ROY COOPER
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Secretary
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Director

NORTH CAROLINA
Environmental Quality

DRAFT

Mr. Jeffery D. Hines
General Manager II
Duke Energy Progress, LLC
1199 Black Jack Church Road
Goldsboro, NC 27530

SUBJECT: Air Quality Permit No. 01812T49
Facility ID: 9600017
Duke Energy Progress, LLC - H. F. Lee Steam Electric Plant
Goldsboro
Wayne County
Fee Class: Title V
PSD Class: Major

Dear Mr. Hines:

In accordance with your completed Air Quality Permit Application for a 15A NCAC 02Q .0501(c)(1) significant permit modification, we are forwarding herewith Air Quality Permit No. 01812T49 authorizing the construction and operation, of the emission sources and associated air pollution control devices 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 identified as such in the permit. Please note the requirements for the annual compliance certification are contained in General Condition P in Section 4. 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 file a petition for contested case hearing in the North Carolina Office of Administrative Hearings. Information regarding the right, procedure, and time limit for permittees and other persons aggrieved to file such a petition is contained in the attached "Notice Regarding the Right to Contest A Division of Air Quality Permit Decision."

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.

Wayne County has triggered increment tracking under PSD for PM_{10}, $PM_{2.5}$, 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, P.E., 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 (Permit and Review)
Washington Regional Office
Central Files
Connie Horne (cover page only)

NOTICE REGARDING THE RIGHT TO CONTEST A DIVISION OF AIR QUALITY PERMIT DECISION

Right of the Permit Applicant or Permittee to File a Contested Case: Pursuant to NCGS 143-215.108(e), a permit applicant or permittee who is dissatisfied with the Division of Air Quality's decision on a permit application may commence a contested case by filing a petition under NCGS 150B-23 in the Office of Administrative Hearings within 30 days after the Division notifies the applicant or permittee of its decision. If the applicant or permittee does not file a petition within the required time, the Division's decision on the application is final and is not subject to review. The filing of a petition will stay the Division's decision until resolution of the contested case.

Right of Other Persons Aggrieved to File a Contested Case: Pursuant to NCGS 143-215.108(e1), a person other than an applicant or permittee who is a person aggrieved by the Division's decision on a permit application may commence a contested case by filing a petition under NCGS 150B-23 within 30 days after the Division provides notice of its decision on a permit application, as provided in NCGS 150B-23(f), or by posting the decision on a publicly available Web site. The filing of a petition under this subsection does not stay the Division's decision except as ordered by the administrative law judge under NCGS 150B-33(b).

General Filing Instructions: A petition for contested case hearing must be in the form of a written petition, conforming to NCGS 150B-23, and filed with the Office of Administrative Hearings, 1711 New Hope Church Road, Raleigh NC, 27609, along with a fee in an amount provided in NCGS 150B-23.2. A petition for contested case hearing form may be obtained upon request from the Office of Administrative Hearings or on its website at https://www.oah.nc.gov/hearings-division/filing/hearing-forms. Additional specific instructions for filing a petition are set forth at 26 NCAC Chapter 03.

Service Instructions: A party filing a contested case is required to serve a copy of the petition, by any means authorized under 26 NCAC 03 .0102, on the process agent for the Department of Environmental Quality:

William F. Lane, General Counsel
North Carolina Department of Environmental Quality
1601 Mail Service Center
Raleigh, North Carolina 27699-1601

If the party filing the petition is a person aggrieved other than the permittee or permit applicant, the party **must also** serve the permittee in accordance with NCGS 150B-23(a).

* * *

Additional information is available at https://www.oah.nc.gov/hearings-division/hearing-process/filing-contested-case. Please contact the OAH at 984-236-1850 or oah.postmaster@oah.nc.gov with all questions regarding the filing fee and/or the details of the filing process.

Summary of Changes to Permit

The following changes were made to Air Permit No. 01812T48:*

Old Page	Old Section	New Page	New Section	Description of Changes
Cover				Added new cover letter with new format. Amended permit numbers and dates.
various	2.1 A, C, D, E, F, H, I, J and K	various	2.1 A, C, D, E, F, H, I, J and K	Added 15A NCAC 02Q .0317 (avoidance for 02D .1111) to each applicable regulations table.
3-4	1, table of permitted emission sources	4-5	1, table of permitted emission sources	Removed "MACT YYYY" identifier for Lee IC Unit No. 14, Lee IC Unit No. 1A, Lee IC Unit No. 1B and Lee IC Unit No. 1C. Removed "MACT DDDDD" identifier for AB1, DPH1, DPH2 and DPH3.
15	2.1 C, regulation table	15	2.1 C, regulation table	Removed 15A NCAC 02D .1111 MACT (40 CFR Part 63 Subpart YYYY)
21	2.1 C.4	20	2.1 C.4	Removed and reserved.
23	2.1 D regulation table	21	2.1 D regulation table	Removed 15A NCAC 02D .1111 MACT (40 CFR Part 63 Subpart YYYY)
26	2.1 D.4	23	2.1 D.4	Removed and reserved.
28	2.1 E regulation table	24	2.1 E regulation table	Removed 15A NCAC 02D .1111 (40 CFR Part 63, Subpart DDDDD)
29	2.1 E.5	25	2.1 E.5	Removed and reserved.
32	2.1 F regulation table	26	2.1 F regulation table	Removed 15A NCAC 02D .1111 (40 CFR Part 63, Subpart DDDDD)
	2.1 F.4	26	2.1 F.4	Removed and reserved.
--	--	45	2.2 C.1	Added this HAP Facility-wide demonstration testing condition.
--	Insignificant Activities List	48	3	Created this new section for insignificant activities. Reclassified I-ASH-1, I-ES-39B, I-ES-39D, I-ES-40B, I-ES-44A through I-ES-44F and I-ES-FWP1 from "MACT ZZZZ" to "GACT ZZZZ". Removed "MACT DDDDD" identifier for I-ES-45A, I-ES-45B, I-ES-45C, I-ES-46A, I-ES-46B, and I-ES-4C.

Old Page	Old Section	New Page	New Section	Description of Changes
57-66	3	50-58	4	Created this new section and moved General Conditions to this section. Updated General Conditions to version 6.0, dated 01/07/2022).

* This list is not intended to be a detailed record of every change made to the permit but a summary of those changes.

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

AIR QUALITY PERMIT

Permit No.	Replaces Permit No.	Effective Date	Expiration Date
01812T49	01812T48		September 30, 2025

NOTE: Per General Condition K, a permit application for the renewal of this Title V permit shall be submitted no later than March 31, 2025.

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 – H. F. Lee Steam Electric Plant**
Facility ID:	**9600017**
Primary SIC Code:	**4911**
NAICS Code:	**221112**
Facility Site Location:	**1199 Black Jack Church Road**
City, County, State, Zip:	**Goldsboro, Wayne County, NC 27530**
Mailing Address:	**1199 Black Jack Church Road**
City, State, Zip:	**Goldsboro, NC 27530**
Application Numbers:	**9600017.21B**
Complete Application Date:	**October 7, 2021**
Division of Air Quality, Regional Office Address:	**Washington Regional Office 943 Washington Square Mall Washington, NC 27889**

Permit issued this the __ day of _____, 2022.

_____

Mark Cuilla, EIT, CPM, Chief, Air Permitting Section
By Authority of the Environmental Management Commission

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ATTACHMENT

Acid Rain Permit Application (signed November 22, 2019)

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
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COMS	Contiuous Opacity Monitoring System
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
NAICS	North American Industry Classification System
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

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:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Lee IC Unit No. 10 Lee IC Unit No. 11 **NSPS GG,** **PSD**	Two No. 2 fuel oil/natural gas-fired simple-cycle internal combustion turbines (GE Model PG7241FA, 1,925.3 million Btu per hour nominally rated heat input each) each equipped with water injection for NOx control	N/A	N/A
Lee IC Unit No. 12 Lee IC Unit No. 13 **NSPS GG,** **PSD**	Two No. 2 fuel oil/natural gas-fired simple-cycle internal combustion turbines (GE Model PG7241FA, 1,819.2 million Btu per hour nominally rated heat input each) each equipped with dry-low NOx combustors and water injection for NOx control	N/A	N/A
Lee IC Unit No. 14 **NSPS KKKK,** **PSD**	One natural gas/distillate fuel oil-fired simple cycle combustion turbine (1,940.1 million Btu per hour heat input when firing natural gas and 2,030.9 million Btu per hour heat input when firing distillate fuel oil) equipped with dry low-NOx combustors and water injection for NOx control	N/A	N/A
ST1 ST2 **PSD**	W-1 and W-2 - Two No. 2 fuel oil fixed-roof storage tanks (3,061,500 gallons capacity each) with atmospheric vents	N/A	N/A
Lee IC Unit No. 1A* Lee IC Unit No. 1B* Lee IC Unit No. 1C* **NSPS KKKK**	Three natural gas/No. 2 fuel oil-fired simple/combined-cycle internal combustion turbines, each equipped with dry low-NOx combustors and water injection control, a heat recovery steam generator with natural gas-fired duct burner, and a common steam turbine <u>Simple-cycle mode of operation</u>: 2,224 million Btu per hour heat input rate each when firing natural gas	Unit 1A SCR** Unit 1B SCR** Unit 1C SCR**	Selective Catalytic Reduction (applicable for combined-cycle mode of operation only)

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
	2,153 million Btu per hour heat input rate each when firing No. 2 fuel oil Combined-cycle mode of operation: 2,248 million Btu per hour heat input rate each and 453 million Btu per hour heat input rate (each duct burner) when firing natural gas 2,153 million Btu per hour heat input rate each with no duct burner firing when firing No. 2 fuel oil	Unit 1A OxdnCat Unit 1B OxdnCat Unit 1C OxdnCat	Oxidation Catalyst (applicable for combined-cycle mode of operation only)
AB1 **NSPS Dc**	One natural gas-fired auxiliary boiler (85.0 million Btu per hour heat input rate)	N/A	N/A
DPH1, DPH2 and DPH3	Three natural gas-fired dew point heaters (4.00 million Btu per hour heat input rate each)	N/A	N/A
CT1	One multi-cell wet surface air cooler with drift eliminators (10,600 gallons per minute recirculation water flow rate)	N/A	N/A
CT2	One multi-package/multi-cell turbine inlet chiller with drift eliminators (4,960 gallons per minute recirculation water flow rate)	N/A	N/A
4	One Gasoline tank - 1,000 gallons	N/A	N/A
ES-31	STAR® feedstock processing reactor (140 million Btu per hour maximum heat input rate, 130 million Btu per hour nominal heat input rate, designed to process 75 tons per hour and 400,000 tons per year flyash feedstock process rates), equipped with natural gas/propane burners for startup or to maintain temperature with a combined heating capacity of 60 million Btu per hour heat input rate.	CD-31A CD-31B	Dry scrubber (77,500 ACFM maximum inlet flue gas flow rate) Baghouse (26,790 total filter surface area, 2.18:1 air-to-cloth ratio, 77,500 ACFM maximum inlet flue gas flow rate)
ES-32	FGD byproduct storage silo (3,120 cubic feet capacity, 1.75 tons per hour maximum fill rate, 300 tons per hour maximum unload rate)	CD-32	Bin vent filter (4:1 air-to-cloth ratio)
ES-33	FGD absorbent storage silo (10,000 cubic feet capacity, 25 tons per hour maximum fill rate, 1.5 tons per hour maximum unload rate)	CD-33	Bin vent filter (4:1 air-to-cloth ratio)
ES-34	EHE- external heat exchanger 1 (70 tons per hour maximum process rate)	CD-34	Baghouse (3:1 air-to-cloth ratio, 32,000 dSCFM exhaust flow rate)
ES-35	EHE- external heat exchanger 2 (70 tons	CD-35	Baghouse (3:1 air-to-cloth

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
	per hour maximum process rate)		ratio, 32,000 dSCFM exhaust flow rate)
ES-37	Storage dome (75 tons per hour maximum fill rate, 275 tons per hour maximum unload rate, 400,000 tons per year fill and unload rate)	CD-37	Bin vent filter (4:1 air-to-cloth ratio)
F-4	Ash basin (25 acres active and 296 acres inactive)	N/A	N/A

* The change in emission factor for PM, PM_{10}, and $PM_{2.5}$ when combusting natural gas in a combined cycle mode of operation for combustion turbines (ID Nos. Lee IC Unit No. 1A, Lee IC Unit No. 1B, and Lee IC Unit No. 1C) in Section 2.2.B.1.g. of the permit is listed as a minor modification per 15A NCAC 02Q .0515. The compliance certification as described in General Condition P is required. Unless otherwise notified by NC DAQ, the affected terms of this permit (excluding the permit shield as described General Condition R) for these sources shall become final on October 1, 2021. Until this date, the affected permit terms herein reflect the proposed operating language that the Permittee shall operate this source under pursuant to 15A NCAC 02Q .0515(f).

