Air Quality
ENVIRONMENTAL QUALITY

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MICHAEL S. REGAN
Secretary

MICHAEL A. ABRACZINSKAS
Director

DRAFT

Mr. Jeffery D. Hines, General Manager II
Duke Energy Progress, LLC - H. F. Lee Steam Electric Plant
1199 Black Jack Church Road
Goldsboro, NC 27530

SUBJECT: Air Quality Permit No. 01812T43
Facility ID: 9600017
Duke Energy Progress, LLC - H. F. Lee Steam Electric Plant
Goldsboro, North Carolina
Wayne County
Fee Class: Title V
PSD Class: Major

Dear Mr. Hines:

In accordance with your completed Air Quality Permit Application for a significant modification of a Title V permit received November 13, 2017, we are forwarding herewith Air Quality Permit No. 01812T43 to Duke Energy Progress, LLC - H. F. Lee Steam Electric Plant, 1199 Black Jack Church Road, Goldsboro, Wayne County, North Carolina authorizing the construction and operation, of the emission source(s) and associated air pollution control device(s) specified herein. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant per 15A North Carolina Administrative Code 02Q .0503(8) have been listed for informational purposes as an "ATTACHMENT." Please note the requirements for the annual compliance certification are contained in General Condition P in Section 3. The current owner is responsible for submitting a compliance certification for the entire year regardless of who owned the facility during the year.

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

If any parts, requirements, or limitations contained in this Air Quality Permit are unacceptable to you, you have the right to request a formal adjudicatory hearing within 30 days following receipt of this permit, identifying the specific issues to be contested. This hearing request must be in the form of a written petition, conforming to NCGS (North Carolina General Statutes) 150B-23, and filed with both the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, North Carolina 27699-6714 and the Division of Air Quality, Permitting Section, 1641 Mail Service Center, Raleigh, North Carolina 27699-1641.

The form for requesting a formal adjudicatory hearing may be obtained upon request from the Office of Administrative Hearings. Please note that this permit will be stayed in its entirety upon receipt of the request for a hearing. Unless a request for a hearing is made pursuant to NCGS 150B-23, this Air Quality Permit shall be final and binding 30 days after issuance.

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

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

Wayne County has triggered increment tracking under PSD for PM-10, SO_2 and NOx. This modification will result in an increase in 23.50 pounds per hour of PM-10, 24.94 pounds per hour of SO_2, and 59.72 pounds per hour of NOx.

This Air Quality Permit shall be effective from _____ until June 30, 2020, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein.

The changes made to the permit are summarized in an attachment to this letter. Should you have any questions concerning this matter, please contact Edward L. Martin, P.E., at (919) 707-8739.

Sincerely yours,

William D. Willets, P.E., Chief, Permitting Section
Division of Air Quality, NCDEQ

Enclosure

c: Heather Ceron, EPA Region 4
Washington Regional Office
Connie Horne (cover page only)
Central Files

ATTACHMENT
Duke Energy Progress, LLC - H. F. Lee Steam Electric Plant
Insignificant Activities under 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-20	Fugitive emissions from plant parking lots, paved roads, unpaved roads, and ash pond
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-ES-39A	Screener
I-ES-39B **NSPS Subpart IIII** **MACT Subpart ZZZZ**	No. 2 fuel oil-fired screener engine (91 HP) (2007 model year or later)
I-ES-40A	Crusher
I-ES-40B **NSPS Subpart IIII** **MACT Subpart 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

1. Because an activity is insignificant does not mean that the activity is exempted from an applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement.
2. When applicable, emissions from stationary source activities identified above shall be included in determining compliance with the permit requirements for toxic air pollutants under 15A NCAC 02D .1100 “Control of Toxic Air Pollutants” or 02Q .0711 “Emission Rates Requiring a Permit”.
3. For additional information regarding the applicability of GACT see the DAQ page titled “The Regulatory Guide for Insignificant Activities/Permits Exempt Activities”. The link to this site is as follows: http://deq.nc.gov/about/divisions/air-quality/air-quality-permits/specific-permit-conditions-regulatory-guide.

ATTACHMENT
Duke Energy Progress, LLC - H. F. Lee Steam Electric Plant

The following changes were made to the Duke Energy Progress, LLC - H. F. Lee Steam Electric Plant Air Permit No. 01812T42:

Old Page	Old Section	New Page	New Section	Description of Change(s)
Cover		Cover		Amended permit numbers and dates.
Insignificant Activities List		Insignificant Activities List		Added I-ES-39A, I-ES-39B, I-ES-40A, I-ES-40B, I-F-1, I-F-2, I-F-3, I-F-5 and I-F-6.
3-4	1, table of permitted emission sources	3-5	1, table of permitted emission sources	Added emission sources: ID Nos. ES-30A, ES-30B, ES-31, ES-32, ES-33, ES-34, ES-35, ES-36A, ES-36B, ES-37A, ES-37B, ES-38, ES-38A, ES-38B and F-4; with footnote **.
23-27	2.1.D.5	48-54	2.2.B	Relocated this PSD avoidance condition for turbines 1A, 1B and 1C from Section 2.1.D.5 to Section 2.2.B.1 and revised the limits to also include the new STAR® project sources.
--	--	37-40	2.1.J	Added this section for new STAR® reactor.
--	--	40-42	2.1.K	Added this section for new STAR® supporting sources.
--	--	43-44	2.1.L	Added this section for new STAR® ash basin (ID No. F-4) fugitive source.
40-41	2.2.A.1.a	44-47	2.2.A.1.a	Revised this 02D .1100 condition to include emission limits for new facility-wide toxics modeling.
--	--	47	2.2.A.1.b	Added requirement to submit a modeling protocol to update the toxics modeling demonstration in Application 9600017.17A to revise the toxics emission rates in Section 2.2.A.1.a, and submit a permit application showing compliance with 15A NCAC 2D .1100 prior to startup of the STAR® project sources.
46-54	3	59-67	3	Updated general conditions to version 5.2, 04/03/2018. Condition K changed: 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.

