stack Test, 3 run average) 30 ppmvd at 15% O_2 at 70%-80% load (Stack Test, 3 run average	good combustion control
		Simple Cycle	4 ppmvd at 15% O_2 at 70%-100% load (Stack Test, 3 run average) 10 ppmvd at 15% O_2 at 60%-70% load (Stack Test, 3 run average)	10 ppmvd at 15% O_2 at 90%-100% load (Stack Test, 3 run average) 20 ppmvd at 15% O_2 at 80%-90% load (Stack Test, 3 run average) 30 ppmvd at 15% O_2 at 70%-80% load (Stack Test, 3 run average)	good combustion control

Emission Source	Pollutant	Mode Of Operation	Emission Limits*,**		Control Technology
			Natural Gas	No. 2 Fuel Oi.	
ID Nos. Unit 9 and Unit 10 (per turbine)	VOC (as CH_4)	Combined Cycle, With Duct Firing	3 ppmvd at 15% O_2 at 60%-100% load (Stack Test, 3 run average)	N/A	good combustion control
		Combined Cycle, Without Duct Firing	1 ppmvd at 15% O_2 at 70%-100% load (Stack Test, 3 run average) 5 ppmvd at 15% O_2 at 60%-70% load (Stack Test, 3 run average)	10 ppmvd at 15% O_2 at 70%-100% load (Stack Test, 3 run average)	good combustion control
		Simple Cycle	1 ppmvd at 15% O_2 at 70%-100% load (Stack Test, 3 run average) 5 ppmvd at 15% O_2 at 60%-70% load (Stack Test, 3 run average)	10 ppmvd at 15% O_2 at 70%-100% load (Stack Test, 3 run average)	good combustion control
ID Nos. Unit 9 and Unit 10 (per turbine)	PM/PM10 (filterable and condensable)	Combined Cycle, With Duct Firing	0.0059 lb/million Btu (Stack Test, 3 run average)	N/A	use of natural gas (0.2 grain/100 sft^3 sulfur content)
		Combined Cycle, Without Duct Firing	0.0071 lb/million Btu (Stack Test, 3 run average)	0.0435 lb/million Btu (Stack Test, 3 run average)	use of natural gas (0.2 grain/100 sft^3 sulfur content) and No. 2 fuel oil (0.0015%w sulfur content)
		Simple Cycle	0.0069 lb/million Btu (Stack Test, 3 run average)	0.0432 lb/million Btu (Stack Test, 3 run average)	use of natural gas (0.2 grain/100 sft^3 sulfur content) and No. 2 fuel oil (0.0015%w sulfur content)

* BACT emission limits shall apply to each source (**ID Nos. Unit 9 and Unit 10**). Emissions resulting from start-up, shutdown or malfunction above those given in Section 2.1 F.4.a above are permitted provided that optimal operational practices are adhered to and periods of excess emissions are minimized.

** Compliance with the BACT limits (except for NOx BACT for combined cycle operation)

shall be based on 3-run average of a stack test. Any use of continuous emission monitoring systems data for demonstrating compliance with BACT for any pollutants (except NOx for combined cycle operation) will require reevaluation of applicable BACT limits.

ii. For the simple cycle operation using natural gas, periods of excess emissions due to start-up and/or shutdown or operation below 60% load shall not exceed two hours (120 minutes) in any 24-hour block period beginning at midnight. For the simple cycle operation using fuel oil, periods of excess emissions due to start-up and/or shutdown or operation below 70% load shall not exceed two hours in any 24-hour block period beginning at midnight. In no case shall the start-up and/or shutdown or operation below 60% load (natural gas)/70% load (fuel oil) exceed two hours (120 minutes) in any 24-hour block period beginning at midnight for simple-cycle operations.

iii. For the combined cycle operation using natural gas, periods of excess emissions due to start-up and/or shutdown or operation below 60% load shall not exceed six hours (360 minutes) in any 24-hour block period beginning at midnight. For the combined cycle operation using fuel oil, periods of excess emissions due to start-up and/or shutdown or operation below 70% load shall not exceed six hours (360 minutes) in any 24-hour block period beginning at midnight. In no case shall the start-up and/or shutdown or operation below 60% load (natural gas)/70% load (fuel oil) exceed six hours (360 minutes) in any 24-hour block period beginning at midnight for combined-cycle operations.