** Operated on an as-needed basis to ensure compliance with the NSPS Subpart KKKK and the PSD avoidance NOx limits.

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. Two No. 2 fuel oil/natural gas-fired simple-cycle internal combustion turbines (ID Nos. Lee IC Unit No. 10 and Lee IC Unit No. 11) each equipped with water injection for NOx control, and

Two No. 2 fuel oil/natural gas-fired simple-cycle internal combustion turbines (ID Nos. Lee IC Unit No. 12 and Lee IC Unit No. 13) each equipped with dry-low NOx combustors and water injection for NOx control

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

Pollutant	Limits/Standards	Applicable Regulation
Sulfur Dioxide	As defined in specific conditions	15A NCAC 02D .0524 (40 CFR Part 60 Subpart GG)
	Cross State Air Pollution Rule (see Section 2.4)	40 CFR Part 97, Subpart CCCCC
	Phase II Acid Rain Permit Requirements (see Section 2.3)	15A NCAC 02Q .0402 (40 CFR Part 72)
Nitrogen Oxides	As defined in specific conditions	15A NCAC 02D .0524 (40 CFR Part 60 Subpart GG)
	Cross State Air Pollution Rule (see Section 2.4)	40 CFR Part 97, Subparts AAAAA and BBBBB
	Phase II Acid Rain Permit Requirements (see Section 2.3)	15A NCAC 02Q .0402 (40 CFR Part 72)
Various	As defined in specific conditions	15A NCAC 02D .0530 (PSD)
Visible Emissions	20 percent opacity	15A NCAC 02D .0521
Toxic Air Pollutants	State-enforceable Only toxics demonstration (see Sections 2.2 A.1 and 2.2 A.2)	15A NCAC 02D .1100 and 15A NCAC 02Q .0711
Facility-wide HAP	See Section 2.2 C.1	15A NCAC 02Q .0317 (avoidance for 02D .1111)

1. 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."

b. NSPS Emissions Limitations – As required by 15A NCAC 02D .0524, the following permit limits shall not be exceeded:

AFFECTED UNIT	POLLUTANT	EMISSION LIMIT
Combustion Turbines Lee IC Unit No. 10 Lee IC Unit No. 11 Lee IC Unit No. 12 Lee IC Unit No. 13	Nitrogen Oxides [40 CFR 60.332(a)]	STD = 0.0075 × [(14.4) / Y] + F*
	Sulfur Dioxide [40 CFR 60.333]	0.015 percent by volume** Or 0.8 percent weight sulfur in fuel

* Where:
STD = allowable nitrogen oxides emissions in percent by volume at 15 percent O_2 on a dry basis.
Y = manufacturer's rated heat rate at manufacturer's rated load or actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. Y shall not exceed 14.43 kJ/W-h.
F = NOx emission allowance for fuel bound nitrogen as defined in 40 CFR 60.332(a)(3).

** Allowable sulfur dioxide emissions at 15 percent O_2 on a dry basis.

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

c. 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.1.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

d. 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 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:
      1. 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.
      2. 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(c)(2), 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 CEMS does not comply with the applicable requirements of 40 CFR 60.334 and 40 CFR 75, or the NOx emissions from these turbines exceed the emission limits set forth in 40 CFR 60.332, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

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

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

g. 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 Section 2.1 A.1.d above, reporting shall be in accordance with 40 CFR 60(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.1.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 O_2 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. The Permittee does not have to report ambient conditions if the worst-case ISO correction factor as specified in 40 CFR 60.334(b)(3)(ii) is used, or if the ISO correction equation under the provisions of 40 CFR 60.335(b)(1) is not used. The Permittee shall comply with all applicable reporting requirements of 40 CFR 60.334.

h. The Permittee shall submit in writing 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.

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

a. The following Best Available Control Technology (BACT) limits shall not be exceeded:
   i. Short term maximum emission rates for each turbine (**ID Nos. Lee IC Unit No. 12 and Lee IC Unit No. 13**) when firing No. 2 fuel oil shall not exceed:

POLLUTANT	BACT EMISSION LIMITS*		BACT CONTROLS
	lb/hr	lb/million Btu	
Opacity	20%	---	Combustion control
Nitrogen Oxides	319.0	0.17535 42 ppmvd**	Water injection 0.020% nitrogen fuel oil**
Sulfur Dioxide	98.1	0.05392	0.05% sulfur fuel oil
Carbon Monoxide	65.0	0.03573	Combustion control
Volatile Organic Compounds	15.0	0.008245	Combustion control
Particulates/PM-10	17.0	0.009345	Combustion control
Sulfuric Acid	Fuel certification		0.05% sulfur fuel oil

* BACT limits shall apply at all times except as provided under Section 2.1 A.2.a.v

** At 15 % O2 and 0.015% or less fuel-bound nitrogen; may be adjusted based on results of initial performance test

*** Fuel-bound nitrogen content based on a 12-month rolling average

   ii. Short term maximum emission rates for each turbine (**ID Nos. Lee IC Unit No. 12 and Lee IC Unit No. 13**) when firing natural gas shall not exceed:

POLLUTANT	BACT EMISSION LIMITS*		BACT CONTROLS
	lb/hr	lb/million Btu	
Opacity	20%	---	Combustion control

Nitrogen Oxides	80.0	0.06144 12 ppmvd**	Dry-low NOx
Sulfur Dioxide	1.0	0.0006144	Combustion control
Carbon Monoxide	49.0	0.03011	Combustion control
Volatile Organic Compounds	14.0	.0086	Combustion control
Particulates/PM-10	9.0	0.00553	Combustion control

* BACT limits shall apply at all times except as provided under Section 2.1 A.2.a.v
** At 15 % O_2

iii. Short term maximum emission rates for each turbine (**ID Nos. Lee IC Unit No. 10 and Lee IC Unit No. 11**) when firing No. 2 fuel oil shall not exceed:

POLLUTANT	BACT EMISSION LIMITS*		BACT CONTROLS
	lb/hr	lb/million Btu	
Opacity	20%	---	Combustion control
Nitrogen Oxides	338.0	0.17556 42 ppmvd**	Water injection 0.020% nitrogen fuel oil***
Sulfur Dioxide	103.8	0.05391	0.05% sulfur fuel oil
Carbon Monoxide	81.0	0.04207	Combustion control
Volatile Organic Compounds	15.0	0.00779	Combustion control
Particulates/PM-10	17.0	0.00883	Combustion control
Sulfuric Acid	Fuel certification		0.05% sulfur fuel oil

* Emissions are at 50% load and above, and ISO standard conditions (ISO correction may be made by turbine internal control algorithm as approved by DAQ in October 24, 2000 letter to CP&L)
** At 15 % O_2 and 0.015% or less fuel-bound nitrogen; may be adjusted based on results of initial performance test
*** Fuel-bound nitrogen content based on a 12-month rolling average

iv. Short term maximum emission rates for each turbine (**ID Nos. Lee IC Unit No. 10 and Lee IC Unit No. 11**) when firing natural gas shall not exceed:

POLLUTANT	BACT EMISSION LIMITS*		BACT CONTROLS
	lb/hr	lb/million Btu	
Opacity	20%	---	Combustion control
Nitrogen Oxides	195.0	0.1022 25 ppmvd**	Water injection
Sulfur Dioxide	1.0	0.000524	Combustion control
Carbon Monoxide	81.0	0.04245	Combustion control
Volatile Organic Compounds	15.0	0.00786	Combustion control
Particulates/PM-10	9.0	0.00472	Combustion control

* Emissions are at 50% load and above, and ISO standard conditions (ISO correction may be made by turbine internal control algorithm as approved by DAQ in October 24, 2000 letter to CP&L)
** At 15 % O_2

v. Emissions resulting from start-up, shutdown, or malfunction above those given in Sections 2.1 A.2.a.i through iv above are permitted provided that optimal operational practices are adhered to and periods of excess emissions are minimized. 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 as follows:

(A) For Lee IC Unit Nos. 12 and 13, when firing natural gas, start-up is defined as the period from initial firing to Mode 6 DLN operation (as defined by the manufacturer's dry low NOx control system information) and shutdown shall be defined as the period from Mode 6 DLN operation to flame out. When firing fuel oil, start-up is defined as 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 DLN operation 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 Sections 2.1 A.2.a.i and ii when firing natural gas once Mode 6 DLN operation is reached or, when firing fuel oil, once water injection is initiated. Any operation outside of these parameters shall be deemed a startup, shutdown, or malfunction event.

(B) For Lee IC Unit Nos. 10 and 11, start-up is defined as the period from zero load (unfired) to 50% load. Shutdown is defined as the period from 50% load to zero load (unfired). Unit emissions shall comply with those given in Sections 2.1 A.2.a.iii and iv when operating above 50% load. Any operation outside of these parameters shall be deemed a startup, shutdown, or malfunction event.

vi. During turbine tuning events when firing natural gas, emissions of nitrogen oxides exceeding those given in Sections 2.1 A.2.a.ii and iv above are permitted as described below provided that tuning is conducted in accordance with manufacturer's recommendations and that periods of excess emissions are minimized. No more than one turbine tuning event shall occur at a time. Prior to turbine tuning, the Permittee shall notify the Washington Regional Office at least five days in advance. The notification shall include the details of the tuning activity and the proposed schedule. Any excess emissions above those in Sections 2.1 A.2.a.ii and iv during tuning events shall be indicated in the next semi-annual report and any deviations in the above tuning conditions shall be reported.

(A) Normal maintenance tuning events. No more than ten normal maintenance tuning events (total for the five turbines: Lee IC Unit No. 10, Lee IC Unit No. 11, Lee IC Unit No. 12, Lee IC Unit No. 13 and Lee IC Unit No. 14) shall occur per consecutive rolling 12-month period with each event not to exceed a period of eight hours. Emissions of nitrogen oxides shall not exceed 30 ppmvd at 15% O_2 (24-hour rolling averaging period) for Lee IC Unit Nos. 10 and 11, and shall not exceed 17 ppmvd at 15% O_2 (24-hour rolling averaging period) for Lee IC Unit Nos. 12 and 13.

(B) Green Rotor Run-In (GRRI) tuning events. No more than three GRRI tuning events (total for the five turbines: Lee IC Unit No. 10, Lee IC Unit No. 11, Lee IC Unit No. 12, Lee IC Unit No. 13 and Lee IC Unit No. 14) shall occur per consecutive rolling 12-month period with each event not to exceed a period of four hours. Emissions of nitrogen oxides shall not exceed 82 ppmvd at 15% O_2 (1-hour average) for Lee IC Unit No. 10 and Lee IC Unit No. 11, and shall not exceed 69 ppmvd at 15% O_2 (1-hour average) for Lee IC Unit No. 12 and Lee IC Unit No. 13.

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):

Long term maximum emission rates for all four turbines (ID Nos. Lee IC Unit No. 10, Lee IC Unit No. 11, Lee IC Unit No. 12 and Lee IC Unit No. 13) when firing either **No. 2 fuel oil or natural gas** shall not exceed:

POLLUTANT	BACT EMISSION LIMIT (tons/year)*
Nitrogen Oxides	1,484.0
Sulfur Dioxide	415.2
Carbon Monoxide	324.0
Volatile Organic Compounds	60.0
Particulates/PM-10	68.0

* Emissions are for 2,000 hours per year operation and at 100% load and ISO standard conditions (ISO correction may be made by turbine internal control algorithm as approved by DAQ in October 24, 2000 letter to CP&L)

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

c. The sulfur content of the fuel being fired in each combustion turbine shall be monitored as specified in 40 CFR 60.334(b) to demonstrate compliance with the sulfur dioxide standard in 40 CFR 60.333, using the test methods and procedures in 40 CFR 60.335, except as follows:

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(b)(1)), the Permittee may sample each tank to determine

sulfur content after all shipments have been transferred into the tank and prior to placing the tank in service for supply to the turbines. Samples shall be analyzed for sulfur content in accordance with 40 CFR Part 75, Appendix D.

ii. When firing natural gas, the procedures from 40 CFR Part 75, Appendix D shall be used to sample and analyze for sulfur content.

d. The nitrogen oxide emissions shall be monitored as specified below:

i. If CEMS are not used to monitor emissions, then NOx shall be monitored according to 40 CFR Part 75 Appendix E. At least 45 days prior to performing any required initial performance testing required by the procedure in Appendix E, the Permittee must submit a testing protocol to the Regional Supervisor, Division of Air Quality for review and approval prior to performing such tests. If Appendix E is being used in lieu of a NOx CEM under the Acid Rain Program, then certification to use Appendix E shall be completed no later than the applicable deadline specified in 40 CFR Part 75.4 pursuant to the requirements in §75.20.

ii. If the Permittee elects to install, certify, maintain, operate, and quality-assure CEMS for demonstrating compliance with the NOx, BACT emissions limits, emissions shall be determined 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

(A) not exceed 5.0 percent of the operating time in a calendar quarter[1], 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.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the sulfur content of the fuel is not monitored, the nitrogen oxide emissions are not monitored, or the sulfur dioxide or nitrogen oxide emission limits in Section 2.1.A.2.a or b above are exceeded.

e. The maximum annual hours of operation for each combustion turbine shall not exceed 2,000 full load equivalent hours per calendar year. The Permittee shall maintain records of the actual number of hours of operation for each combustion turbine.

f. The amounts of each fuel combusted during each day shall be recorded and maintained.

g. The fuel-bound nitrogen content of the No. 2 fuel oil shall not exceed 0.020 percent nitrogen by weight based on a 12-month rolling average.