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

AIR QUALITY PERMIT

Permit No.	Replaces Permit No.(s)	Effective Date	Expiration Date
01812T43	01812T42		June 30, 2020

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**

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: **9600017.17A**
Complete Application Date: **November 13, 2017**

Primary SIC Code: **4911**
Division of Air Quality, Regional Office Address: **Washington Regional Office**
943 Washington Square Mall
Washington, NC 27889

Permit issued this the ___ day of _____, 20XX.

_____
William D. Willets, P.E., Chief, Permitting Section
By Authority of the Environmental Management Commission

Table of Contents

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

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

Page No.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
6 43 54 55	Lee IC Unit No. 10 Lee IC Unit No. 11 **NSPS Subpart GG** **PSD**	Two No. 2 fuel oil/natural gas-fired simple-cycle internal combustion turbines (GE Model PG7241FA, 1925.3 million Btu per hour nominally rated heat input each) each equipped with water injection for NOx control	N/A	N/A
6 43 54 55	Lee IC Unit No. 12 Lee IC Unit No. 13 **NSPS Subpart GG** **PSD**	Two No. 2 fuel oil/natural gas-fired simple-cycle internal combustion turbines (GE Model PG7241FA, 1819.2 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
14 54 55	Lee IC Unit No. 14 **NSPS Subpart KKKK** **MACT Subpart YYYY** **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
13	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

Page No.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
21 47 54 55	Lee IC Unit No. 1A Lee IC Unit No. 1B Lee IC Unit No. 1C **NSPS Subpart KKKK** **MACT Subpart YYYY**	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 2,153 million Btu per hour heat input rate each when firing No. 2 fuel oil <u>Combined-cycle mode of operation</u>: 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 SCR* Unit 1B SCR* Unit 1C SCR *	Selective Catalytic Reduction (applicable for combined-cycle mode of operation only)
			Unit 1A OxdnCat Unit 1B OxdnCat Unit 1C OxdnCat	Oxidation Catalyst (applicable for combined-cycle mode of operation only)
25	AB1 **NSPS Subpart Dc** **02D .1109 Case-by-Case MACT** **MACT Subpart DDDDD**	One natural gas-fired auxiliary boiler (85.0 million Btu per hour heat input rate)	N/A	N/A
29	DPH1, DPH2 and DPH3 **02D .1109 Case-by-Case MACT** **MACT Subpart DDDDD**	Three natural gas-fired dew point heaters (4.00 million Btu per hour heat input rate each)	N/A	N/A
33	FWP1 **NSPS Subpart IIII MACT Subpart ZZZZ**	One diesel-fired firewater pump engine (4.25 million Btu per hour heat input rate)	N/A	N/A
35	CT1	One multi-cell wet surface air cooler with drift eliminators (10,600 gallons per minute recirculation water flow rate)	N/A	N/A
35	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
36 44	4	One Gasoline tank - 1000 gallons	N/A	N/A

STAR® Facility				
39 44	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)	CD-30**	Bin vent filter (4:1 air-to-cloth ratio)
36 44 47	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)
39	ES-32**	FGD byproduct storage silo (3120 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)
39	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)
39 44 47	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)
39 44 47	ES-35**	EHE- external heat exchanger 2 (70 tons per hour maximum process rate)	CD-35**	Baghouse (3:1 air-to-cloth ratio, 32,000 dSCFM exhaust flow rate)
39 45	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)	CD-36**	Bin vent filter (4:1 air-to-cloth ratio)
39 45	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)
39 45	ES-38**	Loadout silo (300 tons per hour maximum unload rate, 400,000 tons per year maximum unload rate)	CD-38**	Bin vent filter (4:1 air-to-cloth ratio)
39 45	ES-38A**	Loadout silo chute 1A (100 tons per hour maximum unload rate, 400,000 tons per year maximum unload rate)	CD-38A**	Bin vent filter (4:1 air-to-cloth ratio)
39 45	ES-38B**	Loadout silo chute 1B (100 tons per hour maximum unload rate, 400,000 tons per year maximum unload rate)	CD-38B**	Bin vent filter (4:1 air-to-cloth ratio)
42 46	F-4**	Ash basin (321 acres)	N/A	N/A

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

** These emission sources (ID Nos. ES-30, ES-31, ES-32, ES-33, ES-34, ES-35, ES-36, ES-37, ES-38, ES-38A, ES-38B and F-4) and control devices (ID Nos. CD-30, CD-31A, CD-31B, CD-32, CD-33, CD-34, CD-35, CD-36, CD-37, CD-38, CD-38A and CD-38B) are listed as a 15A NCAC 02Q .0501(c)(2) modification. The Permittee shall file a Title V Air Quality Permit Application on or before 12 months after commencing operation in accordance with General Condition NN.1. The permit shield described in General Condition R does not apply and compliance certification as described in General Condition P is not required.

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 NO_X 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 NO_X combustors and water injection for NO_X control

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Sulfur Dioxide	As defined in specific conditions	15A NCAC 02D .0524 (40 CFR Part 60 Subpart GG)
	Clean Air Interstate Rule (CAIR) permit requirements (see Section 2.4)	15A NCAC 02D .2404
	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)
	Clean Air Interstate Rule (CAIR) permit requirements (see Section 2.4)	15A NCAC 02D .2403 and .2405
	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 (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 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	15A NCAC 02D .0521
Toxic Air Pollutants	toxics demonstration (see Sections 2.2.A.1 and 2.2.A.2) **- State-only Requirement**	15A NCAC 02D .1100 and 15A NCAC 02Q .0705

1. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60 SUBPART GG)

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."[15A NCAC 02D .0524]

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	$Std^{*} = 0.0075 \text{ X } [(14.4) / Y^{**}] + F^{***}$
	Sulfur Dioxide	0.015 Percent By Volume**** Or 0.8 Percent Weight Sulfur In Fuel

* 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 40CFR60.332(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

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 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. You do not have to report ambient conditions if you opt to use the worst-case ISO correction factor as specified in 40 CFR 60.334(b)(3)(ii), or if you are not using the ISO correction equation under the provisions of 40 CFR 60.335(b)(1). The Permittee shall comply with all applicable reporting requirements of 40 CFR 60.334.
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 by 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
	lbs/hr	lbs/MMBtu	
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
	lbs/hr	lbs/MMBtu	
Opacity	20%	---	Combustion control
Nitrogen Oxides	80.0	0.06144 12 ppmvd**	Dry-low NO_x
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 % O2