iv. Start-up for both simple cycle and combined cycle operations is defined as the period from initial firing to 60% load for natural gas and initial firing to 70% load for fuel oil. Shutdown for both simple cycle and combined cycle operations is defined as the period from 60% load to flame out for natural gas and 70% load to flameout for fuel oil.

b. The following emission limits shall apply and shall not be exceeded in order to demonstrate compliance with the National Ambient Air Quality Standards as required by 15A NCAC 02D .0530 and 40 CFR 51.166(k):

EMISSION SOURCE	POLLUTANT	EMISSION LIMITS			
		Annual tons/yr[a]	per 24-hour lbs	per 8-hour lbs	per 1-hour lbs
ID Nos. Unit 9 and Unit 10	Nitrogen Oxides (As Nitrogen Dioxide)	545.3	-	-	-
	Particulates/PM-10 (Filterable And Condensable)	-	1,337.3	-	-
	Carbon Monoxide	-	-	1,066.9	133.4

a Tons per consecutive 12-month period based on a maximum 2,000 operating hours for simple cycle operations in each combustion turbine (**ID Nos. Unit 9 and Unit 10**), a maximum of 1,000 operating hours for fuel oil firing in each combustion turbine (**ID Nos. Unit 9 and Unit 10**) in either simple or combined cycle operations, a maximum of 8,760 hours for combined cycle operations for natural gas firing in each combustion turbine (**ID Nos. Unit 9 and Unit 10**), and 100% load.

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

c. If emission 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.F.4.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

d. The maximum annual hours of operation for each combustion turbine (**ID Nos. Unit 9 and Unit 10**) shall not exceed 1,000 full load equivalent hours per rolling 12-month period when firing No. 2 fuel oil.

e. The maximum annual hours of operation for simple cycle operation for each combustion turbine (**ID Nos. Unit 9 and Unit 10**) shall not exceed 2,000 full load equivalent hours per rolling 12-month period.

f. The Permittee shall record and maintain records of the actual number of hours of operation for simple cycle operation and fuel oil firing for each combustion turbine (**ID Nos. Unit 9 and Unit 10**).

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the above records are not maintained, or if the hours of operation for simple cycle operation for any combustion turbine (**ID Nos. Unit 9 and Unit 10**) exceeds the limits listed in Sections 2.1 F.4.d, e, or f above.

g. Only natural gas shall be burned during summer months (May 1 through September 30), except during operational curtailment of interruptible transportation, Force Majeure events, malfunctions, functional equipment testing (periods not to exceed four hours per calendar month per turbine), and during compliance testing.

h. No monitoring/recordkeeping is required for emissions of CO, VOC, and PM/PM10 from the combustion turbines (**ID Nos. Unit 9 and Unit 10**).

i. The Permittee shall monitor NOx emissions from the combustion turbines (**ID Nos. Unit 9 and Unit 10**) using CEMS for both simple and combined cycle operations, in order to demonstrate compliance with the NOx BACT emission limits as follows:

   i. Emissions of nitrogen oxides shall be determined using a continuous emissions monitoring system (CEMS) meeting the requirements of 15A NCAC 02D .0613 "Quality Assurance Program" and 40 CFR Part 60 Appendix B "Performance Specifications" and Appendix F "Quality Assurance Procedures." If the Permittee has installed a NOx CEMS to meet the requirements of 40 CFR Part 75 and is continuing to meet the ongoing requirements of 40 CFR Part 75, that CEMS may be used to meet the requirements of this section.

   ii. 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.

   iii. Monitor downtime shall
   (A) not exceed 5.0 percent of the operating time in a calendar quarter, and
   (B) 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, or filled with the missing data procedure.