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

h. The Permittee shall submit in writing the following 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:

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,

[1] The percent monitor downtime (%MD) for the peaking simple cycle turbines equipped with CEMS is evaluated on a facility-wide approach based on the total combined number of operating hours and the total combined hours of monitor downtime for all peaking simple cycle turbines during the quarter.

ii. Periods of excess emissions for nitrogen oxides for any period during which the nitrogen content of the No. 2 fuel oil being fired exceeds 0.020 percent by weight based on a 12-month rolling average, and

iii. Periods of excess emissions for nitrogen oxides for any 24-hour rolling averaging period during which the concentrations exceed 0.1022 lb/million Btu (25 ppmvd) for the water injection-equipped turbines (ID Nos. Lee IC Unit No. 10 and Lee IC Unit No. 11) and 0.06144 lb/million Btu (12 ppmvd) for the dry-low NOx-equipped turbines (ID Nos. Lee IC Unit No. 12 and Lee IC Unit No. 13) when firing natural gas, and 0.17556 lb/million Btu (42 ppmvd) for the water injection-equipped turbines (ID Nos. Lee IC Unit No. 10 and Lee IC Unit No. 11) and 0.17535 lb/million Btu (42 ppmvd) for the dry-low NOx-equipped turbines (ID Nos. Lee IC Unit No. 12 and Lee IC Unit No. 13) when firing No. 2 fuel oil; as determined by the procedure specified in 40 CFR Part 75 Appendix E. In addition, periods of excess emissions for nitrogen oxides include any unit operating hour during which the limits in Sections 2.1 C.3.a.iii.(A) and (B) are exceeded during turbine tuning events when firing natural gas. 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 least 15 minutes apart at loads above those defined as start-up or shutdown in Section 2.1 A.2.a.v above; and

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

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

a. Visible emissions from these sources **(ID Nos. Lee IC Unit No. 10 through 13)** shall not be more than 20 percent opacity (except during startup, shutdowns, and malfunctions approved as such according to procedures approved under 15A NCAC 02D .0535) 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 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.3.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

c. To ensure compliance, the Permittee shall perform a Method 9 test for 1 hour in accordance with 15A NCAC 02D .2610 prior to exceeding 1,000 hours of operation on No. 2 fuel oil. This monitoring protocol shall be repeated prior to each 1,000-hour period of operation on No. 2 fuel oil. No monitoring is required while burning natural gas in these sources **(ID Nos. Lee IC Unit No. 10 through 13)**. If the results of this test are above the limit given in Section 2.1 A.3.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

d. The results of monitoring activities required by Section 2.1 A.3.c above shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. The date and time of each recorded action;
   ii. The results of each Method 9 observation; and
   iii. The results of any corrective actions performed.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

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

e. The Permittee shall submit the results of the Method 9 test required by Section 2.1 A.3.c above within 30 days of completion of the test. All instances of deviations from the requirements of this permit must be clearly identified.

B. W-1 and W-2 – Two No. 2 fuel oil fixed-roof storage tanks with atmospheric vents (ID Nos. ST1 and ST2)

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

Pollutant	Limits/Standards	Applicable Regulation
Volatile Organic Compounds	As defined in specific conditions	15A NCAC 02D .0530 (PSD)

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

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

i. Long term maximum emission rates for both storage tanks when firing either No. 2 fuel oil or natural gas shall not exceed:

POLLUTANT	BACT EMISSION LIMIT (tons/year)
Volatile Organic Compounds	4.5

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

b. The total maximum annual No. 2 fuel oil throughput for both storage tanks shall not exceed 117,500,000 gallons per calendar year. To ensure compliance, the Permittee shall maintain records of the actual number of gallons fired in each combustion turbine. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if these records are not maintained.

C. One natural gas/distillate fuel oil-fired simple cycle combustion turbine (1,940.1 million Btu per hour heat input when firing natural gas and 2,030.9 million Btu per hour heat input when firing distillate fuel oil) equipped with dry low-NOx combustors and water injection for NOx control (ID No. Lee IC Unit No. 14)

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

Pollutant	Limits/Standards	Applicable Regulation
Visible Emissions	20 percent opacity	15A NCAC 02D .0521
Nitrogen Oxides	15 ppm at 15 percent O_2 when firing natural gas 42 ppm at 15 percent O_2 when firing fuel oil 96 ppm at 15 percent O_2 when operating at less than 75 percent of peak load or operating at less than 0°F	15A NCAC 02D .0524 [NSPS Subpart KKKK]
	As defined in specific conditions	15A NCAC 02D .0530
	Cross State Air Pollution Rule (see Section 2.4)	40 CFR Part 97, Subpart CCCCC
	Phase II Acid Rain Permit Requirements (see Section 2.3)	15A NCAC 02Q .0402 (40 CFR Part 72)
Sulfur Dioxide	0.9 lb/MWh or 0.06 lb/million Btu heat input	15A NCAC 02D .0524 [NSPS Subpart KKKK]
	As defined in specific conditions	15A NCAC 02D .0530
	Cross State Air Pollution Rule (see Section 2.4)	40 CFR Part 97, Subparts AAAAA and BBBBB
	Phase II Acid Rain Permit Requirements (see Section 2.3)	15A NCAC 02Q .0402 (40 CFR Part 72)
PM/PM_{10}	As defined in specific conditions	15A NCAC 02D .0530
Sulfuric Acid Mist	As defined in specific conditions	15A NCAC 02D .0530
Facility-wide HAP	See Section 2.2 C.1	15A NCAC 02Q .0317 (avoidance for 02D .1111)

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

a. Visible emissions from this source shall not be more than 20 percent opacity (except during startup, shutdowns, and malfunctions approved as such according to procedures approved under 15A NCAC 02D .0535) 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 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 C.1.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

c. To ensure compliance, the Permittee shall perform a Method 9 test for 1 hour in accordance with 15A NCAC 02D .2610 prior to exceeding 1,000 hours of operation on distillate fuel oil. This monitoring shall be repeated prior to each 1,000-hour period of operation on distillate fuel oil. No monitoring is required while burning natural gas in this source. If the results of this test are above the limit given in Section 2.1 C.1.a. above or Method 9 test is not performed before exceeding each 1,000 hours of operation on distillate fuel oil, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

d. The results of monitoring activities required by Section 2.1 C.1.c above shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. The date and time of each recorded action;
   ii. The results of each Method 9 test; and
   iii. The results of any corrective actions performed.
   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

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

e. The Permittee shall submit the results of the Method 9 test required by Section 2.1 C.1.c within 30 days of completion of the test. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60 SUBPART KKKK)

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 40 CFR Part 60 Subpart A "General Provisions."

Emission Limitations

b. NOx emissions (except during startup, shutdowns, and malfunction) from combustion turbine (ID No. Lee IC Unit 14) 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 the combustion turbine is greater than or equal to 50 percent natural gas; the Permittee shall meet the corresponding NOx emission limit in Section 2.1 C.2.b. above for natural gas when the Permittee is burning that fuel. Similarly, when the total heat input to the combustion turbine is greater than 50 percent distillate oil and fuels other than natural gas, the Permittee shall meet the corresponding emission limit in Section 2.1 C.2.b. above for distillate oil and fuels other than natural gas for the duration of the time that the Permittee burn that particular fuel. [40 CFR 60.4325]

d. SO_2 emissions (except during startup, shutdowns, and malfunction) from the combustion turbine shall not exceed 0.9 lb/MWh gross output or 0.06 lb/million Btu heat input. The Permittee has chosen to comply with heat input based SO_2 emission limit. [40 CFR 60.4330]

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

e. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 C.2.b, c, or d 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 §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 §60.4340(b), to demonstrate compliance with the applicable NOx emission limit. Excess emissions are based on a 30-day rolling average for combined-cycle operation and on a 4-hour rolling average for simple-cycle operation, and shall be determined in accordance with §60.4345 and §60.4350. 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 in accordance with §60.4380(b)(3). If the NOx CEMS does not comply with the requirements of §60.4340(b) and §60.4345, or the NOx emissions (except during startup, shutdowns, and malfunction) exceeds the applicable NOx 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 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 §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 for natural gas and fuel oil, if the demonstrations indicate that the sulfur content of natural gas or fuel oil exceeds 0.06 lb SO_2/million Btu, if the SO_2 emissions (excluding the emissions during startup, shutdown, and malfunction) from the combustion turbines exceeds the applicable emission limit, or if these records are not maintained.

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

i. The Permittee shall submit reports of excess emissions and monitor downtime in accordance with §60.7(c). Excess emissions must be reported for all periods of operation, including startup, shutdown, and malfunctions. All reports required under §60.7(c) must be postmarked by the 30th day following the end of each 6-month period. [§60.4375(a), and §60.4395]
   i. Excess emissions and monitor downtime for the NOx CEMS are defined as follows: [§60.4380(b)]
      (A) Excess Emissions. To demonstrate compliance, an excess emission is any unit operating period in which the 30-day rolling average (for combined-cycle operation) or 4-hour rolling average (for simple-cycle operation) NOx emission rate exceeds the applicable emission limit.
      (B) 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.
      (C) 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. [§60.4380(b)(3)]
   ii. Excess emissions and monitor downtime for fuel sulfur content monitoring are defined as follows:[§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 §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.

j. The Permittee shall submit a summary report of monitoring and recordkeeping activities required by Sections 2.1 C.2.f through h above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations 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 the turbine (ID No. Lee IC Unit No. 14) shall not exceed:

EMISSION SOURCE	POLLUTANT	BACT EMISSION LIMITS*		CONTROL TECHNOLOGY
		Natural Gas	Distillate Fuel Oil	
Combustion Turbine (ID No. ES14)	NOx	9 ppmvd at 15% O_2 0.032 lb/million Btu [4-hour rolling average]	42 ppmvd at 15% O_2 0.167 lb/million Btu [4-hour rolling average]	Dry-low NOx combustors when firing natural gas and water injection when firing distillate fuel oil
	PM	18.5 lb/hr (Both filterable and condensable) [24-hour block average] 0.0095 lb/million Btu (both filterable and condensable) [24-hour block average]	32.5 lb/hr (Both filterable and condensable) [24-hour block average] 0.016 lb/million Btu (both filterable and condensable) [24-hour block average]	Low ash, low sulfur fuel and good combustion control
	PM10	18.5 lb/hr (Both filterable and condensable) [24-hour block average] 0.0095 lb/million Btu (Both filterable and condensable) [24-hour block average]	32.5 lb/hr (Both filterable and condensable) [24-hour block average] 0.016 lb/million Btu (Both filterable and condensable) [24-hour block average]	Low ash, low sulfur fuel and good combustion control
	SO_2	0.0056 lb/million Btu [1-hour average]	0.052 lb/million Btu [1-hour average]	Low sulfur distillate fuel oil (0.05 %w sulfur) and natural gas (2 grains/100 sft^3 sulfur)
	Sulfuric Acid Mist	None	None	Low sulfur distillate fuel oil (0.05 %w sulfur) and natural gas (2 grains/100 sft^3 sulfur)

* BACT limits shall apply at all times except as provided under Section 2.1 C.3.a.ii

ii. Emissions resulting from start-up, shutdown, or malfunction above those given in Sections 2.1 C.3.a.i above are permitted provided that optimal operational practices are adhered to and periods of excess emissions are minimized. 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 firing natural gas, start-up is defined as the period from initial firing to Mode 6 DLN operation (as defined by the manufacturer's dry low NOx control system information) and shutdown shall be defined as the period from Mode 6 DLN operation to flame out. When firing fuel oil, start-up is defined as 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 DLN operation 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 Sections 2.1 C.3.a.i when firing natural gas once Mode 6 DLN operation is reached or, when firing fuel oil, once water injection is initiated. Any operation outside of these parameters shall be deemed a startup, shutdown, or malfunction event.

iii. During turbine tuning events when firing natural gas, emissions of nitrogen oxides exceeding those given in Section 2.1 C.3.a.i above are permitted as described below provided that tuning is conducted in accordance with manufacturer's recommendations and that periods of excess emissions are minimized. No more than one turbine tuning event shall occur at a time. Prior to turbine tuning, the Permittee shall notify the Washington Regional Office at least five days in advance. The notification shall include the details of the tuning activity and the proposed schedule. Any excess emissions above those in Section 2.1 C.3.a.i during tuning events shall be indicated in the next semi-annual report and any deviations in the above tuning conditions shall be reported.

(A) Normal maintenance tuning events. No more than ten normal maintenance tuning events (total for the five turbines: Lee IC Unit No. 10, Lee IC Unit No. 11, Lee IC Unit No. 12, Lee IC Unit No. 13 and Lee IC Unit No. 14) shall occur per consecutive rolling 12-month period with each event not to exceed a period of eight hours. Emissions of nitrogen oxides shall not exceed 14 ppmvd at 15% O_2 (4-hour rolling average).

(B) Green Rotor Run-In (GRRI) tuning events. No more than three GRRI tuning events (total for the five turbines: Lee IC Unit No. 10, Lee IC Unit No. 11, Lee IC Unit No. 12, Lee IC Unit No. 13 and Lee IC Unit No. 14) shall occur per consecutive rolling 12-month period with each event not to exceed a period of four hours. Emissions of nitrogen oxides shall not exceed 66 ppmvd at 15% O_2 (1-hour average).

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 LIMIT		
		Annual (tons/year*)	Per 24 –hour (pounds)	Per 3-hour (pounds)
Combustion Turbine (ID No. ES14)	Nitrogen Oxides (As Nitrogen Dioxide)	340	-	-
	PM-10 (Both filterable and condensable)	32.5	780	-
	Sulfur Dioxide	104.7	2,512.8	314.1

* Tons per rolling consecutive 12-month period based on a maximum 2,000 operating hours for combined usage of natural gas and distillate fuel oil.