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
	lbs/hr	lbs/MMBtu	
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 % 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

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
	lbs/hr	lbs/MMBtu	
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 % O2

v. Emissions resulting from start-up, shutdown, or malfunction above those given in Sections 2.1.A.2.a.i-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	1484.0
Sulfur Dioxide	415.2
Carbon Monoxide	324.0
Volatile Organic Compounds	60.0
Particulates/PM-10	68.0

* Emissions are for 2000 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.
   ii. If the Permittee elects to install, certify, maintain, operate, and quality-assure CEMS according to 40 CFR 75 and 40 CFR 60.334(b) for demonstrating compliance with NOx requirements listed 2.1.A.1.d, Alternative B above, then the Permittee shall monitor emissions according to the applicable requirements of 40 CFR 75 and 40 CFR 60.334(b) for purposes of demonstrating compliance with the NOx emissions limits of 2.1.A.2.a.

Note: *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.*

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)]
The Permittee shall submit in writing the following excess emissions by 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:

h. 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,
i. 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
j. Periods of excess emissions for nitrogen oxides for any 24-hour rolling averaging period during which the concentrations exceed 0.1022 lbs/MMBtu (25 ppmvd) for the water injection-equipped turbines (ID Nos. Lee IC Unit No. 10 and Lee IC Unit No. 11) and 0.06144 lbs/MMBtu (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 lbs/MMBtu (42 ppmvd) for the water injection-equipped turbines (ID Nos. Lee IC Unit No. 10 and Lee IC Unit No. 11) and 0.17535 lbs/MMBtu (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.

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 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. [15A NCAC 02D .0521 (d)]

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 assure compliance, the Permittee shall perform a Method 9 test for 1 hour in accordance with 15A NCAC 02D .2610 prior to exceeding 1000 hours of operation on No. 2 fuel oil. This monitoring protocol shall be repeated prior to each 1000-hour period of operation on No. 2 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.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 the monitoring 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.

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

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

Regulated 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 assure compliance, the Permittee shall maintain records of the actual number of gallons fired in each combustion turbine.

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:

Regulated 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
	Clean Air Interstate Rule (CAIR) permit requirements (see Section 2.4)	15A NCAC 02D .2403 and .2405
	Phase II Acid Rain Permit Requirements (see Section 2.3)	15A NCAC 02Q .0402 (40 CFR Part 72)
Sulfur Dioxide	0.9 lbs/MWh or 0.06 lbs/million Btu heat input	15A NCAC 02D .0524 [NSPS Subpart KKKK]
	As defined in specific conditions	15A NCAC 02D .0530
	Clean Air Interstate Rule (CAIR) permit requirements (see Section 2.4)	15A NCAC 02D .2404
	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
HAPs	notification requirements	15A NCAC 02D .1111 [MACT Subpart YYYY]

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. [15A NCAC 02D .0521 (d)]

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 assure compliance, the Permittee shall perform a Method 9 test for 1 hour in accordance with 15A NCAC 02D

.2610 prior to exceeding 1000 hours of operation on distillate fuel oil. This monitoring shall be repeated prior to each 1000-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 1000 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 the monitoring 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 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."[15A NCAC 02D .0524]

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 lbs/MWh gross output or 0.06 lbs/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 or c, 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/mmBtu 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/mmBtu, 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 record keeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

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 lbs/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 lbs/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 lbs	Per 3-hour lbs
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* 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 above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.
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) in accordance with Section 2.1.C.2.g above. 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, acceptable to the Regional Air Quality Supervisor, of monitoring and record keeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. 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.

* 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.

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

a. For combustion turbine (ID No. Lee IC Unit No. 14), the Permittee shall demonstrate compliance upon startup with all applicable provisions, including emission limitations, operating limitations, monitoring, record keeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum

Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart YYYY "National Emission Standards of Hazardous Air Pollutants for Stationary Combustion Turbines".

b. This combustion turbine is an affected source subject to the stay of standards for gas-fired subcategories under §63.6095(d). Based on historic fuel oil usage at this major source, this combustion turbine is classified as "lean premix gas-fired stationary combustion turbines" as defined in §63.6175 because it is equipped both to fire gas using lean premix technology and to fire oil, and is located at a major source where all new, reconstructed, and existing stationary combustion turbines fire oil no more than an aggregate total of 1000 hours during the calendar year. Beginning on the date on which all new, reconstructed, and existing stationary combustion turbines fire oil more than 1000 hours in any calendar year, the Permittee shall demonstrate compliance with all applicable requirements under 40 CFR Part 63 Subpart YYYY for sources classified as "diffusion flame oil-fired stationary combustion turbines" as defined in §63.6175. If all new, reconstructed, and existing stationary combustion turbines fire oil more than 1000 hours per calendar year but fail to meet all applicable requirements under 40 CFR Part 63 Subpart YYYY for "diffusion flame oil-fired stationary combustion turbines," the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111.

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

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

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

d. The Permittee shall submit the initial notification in accordance with §63.6145(d) and 40 CFR §63.9(a)(4)(ii) and submit notification upon the date on which all new, reconstructed, and existing stationary combustion turbines fire oil more than 900 hours and prior to the date of reaching 1000 hours in any calendar year to the following: [15A NCAC 02Q .0508(f)]
   i. Division of Air Quality, Permitting Section
   ii. Division of Air Quality, Regional Office Permitting Section, and
   iii. EPA-Region IV

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the initial notification is not submitted or if the notification prior to the date on which all new, reconstructed, and existing stationary combustion turbines fire oil more than 1000 hours in any calendar year is not submitted.

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-NO_x 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:

Regulated 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** (40 CFR Part 60 Subpart KKKK)
	Clean Air Interstate Rule (CAIR) permit requirements (see Section 2.4)	15A NCAC 02D .2403 and .2405
	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** (40 CFR Part 60 Subpart KKKK)
	Clean Air Interstate Rule (CAIR) permit requirements (see Section 2.4)	15A NCAC 02D .2404
	Phase II Acid Rain Permit Requirements (see Section 2.3)	15A NCAC 02Q .0402 (40 CFR Part 72)
HAPs	notification requirements	15A NCAC 02D .1111 **MACT** (40 CFR Part 63 Subpart YYYY)
nitrogen oxides sulfur dioxide particulate matter PM-10 PM-2.5 carbon monoxide VOCs sulfuric acid lead	as defined in specific conditions see Section 2.2.B.1	15A NCAC 02Q .0317(a)(1) (PSD avoidance)

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 (duct burners only) into the atmosphere shall not exceed 0.11 pound per million Btu heat input. [15A NCAC 02D .0503(a)]

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 (duct burners only).