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

j. In addition to the NOx emissions monitoring requirement in Section 2.1 F.4.i above, the Permittee shall comply with the following requirements for NOx emissions from the combustion turbines (**ID Nos. Unit 9 and Unit 10**) when operating in a combined cycle mode of operation:

   i. The Permittee shall install and operate an ammonia flow meter to measure and record the ammonia injection rate to the SCR system associated with each combustion turbine. The

ammonia injection rates corresponding to a maximum ammonia slip of 10 ppmvd and necessary to comply with the NO_x BACT limits in Section 2.1 F.4.a above shall be established (and made available to the Division of Air Quality upon request) during the initial performance test.

ii. The SCR shall operate at all times that the turbine is operating in a combined cycle mode of operation, 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 the following ammonia injection rates:

(A) Natural Gas Combustion – at the ammonia injection rate determined during the initial performance test as specified in Section 2.1 F.4.j.i above for each load range. 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 test shall be adjusted to the injection rate corresponding to the appropriate load range until a valid data status has been achieved and the CEMS is restored to normal operation.

(B) No. 2 Fuel Oil Combustion - at 100% of the ammonia injection rate determined during the initial performance test as specified in Section 2.1 F.4.j.i for each load range.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the ammonia injection rate to the SCR system is not continuously measured and recorded when the turbine is operating in a combined cycle mode of operation or the ammonia injection rate is less than the injection rate established during the initial performance test for each load range.

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

k. The Permittee shall submit a written report of the results of each performance test required in Section 2.1 F.4.c above, before the close of business on the 60th day following the completion of the performance test.

l. The Permittee shall submit the following reports of excess emissions and monitor downtime when operating in either simple cycle or combined cycle mode of operation postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September. Excess emissions must be reported for all periods of operation, including startup, shutdown, and malfunctions.

i. For the NOx CEM, excess emissions and monitor downtime due to the combined cycle operations firing natural gas shall be as defined below:

(A) An excess emission is any unit operating period in which the 30-day rolling average NO_X emission rate exceeds the emission limit in Section 2.1 F.4.a above. A "30-day rolling average NO_X emission rate" is the arithmetic average of all hourly NO_X emission data in ppm measured by the continuous emission monitoring equipment for a given day and the twenty-nine-unit operating days immediately preceding that unit operating day. A new 30-day average is calculated each unit operating day as the average of all hourly NO_X emissions rates for the preceding 30-unit operating days if a valid NO_X emission rate is obtained for at least 75 percent of all operating hours.

(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.

ii. For the NOx CEM, excess emissions and monitor downtime due to the combined cycle operations firing fuel oil shall be as defined below:

(A) An excess emission is any unit operating period in which the 24-hour rolling average NO_X emission rate exceeds the emission limit in Section 2.1 F.4.a above. The 24-hour rolling average is calculated using only actual operating hours (periods of zero emissions when not operating are not included). A valid hourly emission rate shall be calculated for each hour in

which at least two NOx concentrations are obtained at loads above 70 percent at least 15 minutes apart.

(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.

iii. For the NOx CEM, excess emissions and monitor downtime due to the simple cycle operations firing natural gas shall be as defined below:

(A) An excess emission is any unit operating period in which the 24-hour rolling average NO_X emission rate exceeds the emission limit in Section 2.1 F.4.a. above. The 24-hour rolling average is calculated using only actual operating hours (periods of zero emissions when not operating are not included). A valid hourly emission rate shall be calculated for each hour in which at least two NOx concentrations are obtained at loads above 60 percent at least 15 minutes apart.

(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

iv. For the NOx CEM, excess emissions and monitor downtime due to the simple cycle operations firing fuel oil shall be as defined below:

(A) An excess emission is any unit operating period in which the 24-hour rolling average NO_X emission rate exceeds the emission limit in Section 2.1 F.4.a above. The 24-hour rolling average is calculated using only actual operating hours (periods of zero emissions when not operating are not included). A valid hourly emission rate shall be calculated for each hour in which at least two NOx concentrations are obtained at loads above 70 percent at least 15 minutes apart.

(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.

v. Records of excess emissions and monitor downtime for the associated CEMS in the format approved by DAQ Technical Services Section. The Permittee shall report excess emissions for all periods of operation, including start-up, shutdown, and malfunction.

All instances of deviations from the requirements of this permit must be clearly identified.

m. The Permittee shall submit a semi-annual summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and record keeping activities 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 from the requirements of this permit must be clearly identified.

5. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

a. For combustion turbines (**ID Nos. Unit 9 and Unit 10**), the Permittee shall demonstrate compliance upon startup with all applicable provisions, including emission limitations, operating limitations, monitoring, record keeping, and reporting 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 of Hazardous Air Pollutants for Stationary Combustion Turbines".