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

c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 C.3.a or b, 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 combustion turbine (ID No. Lee IC Unit No. 14) for combined usage of natural gas and distillate fuel oil shall not exceed 2,000 full load equivalent hours per rolling consecutive 12-month period.

e. The Permittee shall record and maintain records of the actual number of hours of operation for combustion turbine (ID No. Lee IC Unit No. 14) in accordance with 40 CFR Part 75. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the above records are not maintained.

f. Water injection shall be used when combustion turbine (ID No. Lee IC Unit No. 14) is firing distillate fuel oil only. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if water injection is not used when combustion turbine (ID No. Lee IC Unit 14) is firing distillate fuel oil or water injection is used when combustion turbine (ID No. Lee IC Unit 14) is firing natural gas.

g. The Permittee is allowed to burn distillate fuel oil in combustion turbine (ID No. Lee IC Unit No. 14) during the summer months (April through October) only when three other combustion turbines (three combustion turbines from ID Nos. Lee IC Unit No. 10, Lee IC Unit No. 11, Lee IC Unit No. 12, and Lee IC No. Unit 13) are already operating on natural gas, except during operational curtailment[2] of interruptible transportation, Force Majeure events, malfunctions, functional equipment testing (periods not to exceed one hour per week), and during compliance testing. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the Permittee burns distillate fuel oil in combustion turbine (ID No. Lee IC Unit No. 14) during summer months (April through October) and less than three other combustion turbines (less than three combustion turbines from ID Nos. Lee IC Unit No. 10, Lee IC Unit No. 11, Lee IC Unit No. 12, and Lee IC Unit No. 13) are operating on natural gas, except during operational curtailment of interruptible transportation, Force Majeure events, malfunctions, functional equipment testing (periods not to exceed one hour per week), and during compliance testing.

h. The Permittee shall monitor sulfur content of fuel burned in combustion turbine (ID No. Lee IC Unit No. 14) in accordance with Section 2.1 C.2.h above. If the sulfur content of the fuel is not monitored as per Section 2.1 C.2.h above or the sulfur monitoring indicates that the sulfur content of the fuel exceeds the limits in Section 2.1 C.3.a or b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

[2] "Operational curtailment" occurs when the interstate pipeline company or the local distribution company is unable to provide natural gas to the customer. The causes for these upstream interruptions can include weather events, scheduled or unscheduled pipeline maintenance outages, malfunctions, or unexpected change in the energy or load requirements, etc. Curtailment does not mean fuel oil is burned merely because it is more economical to do so.

i. The Permittee shall install, certify, maintain and operate a NOx continuous emissions monitoring system (CEMS) and monitor NOx emissions from the combustion turbine (ID No. Lee IC Unit No. 14) 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[3], 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.

   If the results of any tests for NOx are above the limits given in Section 2.1.C.3.a or b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

j. The Permittee shall submit a semi-annual summary report of the monitoring and recordkeeping activities required by Sections 2.1 C.3.d through I above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. The report shall also contain the following:
   i. Periods of excess emissions for sulfur dioxide for any unit operating hour period during which the sulfur content of the distillate fuel oil fired in the combustion turbine exceeds 0.05 percent by weight.
   ii. Periods of excess emissions for nitrogen oxides for any unit operating hour period during which the 4-hour rolling average for NOx concentrations exceed 0.167 lb/million Btu (42 ppmvd) when firing distillate fuel oil and 0.032 lb/million Btu (9 ppmvd) when firing natural gas, and for any unit operating hour during which the limits in Sections 2.1 C.3.a.iii.(A) and (B) are exceeded during turbine tuning events when firing natural gas. The 4-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 those defined as start-up or shutdown in Section 2.1 C.3.a.ii above and are at least 15 minutes apart.

4. Reserved

[3] The percent monitor downtime (%MD) for the peaking simple cycle turbines equipped with CEMS is evaluated on a facility-wide approach based on the total combined number of operating hours and the total combined hours of monitor downtime for all peaking simple cycle turbines during the quarter.

D. Three natural gas/No. 2 fuel oil-fired simple/combined cycle internal combustion turbines (ID Nos. Lee IC Unit No. 1A, Lee IC Unit No. 1B and Lee IC Unit No. 1C), each equipped with dry low-NOx combustors and water injection control, a heat recovery steam generator with natural gas-fired duct burner, and a common steam turbine; and associated selective catalytic reduction (ID Nos. Unit 1A SCR, Unit 1B SCR and Unit 1C SCR) and oxidation catalyst (ID Nos. Unit 1A OxdnCat, Unit 1B OxdnCat and Unit 1C OxdnCat)

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

Pollutant	Limits/Standards	Applicable Regulation
particulate matter	0.11 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 when firing natural gas • 42 ppm at 15 percent O_2 when firing fuel oil • 96 ppm at 15 percent O_2 when operating at less than 75 percent of peak load or operating at less than 0°F	15A NCAC 02D .0524 [NSPS Subpart KKKK]
	Cross State Air Pollution Rule (see Section 2.4)	40 CFR Part 97, Subpart CCCCC
	Phase II Acid Rain Permit Requirements (see Section 2.3)	15A NCAC 02Q .0402 (40 CFR Part 72)
sulfur dioxide	0.06 lb/million Btu heat input each	15A NCAC 02D .0524 [NSPS Subpart KKKK]
	Cross State Air Pollution Rule (see Section 2.4)	40 CFR Part 97, Subparts AAAAA and BBBBB
	Phase II Acid Rain Permit Requirements (see Section 2.3)	15A NCAC 02Q .0402 (40 CFR Part 72)
nitrogen oxides sulfur dioxide particulate matter PM-10 PM-2.5 carbon monoxide VOC sulfuric acid lead	as defined in specific conditions see Section 2.2 B.1	15A NCAC 02Q .0317 (PSD avoidance)
Facility-wide HAP	see Section 2.2 C.1	15A NCAC 02Q .0317 (avoidance for 02D .1111)

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

a. Emissions of particulate matter from the combustion of natural gas or No. 2 fuel oil that are discharged from these sources (**ID Nos. Lee IC Unit No. 1A, Lee IC Unit No. 1B and Lee IC Unit No. 1C;** duct burners only) into the atmosphere shall not exceed 0.11 pounds 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 D.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. Lee IC Unit No. 1A, Lee IC Unit No. 1B and Lee IC Unit No. 1C;** duct burners only).

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from these sources (**ID Nos. Lee IC Unit No. 1A, Lee IC Unit No. 1B and Lee IC Unit No. 1C)** 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 D.2.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 the firing of natural gas and No. 2 fuel oil in these sources (**ID Nos. Lee IC Unit No. 1A, Lee IC Unit No. 1B and Lee IC Unit No. 1C)**.

3. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60 SUBPART KKKK)

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

b. NOx emissions (except during startup, shutdowns, and malfunction) from each combustion turbine (ID Nos. Lee IC Unit No. 1A, Lee IC No. Unit 1B and Lee IC No. Unit 1C) shall not exceed the following: [§60.4320]

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

* peak load defined as the design capacity at ISO conditions

c. SO_2 emissions (except during startup, shutdowns, and malfunction) from the combustion turbines shall not exceed 0.06 lb/million Btu heat input (fuel sulfur content limit). [§60.4330]

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

d. 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 D.3.b or c above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

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

e. 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 §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.

f. The Permittee shall install, certify, maintain and operate a NOx continuous emissions monitoring system (CEMS) on each combined-cycle and simple-cycle turbine stack or ductwork as described in §60.4340(b), to demonstrate compliance with the applicable NOx emission limit. Excess emissions are based on a 30-day rolling average for combined-cycle operation and on a 4-hour rolling average for simple-cycle operation, and shall be determined in accordance with §60.4345 and §60.4350. 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 in accordance with §60.4380(b)(3). If the NOx CEMS does not comply with the

requirements of §60.4340(b) and §60.4345, or the NOx emissions (except during startup, shutdowns, and malfunction) exceeds the applicable NOx emission limit, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

g. The Permittee shall demonstrate compliance with the applicable SO_2 emission limit by using 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 §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 for natural gas and fuel oil, if the demonstrations indicate that the sulfur content of natural gas or fuel oil exceeds 0.060 lb SO_2/million Btu, if the SO_2 emissions (excluding the emissions during startup, shutdown, and malfunction) from the combustion turbines exceeds the applicable emission limit, or if these records are not maintained.

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

h. The Permittee shall submit reports of excess emissions and monitor downtime in accordance with §60.7(c). Excess emissions must be reported for all periods of operation, including startup, shutdown, and malfunctions. All reports required under §60.7(c) must be postmarked by the 30th day following the end of each 6-month period. [§60.4375(a), and §60.4395]
   i. Excess emissions and monitor downtime for the NOx CEMS are defined as follows: [§60.4380(b)]
      (A) Excess Emissions. To demonstrate compliance, an excess emission is any unit operating period in which the 30-day rolling average (for combined-cycle operation) or 4-hour rolling average (for simple-cycle operation) NOx emission rate exceeds the applicable emission limit.
      (B) 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.
      (C) 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. [§60.4380(b)(3)]
   ii. Excess emissions and monitor downtime for fuel sulfur content monitoring are defined as follows: [§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 §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.
   i. The Permittee shall submit a summary report of monitoring and recordkeeping activities in Sections 2.1 D.3.e through g above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

4. Reserved

E. One natural gas-fired auxiliary boiler (ID No. AB1)

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

Pollutant	Limits/Standards	Applicable Regulation
particulate matter	0.11 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
none	recordkeeping	15A NCAC 02D .0524 (40 CFR 60 Subpart Dc)
Facility-wide HAP	See Section 2.2 C.1	15A NCAC 02Q .0317 (avoidance for 02D .1111)

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. AB1)** into the atmosphere shall not exceed 0.11 pounds 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 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. AB1)**.

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

a. Emissions of sulfur dioxide from this source **(ID No. AB1)** 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 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 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 the firing of natural gas in this source (**ID No. AB1**).

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

a. Visible emissions from this source **(ID No. AB1)** 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 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 the firing of natural gas in this source **(ID No. AB1)**.

4. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60 SUBPART Dc)

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

a. The Permittee shall record and maintain records of the amount of fuel burned in this source **(ID No. AB1)** during each calendar month. Such records shall be maintained on site at the source 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.

5. Reserved

F. Three natural gas-fired dew point heaters (ID Nos. DPH1, DPH2 and DPH3)

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

Pollutant	Limits/Standards	Applicable Regulation
particulate matter	0.11 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
Facility-wide HAP	See Section 2.2 C.1	15A NCAC 02Q .0317 (avoidance for 02D .1111)

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. DPH1, DPH2 and DPH3)** into the atmosphere shall not exceed 0.11 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 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 in these sources **(ID Nos. DPH1, DPH2 and DPH3)**.

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

a. Emissions of sulfur dioxide from these sources **(ID Nos. DPH1, DPH2 and DPH3)** 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 F.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 in these sources **(ID Nos. DPH1, DPH2 and DPH3)**.

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

a. Visible emissions from these sources **(ID Nos. DPH1, IPH2 and DPH3)** 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 F.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 the firing of natural gas in these sources **(ID Nos. DPH1, DPH2 and DPH3)**.

4. Reserved

G. One multi-cell wet surface air cooler with drift eliminators (ID No. CT1) and one multi-package/multi-cell turbine inlet chiller with drift eliminators (ID No. CT2)

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

Pollutant	Limits/Standards	Applicable Regulation
particulate matter	$E = 4.10 \times (P)^{0.67}$ for $P \leq 30$ tons/hr, or $E = 55.0 \times (P)^{0.11} - 40$ for $P > 30$ tons/hr where: E = allowable emission rate in pounds per hour P = process weight rate in tons per hour	15A NCAC 02D .0515

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

a. Emissions of particulate matter from these sources **(ID No. CT1 and CT2)** shall not exceed an allowable emission rate as calculated by the following equation:

$E = 4.10 \times P^{0.67}$ for $P \leq 30$ tons per hour
or
$E = 55.0 \times P^{0.11} - 40$ for $P > 30$ 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 G.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 these sources **(ID No. CT1 and CT2)**.

H. One gasoline storage tank (ID No. 4)

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

Pollutant	Limits/Standards	Applicable Regulation
toxic air pollutants	State-enforceable Only toxics demonstration (see Sections 2.2 A.1 and 2.2 A.2)	15A NCAC 02D .1100 and 15A NCAC 02Q .0711
Facility-wide HAP demonstration	See Section 2.2 C.1	15A NCAC 02Q .0317 (avoidance for 02D .1111)

I. One STAR® flyash feedstock processing reactor equipped with natural gas/propane startup burners (ID No. ES-31) and associated dry scrubber (ID No. CD-31A) and baghouse (ID No. CD-31B)

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

Pollutant	Limits/Standards	Applicable Regulation
particulate matter	$E = 4.10 \times (P)^{0.67}$ for $P \leq 30$ tons/hr, or $E = 55.0 \times (P)^{0.11} - 40$ for $P > 30$ tons/hr Where: E = allowable emission rate in pounds per hour P = process weight rate in tons per hour	15A NCAC 02D .0515
sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
visible emissions	20 percent opacity	15A NCAC 02D .0521
particulate matter PM-10 PM-2.5 carbon monoxide VOC	as defined in specific conditions see Section 2.2 B.1	15A NCAC 02Q .0317 (PSD avoidance)
toxic air pollutants	State-enforceable Only toxics demonstration (see Sections 2.2 A.1 and 2.2 A.2)	15A NCAC 02D .1100 and 15A NCAC 02Q .0711
n/a	Submit a permit application within 12 months of startup.	15A NCAC 02Q .0504
Facility-wide HAP	See Section 2.2 C.1	15A NCAC 02Q .0317 (avoidance for 02D .1111)

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

a. Emissions of particulate matter from this source **(ID No. ES-31)** shall not exceed an allowable emission rate as calculated by the following equation:

$$E = 4.10 \times P^{0.67} \quad \text{for } P \leq 30 \text{ tons per hour}$$
or
$$E = 55.0 \times P^{0.11} - 40 \quad \text{for } P > 30 \text{ tons per hour}$$

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 .0308(a)]

b. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit above by testing the reactor (**ID No. ES-31**) for particulate emissions in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in General Condition JJ. Testing shall be completed within 90 days of initial startup[4] of the reactor **(ID No. ES-31)**.