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

a. Visible emissions from these sources 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. [15A NCAC 02D .0521(d)]

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, 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.

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."[15A NCAC 02D .0524]

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 0ºF	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 0ºF	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, 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/mmBtu 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/mmBtu, 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 record keeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

4. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (40 CFR 63 Subpart YYYY - National Emissions Standards for Hazardous Air Pollutants for Stationary Combustion Turbines)

a. For combustion turbines (ID Nos. Lee IC Unit No. 1A, Lee IC No. Unit 1B and Lee Unit No. 1C), the Permittee shall demonstrate compliance upon startup with all applicable provisions, including emission limitations, operating limitations, monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart YYYY "National Emission Standards of Hazardous Air Pollutants for Stationary Combustion Turbines."

b. These combustion turbines are affected sources subject to the stay of standards for gas-fired subcategories under §63.6095(d). Based on historic fuel oil usage at this major source, these combustion turbines are classified as “lean premix gas-fired stationary combustion turbines” as defined in §63.6175 because they are equipped both to fire gas using lean premix technology and to fire oil, and are located at a major source where all new, reconstructed, and existing stationary combustion turbines fire oil no more than an aggregate total of 1000 hours during the calendar year. Beginning on the date on which all new, reconstructed, and existing stationary combustion turbines fire oil more than 1000 hours in any calendar year, the Permittee shall demonstrate compliance with all applicable requirements under 40 CFR Part 63 Subpart YYYY for sources classified as “diffusion flame oil-fired stationary combustion turbines” as defined in §63.6175. If all new, reconstructed, and existing stationary combustion turbines fire oil more than 1000 hours per calendar year but fail to meet all applicable requirements under 40 CFR Part 63 Subpart YYYY for “diffusion flame oil-fired stationary combustion turbines,” the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111.

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

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

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

d. The Permittee shall submit the initial notification in accordance with §63.6145(d) and 40 CFR §63.9(a)(4)(ii) and submit notification upon the date on which all new, reconstructed, and existing stationary combustion turbines fire oil more than 900 hours and prior to the date of reaching 1000 hours in any calendar year to the following: [15A NCAC 02Q .0508(f)]

i. Division of Air Quality, Permitting Section
ii. Division of Air Quality, Regional Office Permitting Section, and
iii. EPA-Region IV

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the initial notification is not submitted or if the notification prior to the date on which all new, reconstructed, and existing stationary combustion turbines fire oil more than 1000 hours in any calendar year is not submitted.

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:

Regulated 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 (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent opacity if (i) no six-minute period exceeds 87 percent opacity, (ii) no more than one six-minute period exceeds 20 percent opacity in any hour, and (iii) no more than four six-minute periods exceed 20 percent opacity in any 24-hour period.	15A NCAC 02D .0521
none	recordkeeping	15A NCAC 02D .0524 (40 CFR 60 Subpart Dc)
HAPs	CO emission limit of 66 ppmvd@7% O_2 Best Combustion Practices (Compliance until May 19, 2019)	15A NCAC 02D .1109 **MACT** CAA **§** 112(j)
	40 CFR Part 63 Subpart DDDDD (Compliance beginning May 20, 2019)	15 A NCAC 02D .1111 **MACT** CAA **§** 112(d)

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 into the atmosphere shall not exceed 0.11 pounds per million Btu heat input. [15A NCAC 02D .0503(a)]

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.

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

a. Emissions of sulfur dioxide from this source 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. [15A NCAC 02D .0516]

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 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. [15A NCAC 02D .0521(d)]

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 this source.

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 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. 15A NCAC 02D .1109: CAA § 112(j); CASE-BY-CASE MACT FOR BOILERS & PROCESS HEATERS

a. Emissions of CO from this source shall not exceed 66 ppmvd at 7% O_2.

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

b. The Permittee shall use best combustion practices when operating this source.
c. The Permittee shall comply with this CAA §112(j) standard until **May 19, 2019**. The initial compliance date for the applicable CAA §112(d) standard for ‘‘National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters” is **May 20, 2019**, as specified in Section 2.1.E.6 below.
d. To assure compliance, the Permittee shall perform an annual burner inspection and maintenance as recommended by the manufacturer, or as a minimum, the inspection and maintenance requirement shall include the following:
   i. Inspect the burner, and clean or replace any components of the burner as necessary;
   ii. Inspect the flame pattern and make any adjustments to the burner necessary to optimize the flame pattern; and,
   iii. Inspect the system controlling the air-to-fuel ratio, and ensure that it is correctly calibrated and functioning properly.

   The Permittee shall conduct at least one tune-up per calendar year to demonstrate compliance with this requirement. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if the affected source is not inspected and maintained as required above.
e. The results of inspection and maintenance 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 of each recorded action;
   ii. The results of each inspection; and,
   iii. The results of any maintenance performed on the boilers.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if these records are not maintained.

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

f. No reporting is required for hazardous air pollutants from the firing of natural gas in this source.

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

Applicability [§§63.7485, 63.7490, 63.7499(l)]

a. For the auxiliary boiler (ID No. AB1) (a new unit designed to burn gas 1 fuels), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart DDDDD . "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" and Subpart A "General Provisions."

   i. The Permittee shall comply with the CAA §112(j) standard in Section 2.1.E.5 through **May 19, 2019**. The Permittee shall be subject to the requirements of this standard starting **May 20, 2019**. Note that the requirements of this standard may require action on behalf of the Permittee prior to May 20, 2019.

Definitions and Nomenclature [§63.7575]

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

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

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

Compliance Date [§63.7495(a), §63.56(b)]

d. The Permittee shall comply with the applicable requirements by May 20, 2019.