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

b. These combustion turbines are affected sources subject to the stay of standards for gas-fired subcategories under 40 CFR 63.6095(d). Based on historic fuel oil usage at this major source these combustion turbines are classified as "lean premix gas-fired stationary combustion turbines" as defined in 40 CFR 63.6175 because they are equipped to fire both natural gas using lean premix

technology and oil, and are located at a major source where all new, reconstructed, and existing stationary combustion turbines fire oil no more than an aggregate total of 1,000 hours during the calendar year. Beginning on the date on which all new, reconstructed, and existing stationary combustion turbines fire oil more than 1,000 hours in any calendar year, the Permittee shall demonstrate compliance with all applicable requirements under 40 CFR 63, Subpart YYYY for sources classified as "diffusion flame oil-fired stationary combustion turbines" as defined in 40 CFR 63.6175. If all new, reconstructed, and existing stationary combustion turbines fire oil more than 1,000 hours per calendar year but fail to meet all applicable requirements under 40 CFR 63, Subpart YYYY for "diffusion flame oil-fired stationary combustion turbines" the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111.

c. The Permittee shall submit the initial notification in accordance with 40 CFR 63.6145(d) and 40 CFR 63.9(a)(4)(ii) and submit notification just prior to the date on which all new, reconstructed, and existing stationary combustion turbines fire oil more than 1,000 hours in any calendar year to the following:
   i. Division of Air Quality, Permitting Section
   ii. Division of Air Quality, Fayetteville Regional Office Permitting Section, and
   iii. EPA Region 4
   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the initial notification is not submitted.

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

d. The Permittee shall maintain a record of the number of hours all on-site new, reconstructed, and existing stationary combustion turbines fire oil during each calendar year. These records shall be maintained on file in a logbook (written or electronic format) for a minimum of five (5) years and be available for inspection by DAQ personnel upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the above records are not maintained.

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

e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities 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 from the requirements of this permit must be clearly identified.

G. Reserved

H. One multi-cell cooling tower (ID No. Tower 5)

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	$E = 4.10 \times P^{0.67}$, For $P \leq 30$ $E = 55.0 \times P^{0.11} - 40$, For $P > 30$, Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
PM/PM10	0.0005% drift loss	15A NCAC 02D .0530

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

a. Emissions of particulate matter from this source shall not exceed an allowable emission rate as calculated by the following equation:

$E = 4.10 \times P^{0.67}$ (for process rates less than or equal to 30 tons per hour), or
$E = 55.0 \times P^{0.11} - 40$ (for process rates greater than 30 tons per hour)

Where E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

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 2.1 H.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

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

c. No monitoring/recordkeeping/reporting is required for particulate matter emissions from this source.

2. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

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

EMISSION SOURCE	POLLUTANT	EMISSION LIMITS*	CONTROL TECHNOLOGY
Cooling Tower (**ID No. Tower 5**)	PM/PM10	0.0005% drift loss [3-hour rolling average]	Drift Eliminators

* BACT emission limits shall apply at all times except during the following: Emissions resulting from start-up, shutdown or malfunction above those given in Section 2.1 H.2.a above are permitted provided that optimal operational practices are adhered to and periods of excess emissions are minimized.

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

b. No emission testing is required for compliance with PM/PM10 emission limit for this source (**ID No. Tower 5**).

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

c. No monitoring/recordkeeping/reporting is required for PM/PM10 emissions from this source (**ID No. Tower 5**).

I. One No. 2 fuel oil fixed-roof storage tank with atmospheric vents (ID No. TK-5)

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
VOC	0.35 tons of VOC emitted per year, combined; and Throughput less than 28,284,500 gallons per year, combined	15A NCAC 02D .0530

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

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

Emission Source	Pollutant	Emission Limit Annual (Tons/Yr)*	Control Technology
Fuel Oil Storage Tank (**ID No. TK-5**)	VOC	0.35	Storage of low vapor pressure material (< 3.5 psia)

* Tons per consecutive 12-month period.