[4] The initial startup is considered to be after the reactor has been through commissioning and turned over to operations.

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

c. Particulate matter emissions from this source (**ID No. ES-31**) shall be controlled by the baghouse (**ID No. CD-31B**). To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
   i. a monthly visual inspection of the system ductwork and material collection unit for leaks;
   ii. a monthly reading of the pressure gauges on the baghouse (**ID Nos. CD-31B**); and
   iii. an annual (for each 12-month period following the initial inspection) internal inspection of the baghouse's structural integrity.

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

d. The results of inspection and maintenance required by Section 2.1 I.1.c above shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each inspection;
   iii. the results of any maintenance performed on the dust extraction system; and
   iv. any variance from manufacturer's recommendations, if any, and corrections made.

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

e. The Permittee shall submit the results of any maintenance performed on any control device within 30 days of a written request by the DAQ.
f. The Permittee shall submit a summary report of monitoring and recordkeeping activities given in Sections 2.1 I.1.c and d above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

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

a. Emissions of sulfur dioxide from this source **(ID No. ES-31)** 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 .0308(a)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ.

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

c. The Permittee shall operate the dry scrubber **(ID No. CD-31A)** at any time the reactor is in operation other than during startup, shutdown or malfunction.
d. To ensure compliance, the Permittee shall install a sulfur dioxide continuous emissions monitoring (CEM) system including any required diluent monitor system with the following requirements:
   i. The CEM system shall be installed, calibrated, maintained, tested, and operated in accordance with 40 CFR Part 60, Appendix B.
   ii. Compliance with the sulfur dioxide emission standard shall be demonstrated based on a three-hour rolling average of the sulfur dioxide exhaust gas concentration measured by the CEM system[5].
   iii. Pursuant to 15A NCAC 02D .0613 "Quality Assurance Program," the Permittee shall develop and implement a written quality assurance program containing information required by 40 CFR Part 60, Appendix F, Section 3, Quality Assurance Procedures.

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

e. The Permittee shall submit the results of any maintenance performed on any control device within 30 days of a written request by the DAQ.
f. For the CEMs, the Permittee shall submit semiannually an excess emissions and monitoring systems summary report. The report shall be calculated on a quarterly basis in a format as provided by the Director. The report shall include any quality assurance assessments, as stated in the quality assurance program, and shall be submitted by July

[5] The SO_2 monitored value subject to the 2.3 lb/mmBtu limit will have a 5% CO_2 diluent cap, or a 14% diluent cap, substituted in the emission rate calculation whenever the actual CO_2 concentration is lower than 5% or whenever the actual O_2 concentration is higher than 14%.

30 for the period between January 1 and June 30 and by January 30 for the period between July 1 and December 31 of each year.

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

a. Visible emissions from this source (**ID No. ES-31**) shall not be more than 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ.

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

c. To ensure compliance, once a month the Permittee shall observe the emission points of this source (**ID No. ES-31**) for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. The Permittee shall establish "normal" for this source in the first 30 days following the effective date of beginning operation. If visible emissions from this source are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 I.3.a above.

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

d. The results of the monitoring required by Section 2.1 I.3.c above shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
   iii. the results of any corrective actions performed.

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

e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities in Sections 2.1 I.3.c and d above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and on or before 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. FGD byproduct storage silo (ID No. ES-32) and associated bin vent filter (ID No. CD-32), FGD absorbent storage silo (ID No. ES-33) and associated bin vent filter (ID No. CD-33), EHE- external heat exchanger 1 (ID No. ES-34) and associated baghouse (ID No. CD-34), EHE- external heat exchanger 2 (ID No. ES-35) and associated baghouse (ID No. CD-35), and storage dome (ID No. ES-37) and associated bin vent filter (ID No. CD-37)

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

Pollutant	Limits/Standards	Applicable Regulation
particulate matter	$E = 4.10 \times (P)^{0.67}$ for $P \leq 30$ tons/hr, or $E = 55.0 \times (P)^{0.11} - 40$ for $P > 30$ tons/hr Where: E = allowable emission rate in pounds per hour P = process weight rate in tons per hour	15A NCAC 02D .0515
visible emissions	20 percent opacity	15A NCAC 02D .0521
particulate matter PM-10 PM-2.5	**(ID Nos. EHE-34 and EHE-35 only)** see Section 2.2 B.1	15A NCAC 02Q .0317 (PSD avoidance)
toxic air pollutants	State-enforceable Only toxics demonstration (see Sections 2.2 A.1 and 2.2 A.2)	15A NCAC 02D .1100 and 15A NCAC 02Q .0711
Facility-wide HAP	See Section 2.2 C.1	15A NCAC 02Q .0317 (avoidance for 02D .1111)

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

a. Emissions of particulate matter from these sources **(ID Nos. ES-32, ES-33, ES-34, ES-35 and ES-37)** shall not exceed an allowable emission rate as calculated by the following equation:

$$E = 4.10 \times P^{0.67} \quad \text{for } P \leq 30 \text{ tons per hour}$$
or
$$E = 55.0 \times P^{0.11} - 40 \quad \text{for } P > 30 \text{ tons per hour}$$

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 .0308(a)]

b. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit above by testing either external heat exchangers 1 or 2 (**ID Nos. ES-34 or ES-35**) for particulate emissions in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in General Condition JJ. Testing shall be completed within 90 days of initial startup[6] of either source (**ID Nos. ES-34 or ES-35**).

[6] The initial startup is considered to be after the reactor has been through commissioning and turned over to operations.

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

c. Particulate matter emissions from these emission sources (**ID Nos. ES-32, ES-33, ES-34, ES-35, and ES-37**) shall be controlled by bin vent filters and baghouses (**ID Nos. CD-32, CD-33, CD-34, CD-35 and CD-37**). To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
   i. a monthly visual inspection of the system ductwork and material collection units for leaks;
   ii. a monthly reading of the pressure gauges on the bagfilters (**ID Nos. CD-34 and CD-35**); and
   iii. an annual (for each 12-month period following the initial inspection) internal inspection of the bagfilter's structural integrity.

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

d. The results of inspection and maintenance required by Section 2.1 J.1.c above shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each inspection;
   iii. the results of any maintenance performed on the dust extraction system; and
   iv. any variance from manufacturer's recommendations, if any, and corrections made.

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

e. The Permittee shall submit the results of any maintenance performed on any control device within 30 days of a written request by the DAQ.
f. The Permittee shall submit a summary report of monitoring and recordkeeping activities given in Sections 2.1 J.1.c and d above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from these sources (**ID Nos. ES-32, ES-33, ES-34, ES-35 and ES-37**) shall not be more than 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ.

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

c. To ensure compliance, once a month the Permittee shall observe the emission points of these sources (**ID Nos. ES-32, ES-33, ES-34, ES-35 and ES-37**) for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. The Permittee shall establish "normal" for this source in the first 30 days following the effective date of beginning operation. If visible emissions from this source are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 K.2.a above.

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

d. The results of the monitoring required by Section 2.1 J.2.c above shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
   iii. the results of any corrective actions performed.

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

e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities in Sections 2.1 J.2.c and d above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and on or before 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.

K. Ash basin (ID No. F-4)

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

Pollutant	Limits/Standards	Applicable Regulation
Fugitive Non-Process Dust Emissions	fugitive non-process dust emissions shall not cause or contribute to substantive complaints	15A NCAC 02D .0540
toxic air pollutants	State-enforceable Only toxics demonstration (see Sections 2.2 A.1 and 2.2 A.2)	15A NCAC 02D .1100 and 15A NCAC 02Q .0711
Facility-wide HAP demonstration	See Section 2.2 C.1	15A NCAC 02Q .0317 (avoidance for 02D .1111)

1. 15A NCAC 02D .0540: PARTICULATES FROM FUGITIVE NON-PROCESS DUST EMISSION SOURCES

a. For the purpose of this Rule the following definitions shall apply:
   i. "Fugitive non-process dust emission" means particulate matter that is not collected by a capture system and is generated from areas such as pit areas, process areas, haul roads, stockpiles, and plant roads.
   ii. “Substantive complaints” means complaints that are verified with physical evidence acceptable to the DAQ.

b. The Permittee shall not cause or allow fugitive non-process dust emissions to cause or contribute to substantive complaints.

c. If fugitive non-process dust emissions from a facility required complying with this Rule cause or contributing to substantive complaints, the Permittee shall:
   i. Within 30 days upon receipt of written notification from the Director of a second substantive complaint in a 12-month period, submit to the Director a written description of what has been done and what will be done to reduce fugitive non-process dust emissions from that part of the facility that caused the second substantive complaint;
   ii. Within 90 days of receipt of written notification from the Director of a second substantive complaint in a 12-month period, submit to the Director a control plan as described in Paragraph (e) of this Rule; and
   iii. Within 30 days after the Director approves the plan, be in compliance with the plan.

d. The Director may require that the Permittee develop and submit a fugitive non-process dust control plan as described in Paragraph (e) of this Rule if:
   i. Ambient air quality measurements or dispersion modeling acceptable to the DAQ show violation or a potential for a violation of an ambient air quality standard for particulates in 15A NCAC 02D .0400 “Ambient Air Quality Standards;” or
   ii. If the DAQ observes excessive fugitive non-process dust emissions from the facility beyond the property boundaries.

   The control plan shall be submitted to the Director no later than 90 days after notification. The facility shall be in compliance with the plan within 30 days after the Director approves the plan.

e. The fugitive dust control plan shall:
   i. Identify the sources of fugitive non-process dust emissions within the facility;
   ii. Describe how fugitive non-process dust will be controlled from each identified source;
   iii. Contain a schedule by which the plan will be implemented;
   iv. Describe how the plan will be implemented, including training of facility personnel; and
   v. Describe methods to verify compliance with the plan.

f. The Director shall approve the plan if:
   i. The plan contains all required elements in Paragraph (e) of this Rule;
   ii. The proposed schedule contained in the plan will reduce fugitive non-process dust emissions in a timely manner;
   iii. The methods used to control fugitive non-process dust emissions are sufficient to prevent fugitive non-process dust emissions from causing or contributing to a violation of the ambient air quality standards for particulates; and
   iv. The described compliance verification methods are sufficient to verify compliance with the plan.

   If the Director finds that the proposed plan does not meet the requirements of this Paragraph, he shall notify the Permittee of any deficiencies in the proposed plan. The Permittee shall have 30 days after receiving written notification from the Director to correct the deficiencies.

g. If, after a plan has been implemented, the Director finds that the plan inadequately controls fugitive non-process dust emissions, the Permittee shall be required to correct the deficiencies in the plan. Within 90 days after receiving written notification from the Director identifying the deficiency, the Permittee shall submit a revision to his plan to correct the deficiencies.

2.2 Multiple Emission Source(s) Specific Limitations and Conditions

A. Facility-wide Toxics Demonstration

State-enforceable Only

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
Lee IC Units No. 10 and 11 (per turbine)	Acrolein			1.13E+01
	Arsenic	1.03E+02		
	Benzene	1.69E+03		
	Beryllium	1.55E+01		
	Butadiene, 1,3-	3.76E+04		
	Cadmium	9.13E+02		
	Formaldehyde			1.95E+02
	Manganese		6.48E+03	
	Mercury		1.10E+02	
	Nickel		5.99E+01	
	Sulfuric Acid		1.90E+01	1.78E+00
Lee IC Units No. 12 and 13 (per turbine)	Acrolein			4.69E+01
	Arsenic	1.03E+02		
	Benzene	2.56E+03		
	Beryllium	1.65E+01		
	Butadiene, 1,3-	3.87E+04		
	Cadmium	1.40E+03		
	Formaldehyde			1.85E+02
	Manganese		6.12E+03	
	Mercury		1.04E+02	
	Nickel		5.66E+01	
	Sulfuric Acid		1.80E+01	1.69E+00
ID No. 4 Gasoline storage tank - 1,000 gallons	Benzene	4.48E+01		
I-ES-30 Feed Silo	Arsenic	3.63E-03		
	Beryllium	7.22E-03		
	Cadmium	6.38E-03		
	Manganese		3.20E-03	
	Mercury		6.12E-05	
	Nickel		4.14E-03	
ES-31 STAR® feedstock processing reactor	Arsenic	1.38E+01		
	Benzene	7.08E+00		
	Beryllium	2.70E+01		
	Cadmium	4.66E+01		
	Formaldehyde			4.52E-01
	Manganese		5.55E+00	
	Mercury		7.04E-01	
	Nickel		7.61E+00	
	Sulfuric Acid		9.11E+01	8.53E+00

Emission Source	Toxic Air Pollutant	Emission Limit		
		lb/yr	lb/day	lb/hr
ES-34 EHE - external heat exchanger 1	Arsenic	5.58E+00		
	Beryllium	1.11E+01		
	Cadmium	9.82E+00		
	Manganese		2.25E+00	
	Mercury		4.30E-02	
	Nickel		2.90E+00	
	Sulfuric Acid			
ES-35 EHE - external heat exchanger 2	Arsenic	5.58E+00		
	Beryllium	1.11E+01		
	Cadmium	9.82E+00		
	Manganese		2.25E+00	
	Mercury		4.30E-02	
	Nickel		2.90E+00	
I-ES-36 Transfer Silo	Arsenic	3.63E-03		
	Beryllium	7.22E-03		
	Cadmium	6.38E-03		
	Manganese		3.20E-03	
	Mercury		6.12E-05	
	Nickel		4.14E-03	
ES-37 Storage Dome	Arsenic	3.63E-03		
	Beryllium	7.22E-03		
	Cadmium	6.38E-03		
	Manganese		5.61E-03	
	Mercury		6.12E-05	
	Nickel		4.14E-03	
I-ES-38 Loadout silo	Arsenic	1.82E-03		
	Beryllium	3.61E-03		
	Cadmium	3.19E-03		
	Manganese		4.81E-03	
	Mercury		9.19E-05	
	Nickel		6.20E-03	
I-ES-38A Loadout silo chute 1A	Arsenic	9.09E-04		
	Beryllium	1.81E-03		
	Cadmium	1.60E-03		
	Manganese		1.60E-03	
	Mercury		3.06E-05	
	Nickel		2.07E-03	
I-ES-38B Loadout silo chute 1B	Arsenic	9.09E-04		
	Beryllium	1.81E-03		
	Cadmium	1.60E-03		
	Manganese		1.60E-03	
	Mercury		3.06E-05	
	Nickel		2.07E-03	