Notifications [§63.7545]

e. The Permittee shall submit an initial Notification of Compliance Status. The notification shall contain the following:

   i. A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, and description of the fuel(s) burned.

   ii. The following certification of compliance:
   "This facility complies with the required initial tune-up according to the procedures in Sections 2.1.E.g.i through v and k. ii (§§63.7540(a)(10)(i) through (vi))."

   The notification must be signed by a responsible official and sent before the close of business on the 60th day following the completion of the initial tune-up after May 20, 2019.
   [§§ CFR 63.7545(e), 63.7530(d), (f), §63.56(b)]

General Compliance Requirements [§§63.7505(a), .7500(f)]

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

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

g. The Permittee shall conduct a tune-up of the source(s) annually as specified below.

   i. As applicable, inspect the burner, and clean or replace any components of the burner as necessary.
   (A) The Permittee may delay the burner inspection until the next scheduled shutdown.

   ii. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

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

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

   v. Measure the concentrations in the effluent stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. [§§ 63.7500(a), 63.7540(a)(10)]

h. Each annual tune-up shall be conducted no more than 13 months after the previous tune-up. The initial tune-up under this rule shall be conducted no later than 13 months after the previous tune-up required under the previously applicable CAA §112(j) standard. [§ 63.7515(d), §63.56(b)]

i. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup. [§§63.7540(a)(13), 63.7515(g)]
j. At all times, you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [§63.7500(a)(3)]
k. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in Sections 2.1.E.e through j are not met.

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

l. The Permittee must keep the following:
   i. A copy of each notification and report submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status, or semiannual compliance report that has been submitted, according to the requirements in §63.10(b)(2)(xiv). [§63.7555(a)(1)]
   ii. Maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs (A) through (C) below:
      (A) The concentrations of carbon monoxide in the effluent stream in parts per million by volume, and oxygen in volume percent, measured before and after the adjustments of the source;
      (B) A description of any corrective actions taken as a part of the combustion adjustment; and
      (C) The type and amount of fuel used over the 12 months prior to the annual adjustment, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit. [§63.7540(a)(10)(vi)]
   iii. The associated records in Sections 2.1.E.f through j including the occurrence and duration of each malfunction of operation (i.e., process equipment) or the required air pollution control and monitoring equipment. [§63.10(b)(2)]
   iv. Maintain records of the calendar date, time, occurrence, duration, type(s) and amount(s) of fuels used during for each startup and shutdown. [§§63.7555(i), (j)]
m. The Permittee shall:
   i. maintain records in a form suitable and readily available for expeditious review;
   ii. keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record; and
   iii. keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee can keep the records offsite for the remaining 3 years. [§§63.7560, 63.10(b)(1)]
n. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if records are not maintained as specified in Sections 2.1.E.l and m.

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

o. The Permittee shall submit compliance reports to the DAQ on an annual basis. The first compliance report shall be postmarked on or before January 30, 2020 and cover the period from May 20, 2019 through December 31, 2019. Subsequent annual reports shall cover the periods from January 1 to December 31. The Permittee shall submit the compliance reports postmarked on or before January 30. [§§63.7550(a), (b), 63.10(a) (4), (5), §63.56(b)]
   i. This report must also be submitted electronically through the EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the Permittee shall submit the report to the Administrator at the appropriate address listed in §63.13. [§63.7550(h)(3)]
p. The compliance report must contain the following information:
   i. Company name and address;
   ii. Process unit information, emissions limitations, and operating parameter limitations;
   iii. Date of report and beginning and ending dates of the reporting period;
   iv. The total operating time during the reporting period;
   iv. If there are no deviations from the requirements of the work practice requirements in Section 2.1.E.6.g through j above, a statement that there were no deviations from the work practice standards during the

reporting period; and

v. Include the date of the most recent tune-up for each unit required according to Section 2.1.E.6.g. Include the date of the most recent burner inspection if it was not done as scheduled and was delayed until the next scheduled or unscheduled unit shutdown. [§§63.7550(a) and (c), Table 9]

q. If you have a deviation from a work practice standard during the reporting period, the report must contain the following information:
   i. A description of the deviation and which emission limit or operating limit from which you deviated; and
   ii. Information on the number, duration, and cause of deviations (including unknown cause), as applicable, and the corrective action taken. [§§63.7550(a) and (d), 63.7540(b), Table 9]

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:

Regulated 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 (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent opacity if (i) no six-minute period exceeds 87 percent opacity, (ii) no more than one six-minute period exceeds 20 percent opacity in any hour, and (iii) no more than four six-minute periods exceed 20 percent opacity in any 24-hour period.	15A NCAC 02D .0521
HAPs	CO emission limit of 66 ppmvd@7% O_2 Best Combustion Practices (Compliance until May 19, 2019)	15A NCAC 02D .1109 **MACT** CAA **§** 112(j)
	40 CFR Part 63 Subpart DDDDD (Compliance beginning May 20, 2019)	15A NCAC 02D .1111 **MACT** CAA **§** 112(d)

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 into the atmosphere shall not exceed 0.11 pounds per million Btu heat input each. [15A NCAC 02D .0503(a)]

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.

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

a. Emissions of sulfur dioxide from these sources 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. [15A NCAC 02D .0516]

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

b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 02D .2601 and 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.

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

a. Visible emissions from these sources 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. [15A NCAC 02D .0521(d)]

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 these sources.

4. 15A NCAC 02D .1109: CAA § 112(j); CASE-BY-CASE MACT FOR BOILERS & PROCESS HEATERS

a. Emissions of CO from these sources shall not exceed 66 ppmvd at 7% O_2.

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

b. The Permittee shall use best combustion practices when operating these sources.
c. The Permittee shall comply with this CAA §112(j) standard until **May 19, 2019**. The initial compliance date for the applicable CAA §112(d) standard for ‘‘National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters” is **May 20, 2019**, as specified in Section 2.1.F.5 below.
d. To assure compliance, the Permittee shall perform an annual burner inspection and maintenance as recommended by the manufacturer, or as a minimum, the inspection and maintenance requirement shall include the following:
   i. Inspect the burner, and clean or replace any components of the burner as necessary;
   ii. Inspect the flame pattern and make any adjustments to the burner necessary to optimize the flame pattern; and,
   iii. Inspect the system controlling the air-to-fuel ratio, and ensure that it is correctly calibrated and functioning properly.