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

b. The maximum throughput for No. 2 fuel oil for the storage tank (**ID No. TK5**) shall not exceed 28,284,500 gallons per year.

c. The Permittee shall keep records for the storage tank (**ID No. TK-5**) on a monthly basis for No. 2 fuel oil in a written or electronic format. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the amount of No. 2 fuel oil used is not monitored or the annual throughput for the storage tank (**ID No. TK5**) exceeds the limit included in Section 2.1 I.1.a above.

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

d. The Permittee shall submit a summary report of recordkeeping activities 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 from the requirements of this permit must be clearly identified.

J. Two natural gas-fired fuel gas heaters (ID Nos. ES-19 and ES-20)

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	0.19 pound per million Btu heat input	15A NCAC 02D .0503
Sulfur Dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible Emissions	20 percent opacity	15A NCAC 02D .0521
Hazardous Air Pollutants	See Section 2.1.J.4	15A NCAC 02D .1111 (40 CFR Part 63, Subpart DDDDD)

1. 15A NCAC 02D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

a. Emissions of particulate matter from the combustion of natural gas that are discharged from these sources (**ID Nos. ES-19 and ES-20**) the atmosphere shall not exceed 0.19 pounds per million Btu heat input each.

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

b. If emissions testing is required, the testing shall be performed in accordance General Condition JJ. If the results of this test are above the limit given in Section 2.1 J.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503.

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

c. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas in these sources (**ID Nos. ES-19 and ES-20**).

2. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

a. Emissions of sulfur dioxide from these sources (**ID Nos. ES-19 and ES-20**) shall not exceed 2.3 pounds per million Btu heat input each. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

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 J.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

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

c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of natural gas for these sources (**ID Nos. ES-19 and ES-20**).

3. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from these sources (**ID Nos. ES-19 and ES-20**) shall not be more than 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period.

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 J.3.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

c. No monitoring/recordkeeping/reporting is required for visible emissions from these sources **(ID Nos. ES-19 and ES-20).**

4. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY
(40 CFR Part 63, Subpart DDDDD)

Applicability [40 CFR 63.7485, .7490(d), .7499(l)]

a. For these boilers (ID Nos. ES-19 and 20, units designed to burn "gas 1 fuels"[6] with a heat input capacity of less than or equal to 5 million Btu per hour), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart DDDDD, "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" and Subpart A "General Provisions."

Definitions and Nomenclature [40 CFR 63.7575]

b. For the purpose of this permit condition, the definitions and nomenclature contained in 40 CFR 63.7575 shall apply.

40 CFR Part 63 Subpart A General Provisions [40 CFR 63.7565]

c. The Permittee shall comply with the requirements of 40 CFR 63 Subpart A General Provisions according to the applicability of Subpart A to such sources as identified in Table 10 to 40 CFR Part 63, Subpart DDDDD.

Compliance Date [40 CFR 63.7510(e), 63.56(b)]

d. The Permittee shall complete the initial tune up and the one-time energy assessment no later than May 20, 2019.

Notifications [40 CFR 63.7545(e)(8), 63.7530(d),(e),(f)]

e. The Permittee shall submit a Notification of Compliance Status. The notification shall contain the following:
   i. A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, and description of the fuel(s) burned.
   ii. the following certification(s) of compliance, as applicable:
      A. "This facility complies with the required initial tune-up according to the procedures in 40 CFR 63.7540(a)(10)(i) through (vi)" [i.e., Sections 2.1 J.4.g.i through g.v and 2.1 J.4.m.i below]; and
      B. "This facility has had an energy assessment performed according to 40 CFR 63.7530(e)" [i.e., Section 2.1 J.4.k below] and is an accurate depiction of the facility at the time of the assessment.

The notification must be signed by a responsible official and sent before the close of business on the 60th day following the completion of the initial tune up and one time energy assessment (whichever is later).

General Compliance Requirements [40 CFR 63.7505(a), 63.7500(f)]

6 "gas 1 fuels" is a category defined by 40 CFR Part 63, Subpart DDDDD.

f. The Permittee shall be in compliance with the work practice standards in this subpart. These standards apply at all times the affected unit is operating.

Work Practice Standards [15A NCAC 02Q .0508(f)]

g. The Permittee shall conduct a tune-up of the process heater every five years as specified below.
   i. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the Permittee may delay the burner inspection until the next scheduled or unscheduled unit shutdown, but the burner must be inspected at least once every 72 months
   ii. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
   iii. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown);
   iv. Optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_X requirement to which the unit is subject.
   v. Measure the concentrations in the effluent stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.