Emission Source	Toxic Air Pollutant	Emission Limit		
		lb/yr	lb/day	lb/hr
I-ES-41 Ball Mill Classifier (Grinding Circuit Discharge Stack)	Arsenic	6.37E-01		
	Benzene			
	Beryllium	1.27E+00		
	Cadmium	1.12E+00		
	Manganese		2.57E-01	
	Mercury		4.91E-03	
	Nickel		3.31E-01	
I-ES-42 Ball Mill Feed Silo (Mill Feed Hopper)	Arsenic	4.04E-07		
	Beryllium	8.04E-07		
	Cadmium	7.10E-07		
	Manganese		4.81E-04	
	Mercury		9.19E-06	
	Nickel		6.20E-04	
I-F-1 Wet ash receiving transfer to shed	Arsenic	7.97E-04		
	Beryllium	1.59E-03		
	Cadmium	1.40E-03		
	Manganese		4.92E-04	
	Mercury		9.41E-06	
	Nickel		6.35E-04	
I-F-2 Wet ash receiving transfer to hopper	Arsenic	1.59E-03		
	Beryllium	3.17E-03		
	Cadmium	2.80E-03		
	Manganese		9.84E-04	
	Mercury		1.88E-05	
	Nickel		1.27E-03	
I-F-3 Wet ash receiving unloading pile	Arsenic	1.21E+00		
	Beryllium	2.41E+00		
	Cadmium	2.13E+00		
	Manganese		4.88E-01	
	Mercury		9.33E-03	
	Nickel		6.30E-01	
F-4 Ash Basin	Arsenic	2.01E+02		
	Beryllium	3.99E+02		
	Cadmium	3.52E+02		
	Manganese		8.08E+01	
	Mercury		1.54E+00	
	Nickel		1.04E+02	
I-F-5 Ash Handling	Arsenic	2.62E-02		
	Beryllium	5.21E-02		
	Cadmium	4.60E-02		
	Manganese		1.06E-02	
	Mercury		2.02E-04	
	Nickel		1.36E-02	
I-ES-39 Screener (Vibrating Bed R230) (per screener)	Arsenic	4.40E-02		
	Beryllium	8.75E-02		
	Cadmium	7.73E-02		
	Manganese		1.44E-01	
	Mercury		2.76E-03	
	Nickel		1.86E-01	

Emission Source	Toxic Air Pollutant	Emission Limit		
		lb/yr	lb/day	lb/hr
I-ES-40 Crusher	Arsenic	7.67E-04		
	Benzene			
	Beryllium	1.53E-03		
	Cadmium	1.35E-03		
	Manganese		2.71E-03	
	Mercury		5.17E-05	
	Nickel		3.49E-03	
I-ES-43 Tele Stacker (per stacker)	Arsenic	9.33E-04		
	Beryllium	1.86E-03		
	Cadmium	1.64E-03		
	Manganese		9.19E-03	
	Mercury		1.76E-04	
	Nickel		1.19E-02	

b. The Permittee has submitted a toxic air pollutant dispersion modeling analysis dated November 5, 2019, 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 March 2, 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 [15A NCAC 02D .0611]

c. No monitoring, recordkeeping or reporting is required.

State-enforceable Only

2. 15A NCAC 02Q .0711: EMISSION RATES REQUIRING A PERMIT

a. As of March 2, 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			
dichlorobenzene				16.8
toluene				14.4

Pollutant	TPERs Limitations			
	Carcinogens (lb/yr)	Chronic Toxicants (lb/day)	Acute Systemic Toxicants (lb/hr)	Acute Irritants (lb/hr)
hydrogen chloride				0.18
hydrogen fluoride		0.63		0.064

B.

- **Three natural gas/No. 2 fuel oil-fired simple/combined cycle internal combustion turbines (ID Nos. Lee IC Unit No. 1A, Lee IC Unit No. 1B and Lee IC Unit No. 1C), each equipped with dry low-NOx combustors and water injection control, a heat recovery steam generator with natural gas-fired duct burner, and a common steam turbine; and associated selective catalytic reduction (ID Nos. Unit 1A SCR, Unit 1B SCR and Unit 1C SCR) and oxidation catalyst (ID Nos. Unit 1A OxdnCat, Unit 1B OxdnCat and Unit 1C OxdnCat)**
- **One STAR® flyash feedstock processing reactor equipped with natural gas/propane startup burners (ID No. ES-31) and associated dry scrubber (ID No. CD-31A) and baghouse (ID No. CD-31B)**
- **EHE- external heat exchanger 1 (ID No. ES-34) and associated baghouse (ID No. CD-34), and EHE- external heat exchanger 2 (ID No. ES-35) and associated baghouse (ID No. CD-35)**

1. 15A NCAC 02Q .0317: AVOIDANCE CONDITION for
15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. In order to avoid applicability of 15A NCAC 02D .0530(g), the combined emissions of nitrogen oxides, sulfur dioxide, particulate matter, PM-10, PM-2.5, carbon monoxide, VOC, sulfuric acid, and lead from these sources **(ID Nos. Lee IC Unit 1A, Lee IC Unit 1B, Lee IC Unit 1C, ES-31, EHE-34 and EHE-35)** shall not exceed the following limits:

Regulated Pollutant	Limits/Standards (tons per year)
nitrogen oxides	3,414.6
sulfur dioxide	14,663.1
particulate matter	218.2
PM-10	218.2
PM-2.5	218.2
carbon monoxide	829.3
VOC	65.1
sulfuric acid	64.3
lead	0.77

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 2.2.B.1.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02Q .0317.

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

c. *NOx CEMS:*

i. Emissions of nitrogen oxides from the three turbines **(ID Nos. Lee IC Unit 1A, Lee IC Unit 1B and Lee IC Unit 1C)** 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.

d. *SO_2 CEMS:*

i. Emissions of sulfur dioxide from the STAR® flyash feedstock processing reactor **(ID No. ES-31)** shall be determined using a CEMS as required by Section 2.1 I.2.d above.

ii. For SO_2 CEMS data gathered to demonstrate compliance with the limit in Section 2.2 B.1.a, the Permittee shall substitute data according to the following procedure: starting with the first hourly SO_2 emission data that is missing, the Permittee shall substitute the data for that hour and any subsequent hours using a value of 22.42 pounds per hour. The data substitution procedure shall be used whenever the emission unit combusts any fuel and/or processes any flyash.

e. *CO CEMS:*

i. Emissions of carbon monoxide from the three turbines **(ID Nos. Lee IC Unit 1A, Lee IC Unit 1B and Lee IC Unit 1C)** shall be determined using a CEMS. The CO CEMS shall meet the requirements of 15A NCAC 02D .0613 except that:

(A) A Cylinder Gas Audit (CGA) shall be conducted at least once each QA operating quarter on each simple-cycle stack CO CEMS and each combined-cycle stack CO CEMS in accordance with 40 CFR Part 75, Appendix B, §2.2.1 instead of once every calendar quarter. A QA operating quarter for each CO CEMS is defined as a calendar quarter in which the unit operates at least 168 unit operating hours (in simple-cycle or combined-cycle mode), and a unit operating hour is a clock hour during which a unit combusts any fuel, either for part of the hour or for the entire hour. Regardless of the number of hours of operation, at a minimum, a CGA shall be conducted at least once every four calendar quarters on each CO CEMS consistent with the requirements in 40 CFR Part 75, Appendix B, §2.2.3(f).

(B) A Relative Accuracy Test Audit (RATA) shall be conducted once every four successive QA operating quarters (as defined above) in accordance with 40 CFR Part 75, Appendix B, §2.3.1.2 instead of once every four calendar quarters. Regardless of the number of hours of operation, at a minimum, a RATA shall be conducted at least once every eight calendar quarters on each CO CEMS consistent with the requirements in 40 CFR Part 75, Appendix B, §2.3.1.1(a). The frequency timeline for the RATAs shall begin with the last RATA conducted prior to July 16, 2014.

(C) All grace period provisions from Part 75, Appendix B, §2.2.4 and, §2.3.3 apply.

(D) Daily calibration test shall be consistent with the requirements in 40 CFR Part 75, Appendix B and data validation rules contained in Part 75, Appendix B, Section 2.1.4 shall apply.

ii. Starting with the first hourly CO emission data that is missing, the Permittee shall substitute the data for that hour and any subsequent hours using the values in the table below. The data substitution procedure shall be used whenever the emission unit combusts any fuel. For hours where more than one operating mode could apply, the Permittee shall use the higher value.

Operating Mode:	Combined-Cycle Operation		Simple-Cycle Operation	
Fuel:	Natural Gas	Fuel Oil	Natural Gas	Fuel Oil
Emission rate (pounds per hour):	61.94	38.60	30	112

f. i. *Excess Emissions:*

For each CEMS required by Sections 2.2 B.1.d, e, and f above, excess emissions shall be defined as any consecutive 12-month period that exceeds the annual limit in Section 2.2 B.1.a.

ii. *Monitor downtime:*

For each CEMS required by Sections 2.2 B.1.d, e, and f above, monitor downtime:

(A) shall not exceed 5.0 percent of the operating time in a calendar quarter;

(B) shall be calculated using the following equation:

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

Where:

"Total Monitor Downtime" is the number of hours in a calendar quarter where an emission source was operating but data from the associated CEMS are invalid, not available, and/or or filled with missing data procedure[7]; and "Total Source Operating Time" is the number of hours in a calendar quarter where the emission source associated with the CEMS was operating.

g. *Emissions calculations:*

i. NOx: Total emissions of NOx comparable to the limit in Section 2.2 B.1.a above shall be calculated using the following equation:

$$E_{NOx} = \left(\frac{LeeIcUnit1A+LeeICUnit1B+LeeICUnit1C}{rolling\ 12\ months}\right) + \left(\frac{hours,ES-31}{rolling\ 12\ months}\right)\left(\frac{140\ MMBtu}{hr}\right)\left(\frac{0.34\ lb}{MMBtu}\right)\left(\frac{1\ ton}{2{,}000\ lb}\right) + \frac{25.637\ tons*}{rolling\ 12\ months}$$

Where:

"E_{NOx}" is the amount of NOx emissions, in tons per rolling 12 months, comparable to the limit in Section 2.2 B.1.a above; and

"LeeIcUnit1A" etc, is the amount of NOx emissions, in tons per rolling 12 months, recorded by the NOx CEMS required by Section 2.2 B.1.d above.

* This static number represents the potential emissions from the STAR® ancillary sources (all sources except ES31, ES-34 and ES-35) in this and the following equations.

ii. SO_2: Total emissions of SO_2 comparable to the limit in Section 2.2 B.1.a above shall be calculated using the following equation:

$$E_{SO2} = \left(\left(\frac{0.00152\ lb}{MMBtu}\right)\left(\frac{MMBtu_{oil}}{rolling\ 12\ months}\right) + \left(\frac{0.0006\ lb}{MMBtu}\right)\left(\frac{MMBtu_{gas}}{rolling\ 12\ months}\right)\right)\left(\frac{1\ ton}{2{,}000\ lb}\right) + \frac{ES\text{-}31\ CEMS}{rolling\ 12\ months} + \frac{0.038\ tons*}{rolling\ 12\ months}$$

Where:

"E_{SO2}" is the amount of SO_2 emissions, in tons per rolling 12 months, comparable to the limit in Section 2.2 B.1.a above;

"$MMBtu_{oil}$" is the combined heat input, in MMBtu per rolling 12 months, for the Units 1A, 1B, and 1C while the turbines were firing fuel oil;

"$MMBtu_{gas}$" is the combined heat input, in MMBtu per rolling 12 months, for the Units 1A, 1B, and 1C while the turbines were firing natural gas; and

"ES-31 CEMS" is the amount of SO_2 emissions, in tons per rolling 12 months, recorded by the SO_2 CEMS required by Section 2.2 B.1.e above.