   The Permittee shall conduct at least one tune-up per calendar year to demonstrate compliance with this requirement. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if the affected sources are not inspected and maintained as required above.
e. The results of inspection and maintenance 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 of each recorded action;
   ii. The results of each inspection; and,
   iii. The results of any maintenance performed on the boilers.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if these records are not maintained.

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

d. No reporting is required for hazardous air pollutants from the firing of natural gas in these sources.

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

Applicability [§§63.7485, 63.7490, 63.7499(l)]

a. For the dew point heaters (ID Nos. DPH1, DPH2 and DPH3) (new units designed to burn gas 1 fuels), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart DDDDD . "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" and Subpart A "General Provisions."

   i. The Permittee shall comply with the CAA §112(j) standard in Section 2.1.F.4 through **May 19, 2019**. The Permittee shall be subject to the requirements of this standard starting **May 20, 2019**. Note that the requirements of this standard may require action on behalf of the Permittee prior to May 20, 2019.

Definitions and Nomenclature [§63.7575]

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

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

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

Compliance Date [§63.7495(a), §63.56(b)]

d. The Permittee shall comply with the applicable requirements by May 20, 2019.

Notifications [§63.7545]

e. The Permittee shall submit an initial Notification of Compliance Status. The notification shall contain the following:
   i. A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, and description of the fuel(s) burned.
   ii. The following certification of compliance:
   "This facility complies with the required initial tune-up according to the procedures in Sections 2.1.F.g.i through v and k.ii (§§63.7540(a)(10)(i) through (vi))."

   The notification must be signed by a responsible official and sent before the close of business on the 60th day following the completion of the initial tune-up after May 20, 2019. [§§ CFR 63.7545(e), 63.7530(d), (f), §63.56(b)]

General Compliance Requirements [§§63.7505(a), .7500(f)]

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

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

g. The Permittee shall conduct a tune-up of the source(s) every five years as specified below.
   i. As applicable, inspect the burner, and clean or replace any components of the burner as necessary.
      (A) The Permittee may delay the burner inspection until the next scheduled shutdown, but each burner must be inspected at least once every 72 months.
   ii. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
   iii. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown).
   iv. Optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_X requirement to which the unit is subject.
   v. Measure the concentrations in the effluent stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. [§§ 63.7500(a), 63.7540(a)(12)]

h. Each 5-year tune-up shall be conducted no more than 61 months after the previous tune-up. The initial tune-up under this rule shall be conducted no later than 61 months after the previous tune-up required under the previously

applicable CAA §112(j) standard. [§ 63.7515(d), §63.56(b)]

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

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

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

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

l. The Permittee must keep the following:
   i. A copy of each notification and report submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status, or semiannual compliance report that has been submitted, according to the requirements in §63.10(b)(2)(xiv). [§63.7555(a)(1)]
   ii. Maintain on-site and submit, if requested by the Administrator, a report containing the information in paragraphs (A) through (C) below:
      (A) The concentrations of carbon monoxide in the effluent stream in parts per million by volume, and oxygen in volume percent, measured before and after the adjustments of the source;
      (B) A description of any corrective actions taken as a part of the combustion adjustment; and
      (C) The type and amount of fuel used over the 12 months prior to the annual adjustment, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit. [§63.7540(a)(10)(vi)]
   iii. The associated records in Section 2.1.F.f through j including the occurrence and duration of each malfunction of operation (i.e., process equipment) or the required air pollution control and monitoring equipment. [§63.10(b)(2)]
   iv. Maintain records of the calendar date, time, occurrence, duration, type(s) and amount(s) of fuels used for each startup and shutdown. [§§63.7555(i), (j)]

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

n. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if records are not maintained as specified in Sections 2.1.F.l and m.

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

o. The Permittee shall submit compliance reports to the DAQ on a 5-year basis. The first compliance report shall be postmarked on or before January 30, 2024 and cover the period from May 20, 2019 through December 31, 2023. Subsequent 5-year reports shall cover the periods from January 1 to December 31. The Permittee shall submit the compliance reports postmarked on or before January 30. [§§63.7550(a), (b), 63.10(a) (4), (5), §63.56(b)]
   i. This report must also be submitted electronically through the EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the Permittee shall submit the report to the Administrator at the appropriate address listed in §63.13. [§63.7550(h)(3)]

p. The compliance report must contain the following information:
   i. Company name and address;
   ii. Process unit information, emissions limitations, and operating parameter limitations;
   iii. Date of report and beginning and ending dates of the reporting period;
   iv. The total operating time during the reporting period;
   iv. If there are no deviations from the requirements of the work practice requirements in Sections 2.1.F.5.g

through j above, a statement that there were no deviations from the work practice standards during the reporting period; and

v. Include the date of the most recent tune-up for each unit required according to Section 2.1.F.5.g. Include the date of the most recent burner inspection if it was not done as scheduled and was delayed until the next scheduled or unscheduled unit shutdown. [§§63.7550(a) and (c), Table 9]

q. If you have a deviation from a work practice standard during the reporting period, the report must contain the following information:
   i. A description of the deviation and which emission limit or operating limit from which you deviated; and
   ii. Information on the number, duration, and cause of deviations (including unknown cause), as applicable, and the corrective action taken. [§§63.7550(a) and (d), 63.7540(b), Table 9]

G. One diesel-fired firewater pump engine (ID No. FWP1)

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
visible emissions	20 percent opacity (except during startup, 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	15A NCAC 02D .0521
nitrogen oxides VOCs carbon monoxide particulates	as defined in specific conditions	15A NCAC 02D .0524 **NSPS** (40 CFR Part 60 Subpart IIII)
HAPs	initial notification requirements	15A NCAC 02D .1111 **MACT** 40 CFR 63 Subpart ZZZZ

1. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

a. Emissions of sulfur dioxide from this source 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. [15A NCAC 02D .0516]

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.G.1.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 No. 2 fuel oil in this source.

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

a. Visible emissions from these sources shall not be more than **20 percent opacity** (except during startup, 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. [15A NCAC 02D .0521(d)]

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.G.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 No. 2 fuel oil in this source.