   [40 CFR 63.7500(a), (e), 63.7540(a)(10)]

h. Each 5-year tune-up shall be conducted no more than 61 months after the previous tune-up. [40CFR 63.7515(d)]
i. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.
   [40 CFR 63.7540(a)(13), 63.7515(g)]
j. At all times, you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.7500(a)(3)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in Sections 2.1 J.4.f through j are not met.

Energy Assessment Requirements [15A NCAC 02Q .0508(f)]

k. The Permittee shall have a one-time energy assessment performed by a qualified energy assessor. The energy assessment must address the requirements in 40 CFR 63 Subpart DDDDD, Table 3, with the extent of the evaluation for items (a) to (e) in Table 3 appropriate for the on-site technical hours listed in §63.7575: [§63.7500(a)(1), Table 3]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in Section 2.1 J.4.k are not met.

Recordkeeping Requirements [15A NCAC 02Q .0508(f), 40 CFR 63.7555]

l. The Permittee shall keep the following:
   i. A copy of each notification and report submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status, or semiannual compliance report that has been submitted, according to the requirements in 40 CFR

63.10(b)(2)(xiv).
[40 CFR 63.7555(a)(1)]

ii. Maintain on-site and submit, if requested by the Administrator, a report containing the information in paragraphs (A) through (C) below:
(A) The concentrations of carbon monoxide in the effluent stream in parts per million by volume, and oxygen in volume percent, measured before and after the adjustments of the source;
(B) A description of any corrective actions taken as a part of the combustion adjustment; and
(C) The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.
[40 CFR 63.7540(a)(10)(vi)]

m. The Permittee shall:
   i. maintain records in a form suitable and readily available for expeditious review;
   ii. keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record; and
   iii. keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee can keep the records offsite for the remaining 3 years.
   [40 CFR 63.7560, 63.10(b)(1)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if records are not maintained as described in Sections 2.1 J.4.l through m.

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

n. The Permittee shall submit compliance reports to the DAQ on a 5-year basis. The first report shall cover the period beginning on the compliance date specified in condition d. and ending on the earliest December 31st following a complete 5-year period. Subsequent 5-year reports shall cover the periods from January 1 to December 31. The Permittee shall submit the compliance reports postmarked on or before January 31. This report must also be submitted electronically through the EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due the report the Permittee submit the report to the at the appropriate address listed in 40 CFR 63.13. [40 CFR 63.7550(a), (b), (h)(3)]

o. The compliance report must contain the following information:
   i. Company name and address;
   ii. Process unit information, emissions limitations, and operating parameter limitations;
   iii. Date of report and beginning and ending dates of the reporting period; and
   iv. Include the date of the most recent tune-up for each unit required according to condition g. Include the date of the most recent burner inspection if it was not done as scheduled and was delayed until the next scheduled or unscheduled unit shutdown.
   [40 CFR 63.7550(a) and (c), Table 9]

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

A. Facility-wide Toxics Demonstration

STATE-ONLY REQUIREMENT

1. 15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS

a. Pursuant to 15A NCAC 02D .1100 and in accordance with the approved application for an air toxic compliance demonstration, the following permit limits shall not be exceeded:

Emission Source	Toxic Air Pollutant	Emission Limit		
		lb/yr	lb/day	lb/hr
Gasoline Tank I-12	Benzene	4.04E+01		

b. The Permittee has submitted a toxic air pollutant dispersion modeling analysis dated September 3, 2020 for the facility's toxic air pollutant emissions as listed in the above table. The modeling analysis was reviewed and approved by the AQAB on October 13, 2020. Placement of the emission sources, configuration of the emission points, and operation of the sources shall be in accordance with the submitted dispersion modeling analysis and should reflect any changes from the original analysis submittal as outlined in the AQAB review memo.

Monitoring/Recordkeeping/Reporting

c. No monitoring, recordkeeping or reporting is required.