iii. PM: Total emissions of PM comparable to the limit in Section 2.2 B.1.a above shall be calculated using the following equation:

$$E_{PM} = \left[\left(\frac{0.0232\ lb}{MMBtu}\right)\left(\frac{MMBtu_{SC\text{-}oil,Lee\ IC\ Unit\ 1A}}{rolling\ 12\ months} + \frac{MMBtu_{SC\text{-}oil,Lee\ IC\ Unit\ 1B}}{rolling\ 12\ months} + \frac{MMBtu_{SC\text{-}oil,Lee\ IC\ Unit\ 1C}}{rolling\ 12\ months}\right) + \left(\frac{0.0074\ lb}{MMBtu}\right)\left(\frac{MMBtu_{SC\text{-}gas,Lee\ IC\ Unit\ 1A}}{rolling\ 12\ months} + \frac{MMBtu_{SC\text{-}gas,Lee\ IC\ Unit\ 1B}}{rolling\ 12\ months} + \frac{MMBtu_{SC\text{-}gas,Lee\ IC\ Unit\ 1C}}{rolling\ 12\ months}\right) + \left(\frac{0.0244\ lb}{MMBtu}\right)\left(\frac{MMBtu_{CC\text{-}oil,Lee\ IC\ Unit\ 1A}}{rolling\ 12\ months} + \frac{MMBtu_{CC\text{-}oil,Lee\ IC\ Unit\ 1B}}{rolling\ 12\ months} + \frac{MMBtu_{CC\text{-}oil,Lee\ IC\ Unit\ 1C}}{rolling\ 12\ months}\right) + \left(\frac{0.00061\ lb}{MMBtu}\right)\left(\frac{MMBtu_{CC\text{-}gas,Lee\ IC\ Unit\ 1A}}{rolling\ 12\ months} + \frac{MMBtu_{CC\text{-}gas,Lee\ IC\ Unit\ 1B}}{rolling\ 12\ months} + \frac{MMBtu_{CC\text{-}gas,Lee\ IC\ Unit\ 1C}}{rolling\ 12\ months}\right)\right]\left(\frac{1\ ton}{2{,}000\ lb}\right) + \left[\left(\frac{tons\ processed,ES-31}{rolling\ 12\ months}\right)\left(\frac{0.231\ lb}{ton}\right) + \left(\frac{hours,ES-34}{rolling\ 12\ months}\right)\left(\frac{1.45\ lb}{hr}\right) + \left(\frac{hours,ES-35}{rolling\ 12\ months}\right)\left(\frac{1.45\ lb}{hr}\right)\right]\left(\frac{1\ ton}{2000\ lb}\right) + \frac{26.929\ tons*}{rolling\ 12\ months}$$

Where:

"E_{PM}" is the amount of PM emissions, in tons per rolling 12 months, comparable to the limit in Section 2.2 B.1.a above;

"$MMBtu_{SC\text{-}oil}$" is the combined heat input, in MMBtu per rolling 12 months, for the Units 1A, 1B, and 1C while the turbines were firing fuel oil in simple-cycle mode;

"$MMBtu_{SC\text{-}gas}$" is the combined heat input, in MMBtu per rolling 12 months, for the Units 1A, 1B, and 1C while the turbines were firing natural gas in simple-cycle mode;

[7] When calculating monitor downtime for the three turbines **(ID Nos. Lee IC Unit 1A, Lee IC Unit 1B and Lee IC Unit 1C)**, the monitor downtime should be calculated using the combined downtime and combined operating time for combined-cycle mode and simple-cycle mode for each unit.

"$MMBtu_{CC\text{-}oil}$" is the combined heat input, in MMBtu per rolling 12 months, for the Units 1A, 1B, and 1C while the turbines were firing fuel oil in combined-cycle mode; and

"$MMBtu_{CC\text{-}gas}$" is the combined heat input, in MMBtu per rolling 12 months, for the Units 1A, 1B, and 1C while the turbines were firing natural gas in combined-cycle mode; and

"hours,ES-31" etc, is the hours of operation, in hours per rolling 12 months, for sources ES-31, ES-34, and ES-35, respectively.

iv. PM10: Total emissions of PM10 comparable to the limit in Section 2.2 B.1.a above shall be calculated using the following equation:

$$E_{PM10} = \left[\left(\frac{0.0232\ lb}{MMBtu}\right)\left(\frac{MMBtu_{SC\text{-}oil,Lee\ IC\ Unit\ 1A}}{rolling\ 12\ months} + \frac{MMBtu_{SC\text{-}oil,Lee\ IC\ Unit\ 1B}}{rolling\ 12\ months} + \frac{MMBtu_{SC\text{-}oil,Lee\ IC\ Unit\ 1C}}{rolling\ 12\ months}\right) + \left(\frac{0.0074\ lb}{MMBtu}\right)\left(\frac{MMBtu_{SC\text{-}gas,Lee\ IC\ Unit\ 1A}}{rolling\ 12\ months} + \frac{MMBtu_{SC\text{-}gas,Lee\ IC\ Unit\ 1B}}{rolling\ 12\ months} + \frac{MMBtu_{SC\text{-}gas,Lee\ IC\ Unit\ 1C}}{rolling\ 12\ months}\right) + \left(\frac{0.0244\ lb}{MMBtu}\right)\left(\frac{MMBtu_{CC\text{-}oil,Lee\ IC\ Unit\ 1A}}{rolling\ 12\ months} + \frac{MMBtu_{CC\text{-}oil,Lee\ IC\ Unit\ 1B}}{rolling\ 12\ months} + \frac{MMBtu_{CC\text{-}oil,Lee\ IC\ Unit\ 1C}}{rolling\ 12\ months}\right) + \left(\frac{0.00061\ lb}{MMBtu}\right)\left(\frac{MMBtu_{CC\text{-}gas,Lee\ IC\ Unit\ 1A}}{rolling\ 12\ months} + \frac{MMBtu_{CC\text{-}gas,Lee\ IC\ Unit\ 1B}}{rolling\ 12\ months} + \frac{MMBtu_{CC\text{-}gas,Lee\ IC\ Unit\ 1C}}{rolling\ 12\ months}\right)\right]\left(\frac{1\ ton}{2{,}000\ lb}\right) + \left[\left(\frac{tons\ processed,ES-31}{rolling\ 12\ months}\right)\left(\frac{0.231\ lb}{ton}\right) + \left(\frac{hours,ES-34}{rolling\ 12\ months}\right)\left(\frac{1.45\ lb}{hr}\right) + \left(\frac{hours,ES-35}{rolling\ 12\ months}\right)\left(\frac{1.45\ lb}{hr}\right)\right]\left(\frac{1\ ton}{2000\ lb}\right)(0.92)\left(\frac{1\ ton}{2{,}000\ lb}\right) + \frac{15.555\ tons*}{rolling\ 12\ months}$$

Where:

"E_{PM10}" is the amount of PM10 emissions, in tons per rolling 12 months, comparable to the limit in Section 2.2 B.1.a above.

v. PM2.5: Total emissions of PM2.5 comparable to the limit in Section 2.2 B.1.a above shall be calculated using the following equation:

$$E_{PM2.5} = \left[\left(\frac{0.0232\ lb}{MMBtu}\right)\left(\frac{MMBtu_{SC\text{-}oil,Lee\ IC\ Unit\ 1A}}{rolling\ 12\ months} + \frac{MMBtu_{SC\text{-}oil,Lee\ IC\ Unit\ 1B}}{rolling\ 12\ months} + \frac{MMBtu_{SC\text{-}oil,Lee\ IC\ Unit\ 1C}}{rolling\ 12\ months}\right) + \left(\frac{0.0074\ lb}{MMBtu}\right)\left(\frac{MMBtu_{SC\text{-}gas,Lee\ IC\ Unit\ 1A}}{rolling\ 12\ months} + \frac{MMBtu_{SC\text{-}gas,Lee\ IC\ Unit\ 1B}}{rolling\ 12\ months} + \frac{MMBtu_{SC\text{-}gas,Lee\ IC\ Unit\ 1C}}{rolling\ 12\ months}\right) + \left(\frac{0.0244\ lb}{MMBtu}\right)\left(\frac{MMBtu_{CC\text{-}oil,Lee\ IC\ Unit\ 1A}}{rolling\ 12\ months} + \frac{MMBtu_{CC\text{-}oil,Lee\ IC\ Unit\ 1B}}{rolling\ 12\ months} + \frac{MMBtu_{CC\text{-}oil,Lee\ IC\ Unit\ 1C}}{rolling\ 12\ months}\right) + \left(\frac{0.00061\ lb}{MMBtu}\right)\left(\frac{MMBtu_{CC\text{-}gas,Lee\ IC\ Unit\ 1A}}{rolling\ 12\ months} + \frac{MMBtu_{CC\text{-}gas,Lee\ IC\ Unit\ 1B}}{rolling\ 12\ months} + \frac{MMBtu_{CC\text{-}gas,Lee\ IC\ Unit\ 1C}}{rolling\ 12\ months}\right)\right]\left(\frac{1\ ton}{2{,}000\ lb}\right) + \left[\left(\frac{tons\ processed,ES-31}{rolling\ 12\ months}\right)\left(\frac{0.231\ lb}{ton}\right) + \left(\frac{hours,ES-34}{rolling\ 12\ months}\right)\left(\frac{1.45\ lb}{hr}\right) + \left(\frac{hours,ES-35}{rolling\ 12\ months}\right)\left(\frac{1.45\ lb}{hr}\right)\right]\left(\frac{1\ ton}{2000\ lb}\right)(0.23)\left(\frac{1\ ton}{2{,}000\ lb}\right) + \frac{4.234\ tons*}{rolling\ 12\ months}$$

Where:

"$E_{PM2.5}$" is the amount of PM2.5 emissions, in tons per rolling 12 months, comparable to the limit in Section 2.2 B.1.a above.

vi. CO: Total emissions of CO comparable to the limit in Section 2.2 B.1.a above shall be calculated using the following equation:

$$E_{CO} = \left(\frac{LeeIcUnit1A + LeeICUnit1B + LeeICUnit1C}{rolling\ 12\ months}\right) + \left(\frac{0.046\ lb}{MMBtu}\right)\left(\frac{MMBtu,ES-31}{rolling\ 12\ months}\right)\left(\frac{1\ ton}{2{,}000\ lb}\right) + \frac{25.264\ tons*}{rolling\ 12\ months}$$

Where:

"E_{CO}" is the amount of CO emissions, in tons per rolling 12 months, comparable to the emission limit in Section 2.2 B.1.a above;

"LeeIcUnit1A" etc, is the amount of CO emissions, in tons per rolling 12 months, recorded by the CO CEMS required by Section 2.2 B.1.e above; and

"$MMBtu_{ES\text{-}31}$" is the total heat input, in MMBtu per rolling 12 months, in the reactor ES-31.

vii. VOC: Total emissions of VOC comparable to the limit in Section 2.2 B.1.a above shall be calculated using the following equation:

$$E_{VOC} = \left[\left(\frac{0.00085\ lb}{MMBtu}\right)\left(\frac{MMBtu_{SC\text{-}oil,Lee\ IC\ Unit\ 1A}}{rolling\ 12\ months} + \frac{MMBtu_{SC\text{-}oil,Lee\ IC\ Unit\ 1B}}{rolling\ 12\ months} + \frac{MMBtu_{SC\text{-}oil,Lee\ IC\ Unit\ 1C}}{rolling\ 12\ months}\right) + \left(\frac{0.00077\ lb}{MMBtu}\right)\left(\frac{MMBtu_{SC\text{-}gas,Lee\ IC\ Unit\ 1A}}{rolling\ 12\ months} + \frac{MMBtu_{SC\text{-}gas,Lee\ IC\ Unit\ 1B}}{rolling\ 12\ months} + \frac{MMBtu_{SC\text{-}gas,Lee\ IC\ Unit\ 1C}}{rolling\ 12\ months}\right) + \left(\frac{0.0004\ lb}{MMBtu}\right)\left(\frac{MMBtu_{CC\text{-}oil,Lee\ IC\ Unit\ 1A}}{rolling\ 12\ months} + \frac{MMBtu_{CC\text{-}oil,Lee\ IC\ Unit\ 1B}}{rolling\ 12\ months} + \frac{MMBtu_{CC\text{-}oil,Lee\ IC\ Unit\ 1C}}{rolling\ 12\ months}\right) + \left(\frac{0.0004\ lb}{MMBtu}\right)\left(\frac{MMBtu_{CC\text{-}gas,Lee\ IC\ Unit\ 1A}}{rolling\ 12\ months} + \frac{MMBtu_{CC\text{-}gas,Lee\ IC\ Unit\ 1B}}{rolling\ 12\ months} + \frac{MMBtu_{CC\text{-}gas,Lee\ IC\ Unit\ 1C}}{rolling\ 12\ months}\right)\right]\left(\frac{1\ ton}{2{,}000\ lb}\right) + \left(\frac{0.00097\ lb}{MMBtu}\right)\left(\frac{MMBtu,ES-31}{rolling\ 12\ months}\right)\left(\frac{1\ ton}{2{,}000\ lb}\right) + \frac{8.935\ tons*}{rolling\ 12\ months}$$

Where:

"E_{VOC}" is the amount of VOC emissions, in tons per rolling 12 months, comparable to the emission limit in Section 2.2 B.1.a above.

viii. Sulfuric acid: Total emissions of sulfuric acid comparable to the limit in Section 2.2 B.1.a above shall be calculated using the following equation:

$$E_{H2SO4} = \left[\left(\frac{0.000232\ lb}{MMBtu}\right)\left(\frac{MMBtu_{SC\text{-}oil,Lee\ IC\ Unit\ 1A}}{rolling\ 12\ months} + \frac{MMBtu_{SC\text{-}oil,Lee\ IC\ Unit\ 1B}}{rolling\ 12\ months} + \frac{MMBtu_{SC\text{-}oil,Lee\ IC\ Unit\ 1C}}{rolling\ 12\ months}\right) + \left(\frac{0.0000857\ lb}{MMBtu}\right)\left(\frac{MMBtu_{SC\text{-}gas,Lee\ IC\ Unit\ 1A}}{rolling\ 12\ months} + \frac{MMBtu_{SC\text{-}gas,Lee\ IC\ Unit\ 1B}}{rolling\ 12\ months} + \frac{MMBtu_{SC\text{-}gas,Lee\ IC\ Unit\ 1C}}{rolling\ 12\ months}\right) + \left(\frac{0.00107\ lb}{MMBtu}\right)\left(\frac{MMBtu_{CC\text{-}oil,Lee\ IC\ Unit\ 1A}}{rolling\ 12\ months} + \frac{MMBtu_{CC\text{-}oil,Lee\ IC\ Unit\ 1B}}{rolling\ 12\ months} + \frac{MMBtu_{CC\text{-}oil,Lee\ IC\ Unit\ 1C}}{rolling\ 12\ months}\right) + \left(\frac{0.000402\ lb}{MMBtu}\right)\left(\frac{MMBtu_{CC\text{-}gas,Lee\ IC\ Unit\ 1A}}{rolling\ 12\ months} + \frac{MMBtu_{CC\text{-}gas,Lee\ IC\ Unit\ 1B}}{rolling\ 12\ months} + \frac{MMBtu_{CC\text{-}gas,Lee\ IC\ Unit\ 1C}}{rolling\ 12\ months}\right)\right]\left(\frac{1\ ton}{2{,}000\ lb}\right) + \left(\frac{hours,ES-31}{rolling\ 12\ months}\right)\left(\frac{0.10\ lb}{hr}\right)\left(\frac{1\ ton}{2{,}000\ lb}\right)$$

Where:

"E_{H2SO4}" is the amount of sulfuric acid emissions, in tons per rolling 12 months, comparable to the emission limit in Section 2.2 B.1.a above.

ix. Lead: No calculations are required for lead.