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

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 IIII, including Subpart A "General Provisions."[15A NCAC 02D .0524]

b. The following emission limits shall not be exceeded [15A NCAC 02D .0524, §60.4202(a) and §60.4205(c)]:

AFFECTED SOURCE	POLLUTANT	EMISSION LIMIT (g/hp-hr)
Diesel-fired firewater pump (ID No. FWP1) [§60.4205(c)]	nitrogen oxides + VOCs	3.0
	carbon monoxide	2.6
	PM	0.15

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 limits given in Section 2.1.G.3.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

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

d. The engine must use diesel fuel with sulfur content of less than 15 ppm (40CFR80.510(b)). [§60.4207]
e. The engine must be equipped with a non-resettable hour meter prior to startup. [§60.4209]
f. The manufacturer must certify the engine in accordance with procedures in 40CFR89 and test the engine as required by that rule. [§60.4210]
g. The owner or operator must operate and maintain the engines in accordance with the manufacturer's written instructions. The owner or operator may only change those engine settings that are permitted by the manufacturer. The owner or operator shall also meet the requirements of 40 CFR 89, 94 and/or 1068 as applicable. [§60.4211(a)]
h. Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. The Permittee may petition the administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. Emergency stationary ICE may operate up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in this section, is prohibited. [§60.4211(f)]

i. No initial notification is required for an emergency use engine. Starting with the model years in Table 5 to NSPS Subpart IIII, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the Permittee shall keep records of the operation of the engine in emergency and non-emergency service that are recorded through the nonresettable hour meter. The Permittee shall record the time of operation of the engine and the reason the engine was in operation during that time. [§60.4214(b)]

j. If any of the above monitoring/recordkeeping requirements in this section are not met, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524. [40 CFR 60.8 and 60.45]

4. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (MACT – 40 CFR PART 63 SUBPART ZZZZ)

a. **Recordkeeping/Reporting** [15A NCAC 02Q .0508(f)]
The Permittee shall meet the initial notification requirements of §63.6645(d) for the diesel-fired fire-water pump engine (ID No. FWP1). These notifications must be submitted not later than 120 days after the source becomes subject to Subpart ZZZZ and shall include the information required in §63.9(b)(2)(i) through (v), and an applicability determination statement that the source has no additional requirements under this subpart and explain the basis of the exclusion. The Permittee shall comply with the recordkeeping requirements of §63.10(b)(3) and keep a record of the applicability determination on site at the source for a period of 5 years after the determination. If the initial notification requirements of §63.6645(d) are not met or the Permittee does not comply with the recordkeeping requirements of §63.10(b)(3), the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111. This source is exempt from the General Provisions (40 CFR Part 63, Subpart A) and from any other provisions of Subpart ZZZZ.

H. 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:

Regulated 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 this source shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 02D .0515(a)]

$E = 4.10 \times P^{0.67}$ 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.H.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

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

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

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

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
toxic air pollutants	toxics demonstration (see Sections 2.2.A.1 and 2.2.A.2) - **State-only Requirement**	15A NCAC 02D .1100 and 15A NCAC 02Q .0711

J. 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)

CONDITIONS FOR THIS EQUIPMENT ARE NOT SHIELDED PURSUANT TO 15A NCAC 02Q .0512(a).

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter	$E = 4.10 \times (P)^{0.67}$ for $P \leq 30$ 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 except during startups, shutdowns, and malfunctions	15A NCAC 02D .0521
particulate matter PM-10 PM-2.5 carbon monoxide VOCs	as defined in specific conditions see Section 2.2.B.1	15A NCAC 2Q .0317(a)(1) (PSD avoidance)
toxic air pollutants	toxics demonstration (see Sections 2.2.A.1 and 2.2.A.2) **- State-only Requirement**	15A NCAC 02D .1100 and 15A NCAC 02Q .0711
sulfur dioxide	submittal of CAM Plan information required under §64.4 as part of the application for a significant permit revision under 40 CFR Part 70	15A NCAC 2D .0614 **CAM** (40 CFR 64)

1. 15A NCAC 2D .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: [15A NCAC 2D .0515(a)]

$$E = 4.10 \times P^{0.67} \qquad \text{for } P \leq 30 \text{ tons per hour}$$

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 2Q .0508(f)]

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

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

c. Particulate matter emissions from this source (ID No. ES-31) shall be controlled by the baghouse (ID No. CD-31B). To assure 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; and
   ii. an annual (for each 12-month period following the initial inspection) internal inspection of the bagfilter's structural integrity.

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

d. The results of inspection and maintenance 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 2Q .0508(f)]

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 .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. [15A NCAC 02D .0516]

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

b. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit in Section 2.1.J.2.a above by conducting an initial stack test for sulfur dioxide emissions, with the reactor operating within 10% of its maximum heat input rate, in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in Section 3 - General Condition JJ. Testing shall be completed within 90 days of initial start-up of the reactor (ID No. ES-31). Test results shall be the average of 3 valid test runs each when the source is processing flyash with: (1) a low sulfur content, (2) a medium sulfur content, and (3) a high sulfur content; to establish a minimum lime-to-sulfur ratio for the dry scrubber (ID No. CD-31A) for each fly ash sulfur content range that demonstrates compliance with the emissions limit in paragraph a above. In addition, the Permittee shall measure the pressure drop across the baghouse (ID No. 31B) during each test.

Test results shall include the following information for each test run:
i. Sulfur dioxide emission rate (lb/mmBtu).
ii. Dry scrubber lime-to-sulfur ratio.
iii. Reactor heat input (mmBtu/hr).
iv. Reactor flyash raw feed rate (tons per hour).
v. Flyash loss on ignition (% carbon).
vi. Flyash sulfur content (%).
vii. Baghouse pressure drop (Δp).