STATE-ONLY REQUIREMENT

2. 15A NCAC 02Q .0711: EXISTING FACILITES AND SIC CALLS for TOXIC AIR POLLUTANT EMISSIONS LIMITATION REQUIREMENT

a. As of October 13, 2020 emissions of toxic air pollutants have been demonstrated on a facility-wide basis (excluding those sources exempt under 15A NCAC 02Q .0702 "Exemptions") that each of the toxic air pollutants (TAPs) emitted from all sources at the facility are either below its respective toxic permit emission rates (TPER) listed in 15A NCAC 02Q .0711 - "Emission Rates Requiring a Permit" or the TAPs are in compliance with 15A NCAC 02D .1100 "Control of Toxic Air Pollutants" as described elsewhere in this permit.

b. The facility shall be operated and maintained in such a manner that any new, existing or increased actual emissions of any TAP listed in 15A NCAC 02Q .0711 or in this permit from all sources at the facility (excluding those sources exempt under 15A NCAC 02Q .0702 "Exemptions"), including fugitive emissions and emission sources not otherwise required to have a permit, will not exceed its respective TPER listed in 15A NCAC 02Q .0711 without first obtaining an air permit to construct or operate.

c. PRIOR to exceeding any of the TPERs listed in 15A NCAC 02Q .0711, the Permittee shall be responsible for obtaining an air permit to emit TAPs and for demonstrating compliance with the requirements of 15A NCAC 02D .1100 "Control of Toxic Air Pollutants".

d. The Permittee shall maintain at the facility records of operational information sufficient for demonstrating to the Division of Air Quality staff that actual TAPs are less than the rate listed in 15A NCAC 02Q .0711.

e. The TPER table listed below is provided to assist the Permittee in determining when an air permit is required pursuant to 15A NCAC 02Q .0711 and may not represent all TAPs being emitted from the facility. This table will be updated at such time as the permit is either modified or renewed.

Pollutant	TPERs Limitations			
	Carcinogens (lb/yr)	Chronic Toxicants (lb/day)	Acute Systemic Toxicants (lb/hr)	Acute Irritants (lb/hr)
acetaldehyde				6.8

benzo(a)pyrene	2.2			
hexane		23		
toluene		98		14.4
xylene		57		16.4

2.3- Phase II Acid Rain Permit Requirements

ORIS code: 7805

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 Department of Environment and Natural Resources, 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 1 (IC Turbine) **Unit 2 (IC Turbine)** **Unit 3 (IC Turbine)** **Unit 4 (IC Turbine)** **Unit 6 (IC Turbine)** **Unit 7 (IC Turbine)** **Unit 8 (IC Turbine)** **ES-13 (IC Turbine) (Unit 9)** **ES-14 (IC Turbine) (Unit 10)**	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.

4. Phase II Permit Application (attached)

The Phase II Permit Application submitted for this facility, as approved by the Department of Environment and Natural Resources, 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:

See Attachment 2: Acid Rain Permit Application, dated August 13, 2020.

2.4- Cross State Air Pollution Rules (CSAPR) Permit Requirements

For the combustion turbines **(ID Nos. Unit 1 through Unit 4 and Unit 6 through Unit 10)**, 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".

2.5- Permit Shield for Non-applicable Requirements

The Permittee is shielded from the following non-applicable requirements:

1. The EPA's Clean Air Interstate Rules (CAIR) are not applicable to the combustion turbines **(ID Nos. Unit 1 through Unit 4 and Unit 6 through Unit 10)**, pursuant to 40 CFR 52.35(f) and 52.36(e). CAIR has been replaced by the Cross State Air Pollution Rule (CSAPR).
2. The requirements of 15A NCAC 2D .2400 "Clean Air Interstate Rules" no longer apply to the combustion turbines **(ID Nos. Unit 1 through Unit 4 and Unit 6 through Unit 10)**. According to 15A NCAC 2D .2401(a), the purpose of the 2D .2400 rules is to implement CAIR. Because CAIR no longer applies, the 2D .2400 rules also no longer apply.

[15A NCAC 2Q .0512(a)(1)(B)]

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 terms 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 address on 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 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 to Air Quality Permit 08759T23
Duke Energy Progress, LLC, Richmond County Combustion Turbine Facility

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 to Air Quality Permit 08759T23
Duke Energy Progress, LLC, - Richmond County Combustion Turbine Facility

Acid Rain Permit Renewal Application

(Dated August 3, 2015)