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

h. The Permittee shall keep records in a logbook (written or in electronic format) of the monthly emissions from each source (**ID Nos. Lee IC Unit 1A, Lee IC Unit 1B, Lee IC Unit 1C, ES-31, ES-34 and ES-35**) as calculated in Section 2.2 B.1.f above.

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

i. The Permittee shall submit a semiannual summary report of emissions of the pollutants listed in Section 2.2 B.1.a above from each source (**ID Nos. Lee IC Unit 1A, Lee IC Unit 1B, Lee IC Unit 1C, ES-31, ES-34 and ES-35**) 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. At a minimum, the report shall include:
   i. The total emissions (as tons per consecutive 12-month period) for all sources based on the recordkeeping in Section 2.2 B.1.h above. The total emissions shall include the potential emissions from the small-emitting STAR® ancillary sources. The emissions must be calculated for each of the 12-month periods over the previous 17 months. The report shall note any monthly emissions that do not include CO or VOC emissions from the reactor ES-31 or do not include DAQ-approved CO or VOC emissions from the reactor ES-31.
   ii. Records of excess emissions and monitor downtime for the associated CEMS in the format approved by DAQ Technical Services Section for the turbines (**ID Nos. Lee IC Unit 1A, Lee IC Unit 1B, and Lee IC Unit 1C)**. The Permittee shall report excess emissions for all periods of operation, including start-up, shutdown, and malfunction.

C. Facility-wide HAP Demonstration

1. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS
for 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

a. In order to avoid the applicability of 15A NCAC 02D .1111 "Maximum Achievable Control Technology," emissions of hazardous air pollutants (HAP) from this facility shall be less than:
   i. 10 tons of any individual HAP per consecutive 12-month period; and
   ii. 25 tons of total combined HAP per consecutive 12-month period.

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

b. The Permittee shall conduct emission testing in order to establish site-specific emission factors for formaldehyde as follows:
   i. To establish emission factors for the three combined-cycle turbines (**ID Nos. Lee IC Unit No. 1A, Lee IC Unit No. 1B, and Lee IC Unit No. 1C)**, the Permittee shall test one of these turbines in the combined-cycle mode when burning natural gas with the duct burners in operation.
   ii. To establish emission factors for the five simple-cycle turbines (**ID Nos. Lee IC Unit No. 10, Lee IC Unit No. 11, Lee IC Unit No. 12, Lee IC Unit No. 13, and Lee IC Unit No. 14**), the Permittee shall test one of these turbines when burning natural gas.

c. When performing the required emission testing:
   i. Testing shall be performed at 100 percent load plus or minus 10 percent.
   ii. The emission testing shall be conducted within 180 days of the issuance of Title V permit 01812T49 or another date as approved by DAQ.
   iii. The Permittee shall conduct subsequent testing no more than 61 months after the previous test for one of the three combined-cycle turbines **(ID Nos. Lee IC Unit No. 1A, Lee IC Unit No. 1B, and Lee IC Unit No. 1C)**, and for one of the five simple-cycle turbines (**ID Nos. Lee IC Unit No. 10, Lee IC Unit No. 11, Lee IC Unit No. 12, Lee IC Unit No. 13, and Lee IC Unit No. 14**). Each subsequent test shall be conducted on different units for the combined-cycle and simple-cycle sets of turbines on a rotating basis.
   iv. The emission testing shall be performed in accordance with General Condition JJ.
   v. The Permittee shall be deemed in noncompliance with the requirements in 02D .1111 if the required tests are not conducted or the results of the test indicate that the emission limits in Section 2.2 C.1.a above are exceeded.

d. After completing the required emission testing, if the results of any test indicate a formaldehyde emission factor greater than 6.12 E-5 pounds per million Btu (as included in application 9600017.21B) when burning natural gas, the Permittee shall submit a permit application pursuant to 15A NCAC 02Q .0514 "Administrative Permit Amendments", within 60 days of conducting a test, to demonstrate that the tested emission factor does not result in an exceedance of the emission limits in Section 2.2 C.1.a above. If, however, the results of any test indicate a formaldehyde emission factor is less than 6.12 E-5 pounds per million Btu when burning natural gas, the Permittee may request to revise the formaldehyde emission factor above pursuant to 15A NCAC 02Q .0515 "Minor Permit Modifications".

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

e. The maximum annual hours of operation for the combustion turbines (**ID Nos. Lee IC Unit No. 10, Lee IC Unit No. 11, Lee IC Unit No. 12 and Lee IC Unit No. 13)** shall not exceed the amount in Section 2.1 A.2.e (2,000 full load equivalent hours per calendar year) and the maximum annual hours of operation for combustion turbine (**ID No. Lee IC Unit No. 14**) shall not exceed the amount in Section 2.1 C.3.d (2,000 full load equivalent hours per rolling consecutive 12-month period). The recordkeeping in Sections 2.1 A.2.e and 2.1 C 3.e shall be sufficient to demonstrate compliance with this requirement.

If the required monitoring and recordkeeping activities are not performed, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111.

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

f. The Permittee shall submit a summary report of monitoring and recordkeeping activities in Section 2.2 C.1.e 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. At a minimum, the report shall contain the actual number of hours of operation being recorded for combustion turbines (**ID Nos. Lee IC Unit No. 10, Lee IC Unit No. 11, Lee IC Unit No. 12, and Lee IC Unit No. 13)** in Section 2.1 A.2.e and the actual number of hours of operation being recorded for combustion turbine (**ID No. Lee IC Unit No. 14**) in Section 2.1 C 3.e. The operating hours for each combustion turbine must be calculated for each of the consecutive 12-months period over the previous 17 months. All instances of deviations for the requirements of this permit must be clearly identified.

2.3 Phase II Acid Rain Permit Requirements

ORIS code: 2709

A. 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 Environmental Quality, 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.

B. SO_2 Allowance Allocations and NOx Requirements for each affected unit

Lee IC Unit No. 10 Lee IC Unit No. 11 Lee IC Unit No. 12 Lee IC Unit No. 13 Lee IC Unit No. 14 Lee IC Unit No. 1A Lee IC Unit No. 1B Lee IC Unit No. 1C	SO_2 allowances	SO_2 allowances are not allocated by U.S. EPA for new units under 40 CFR part 72.
	NOx limit	Does not apply for gas or oil-fired units.

C. Comments, Notes and Justifications

None.

D. Permit Applications (attached)

The permit applications submitted for this facility, as approved by the Department of Environmental Quality, Division of Air Quality, are 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 applications:

Acid Rain Permit Application dated signed November 22, 2019

2.4 Cross State Air Pollution Rule ("CSAPR") Requirements

For the eight combustion turbines **(ID Nos. Lee IC Unit No. 10 through 14 and Lee IC Unit No. 1A through 1C)**, the Permittee shall comply with all applicable requirements of 40 CFR Part 97, Subpart AAAAA "TR NOx Annual Trading Program", Subpart BBBBB "TR NOx Ozone Season Trading Program", and Subpart CCCCC "TR SO_2 Group 1 Trading Program".

SECTION 3 – INSIGNIFICANT ACTIVITIES PER 15A NCAC 02Q .0503(8)

Emission Source I.D.	Emission Source Description
I-5	Kerosene tank, 550 gallons
I-11	Used oil tank, 330 gallons
I-13	Emergency fire pump tank, 200 gallons
I-18	Propane generator engine, 12.5 kW
I-23	W-30 - One No. 2 fuel oil fixed-roof storage tank (3,100,000 gallons capacity) with atmospheric vent
I-26	W-38 - One No. 2 fuel oil fixed-roof storage tank (not to exceed 4.545 million gallons capacity) with atmospheric vents (ID No. ST3)
I-ASH-1 **NSPS IIII,** **GACT ZZZZ**	200 kW diesel-fired CAT engine back-up power to support ash basin activities
I-ES-39A and I-ES-39C	Two Screeners (Vibrating Bed R230)
I-ES-39B and I-ES-39D **NSPS IIII,** **GACT ZZZZ**	Two No. 2 fuel oil-fired screener engines (225 HP) (2007 model year or later)
I-ES-40A	Crusher
I-ES-40B **NSPS IIII,** **GACT ZZZZ**	No. 2 fuel oil-fired crusher engine (300 HP) (2007 model year or later)
I-F-1	Wet Ash Receiving Transfer to Shed
I-F-2	Wet Ash Receiving Transfer to Hopper
I-F-3	Wet Ash Receiving Unloading Pile
I-F-5	Ash Handling
I-F-6	Haul Roads
I-ES-30	Feed silo (125 tons per hour maximum fill rate, 75 tons per hour maximum unload rate, 400,000 tons per year fill and unload rate) with bin vent
I-ES-36	Transfer silo (125 tons per hour maximum fill rate, 75 tons per hour maximum unload rate, 400,000 tons per year fill and unload rate) with bin vent
I-ES-38	Loadout silo (300 tons per hour maximum unload rate, 400,000 tons per year maximum unload rate) with bin vent
I-ES-38a	Loadout silo chute 1A (100 tons per hour maximum unload rate, 400,000 tons per year maximum unload rate) with bin vent
I-ES-38b	Loadout silo chute 1B (100 tons per hour maximum unload rate, 400,000 tons per year maximum unload rate) with bin vent
I-ES-41	Ball Mill Classifier
I-ES-42	Ball Mill Feed Silo
I-ES-43A through I-ES-43F	Six Tele Stackers
I-ES-44A through I-ES-44F **NSPS IIII,** **GACT ZZZZ**	Six Tele Stacker Engines (74 HP each)
I-ES-45A, I-ES-45B, and	Three natural gas-fired heaters (2.5 million Btu per hour maximum heat input, each)

Emission Source I.D.	Emission Source Description
I-ES-45C	
I-ES-46A, I-ES-46B, and I-ES-46C	Three natural gas-fired heaters (7 million Btu per hour maximum heat input, each)
I-ES-47	One diesel fuel tank for mobile equipment (1,000 gallons capacity)
I-ES-FWP1 **NSPS IIII, GACT ZZZZ**	One diesel-fired firewater pump engine (265 horsepower, 4.25 million Btu per hour heat input rate)
I-ES-48	HRSG exhaust stack drains and weep hole plugs
I-ES-49	FGD byproduct loadout operations

[1] Because an activity is insignificant does not mean that the activity is exempted from an applicable requirement (Federal or State) or that the Permittee 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.”

SECTION 4 - GENERAL CONDITIONS (version 6.0, 01/07/2022)

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(s) 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. **Title V 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 [15A NCAC 02Q .0508(f)]
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** [15A NCAC 02D .0535(f) and 02Q .0508(f)(2)]
1. "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.)*

2. 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.
3. 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).

I.B **Reporting Requirements for Permit Deviations** [15A NCAC 02D .0535(f) and 02Q .0508(f)(2)]

1. "Permit 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.
2. Pursuant to 15A NCAC 02Q .0508(f)(2), the Permittee shall report deviations from permit requirements (terms and conditions) quarterly by notifying the Regional Supervisor or Director of all other deviations from permit requirements not covered under 15A NCAC 02D .0535. 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.C **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 Enforcement Branch, EPA, Region 4, 61 Forsyth Street SW, Atlanta, GA 30303 or through the EPA CEDRI) postmarked on or before March 1 a compliance certification (for the preceding calendar year) by a responsible official with all terms and conditions in the permit (including emissions limitations, standards, or work practices), except for conditions identified as being State-enforceable Only. 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;
4. the method(s) used for determining the compliance status of the source during the certification period;
5. each deviation and take it into account in the compliance certification; and
6. as possible exceptions to compliance, any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 (CAM) occurred.

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. **National Emission Standards Asbestos – 40 CFR Part 61, Subpart M** [15A NCAC 02D .1110]
The Permittee shall comply with all applicable standards for demolition and renovation activities pursuant to the requirements of 40 CFR Part 61, Subpart M. The permittee shall not be required to obtain a modification of this permit in order to perform the referenced activities.

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 15A NCAC 02D .2600 if the methods can be demonstrated to determine compliance of permitted emission sources or pollutants.
    b. The Director may authorize the DAQ to conduct independent tests of any source subject to a rule in 15A NCAC 02D 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 15A NCAC 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 (Air Permitting Branch, EPA, Region 4, 61 Forsyth Street SW, Atlanta, GA 30303 or through the EPA CEDRI) in writing at least seven days before the change is made.
   a. The written notification shall include:
      i. a description of the change at the facility;
      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.
   b. 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 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

Acid Rain Permit Application

(signed November 22, 2019)
(four pages)