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

c. The Permittee shall operate the dry scrubber at any time the reactor is in operation other than during startup, shutdown or malfunction, with a lime-to-sulfur ratio necessary to achieve a 95% sulfur dioxide removal efficiency.
d. Any time the reactor is in operation, the dry scrubber shall be operated at the minimum lime-to-sulfur ratio established during initial stack testing for each flyash sulfur content range.
e. Once per hour, the Permittee shall record in a logbook (written or electronic format) on-site and made available to an authorized representative upon request, the following information:
i. Flyash sulfur content (%).
ii. Dry scrubber lime-to-sulfur ratio.
iii. Baghouse pressure drop (Δp).

f. **Reporting** [15A NCAC 02Q .0508(f)]
The Permittee shall submit to the DAQ Permitting Section a summary of the results of the initial stack testing that includes the information in Section 2.1.J.2.b above for each of the three sulfur content ranges of fly ash being processed, no later than 30 days after completing the initial stack test in accordance with General Condition JJ; and submit a complete permit application to revise the permit accordingly.

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 .0508(f)]

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

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

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 weekly observation must be made for each week 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.J.3.a above.

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

d. The results of the monitoring 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 .0508(f)]

e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities in Sections 2.1.J.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.

4. 15A NCAC 02Q .0504: OPTION FOR OBTAINING CONSTRUCTION AND OPERATION PERMIT

Permitting [15A NCAC 02Q .0504(d)]

a. For completion of the two-step significant modification process pursuant to 15A NCAC 02Q .0501(c)(2) or (d)(2), the Permittee shall file an amended application following the procedures of Section 15A NCAC 02Q .0500 within one year from the date of beginning operation of this source (ID No. ES-31) and associated baghouse (ID No. CD-31B).

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

b. The Permittee shall notify the Regional Office in writing of the date of beginning operation of this source (ID No. ES-31) and associated baghouse (ID No. CD-31B), postmarked no later than 30 days after such date.

5. 15A NCAC 2D .0614: COMPLIANCE ASSURANCE MONITORING (40 CFR 64)

a. The Permittee shall submit the information required under §64.4 for this source as part of the application for a significant permit revision under 40 CFR Part 70.

K. Feed silo (ID No. ES-30) and associated bin vent filter (ID No. CD-30), 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), transfer silo (ID No. ES-36) and associated bin vent filter (ID No. CD-36), storage dome (ID No. ES-37) and associated bin vent filter (ID No. CD-37), loadout silo (ID No. ES-38) and associated bin vent filter (ID No. CD-38), loadout silo chute 1A (ID No. ES-38A) and associated bin vent filter (ID No. CD-38A), and loadout silo chute 1B (ID No. ES-38B) and associated bin vent filter (ID No. CD-38B)

CONDITIONS FOR THIS EQUIPMENT ARE NOT SHIELDED PURSUANT TO 15A NCAC 02Q .0512(a).

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter	$E = 4.10 \times (P)^{0.67}$ for $P \leq 30$ 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 except during startups, shutdowns, and malfunctions	15A NCAC 02D .0521
particulate matter PM-10 PM-2.5	see Section 2.2 B.1 **applies to EHE-34 and EHE-35 only**	15A NCAC 2Q .0317(a)(1) (PSD avoidance)

toxic air pollutants	toxics demonstration (see Sections 2.2.A.1 and 2.2.A.2) **- State-only Requirement**	15A NCAC 02D .1100 and 15A NCAC 02Q .0711

1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

a. Emissions of particulate matter from these sources (ID Nos. ES-30, ES-32, ES-33, ES-34, ES-35, ES-36, ES,37, ES-38, ES-38A, ES-38B, ES-39A and ES-40A) shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$$E = 4.10 \times P^{0.67} \quad \text{for } P \leq 30 \text{ tons per hour}$$

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 2Q .0508(f)]

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

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

c. Particulate matter emissions from these emission sources (ID Nos. ES-30, ES-32, ES-33, ES-34, ES-35, ES-36, ES-37, ES-38, ES-38A and ES-38B) shall be controlled by bin vent filters and baghouses (ID Nos. CD-30, CD-32, CD-33, CD-34, CD-35, CD-36, CD,37, CD-38, CD-38A and CD-38B). To assure 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; and
   ii. an annual (for each 12-month period following the initial inspection) internal inspection of the bagfilter's structural integrity.

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

d. The results of inspection and maintenance 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 2Q .0508(f)]

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.K.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-30, ES-32, ES-33, ES-34, ES-35, ES-36, ES-37, ES-38, ES-38A and ES-38B) 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 .0508(f)]

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

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

c. To ensure compliance, once a month the Permittee shall observe the emission points of these sources (ID Nos. ES-30, ES-32, ES-33, ES-34, ES-35, ES-36, ES-37, ES-38, ES-38A and ES-38B) 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 .0508(f)]

d. The results of the monitoring 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 .0508(f)]

e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities in Sections 2.1.K.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.

3. 15A NCAC 02Q .0504: OPTION FOR OBTAINING CONSTRUCTION AND OPERATION PERMIT

Permitting [15A NCAC 02Q .0504(d)]

a. For completion of the two-step significant modification process pursuant to 15A NCAC 02Q .0501(c)(2) or (d)(2), the Permittee shall file an amended application following the procedures of Section 15A NCAC 02Q .0500 within one year from the date of beginning operation of these sources (ID Nos. ES-30, ES-32, ES-33, ES-34, ES-35, ES-36, ES-37, ES-38, ES-38A, ES-38B) and associated bin vent filters and baghouses (ID Nos. CD-30, CD-32, CD-33, CD-34, CD-35, CD-36, CD,37, CD-38, CD-38A, CD-38B).

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

b. The Permittee shall notify the Regional Office in writing of the date of beginning operation of these sources (ID Nos. ES-30, ES-32, ES-33, ES-34, ES-35, ES-36, ES-37, ES-38, ES-38A, ES-38B) and associated bin vent filters and baghouses (ID Nos. CD-30, CD-32, CD-33, CD-34, CD-35, CD-36, CD,37, CD-38, CD-38A, CD-38B), postmarked no later than 30 days after such date.

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

CONDITIONS FOR THIS EQUIPMENT ARE NOT SHIELDED PURSUANT TO 15A NCAC 02Q .0512(a).

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Visible Emissions	20 percent opacity except during start-up, shutdown and malfunction	15A NCAC 2D .0521
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	toxics demonstration (see Sections 2.2.A.1 and 2.2.A.2) - State-only Requirement	15A NCAC 02D .1100 and 15A NCAC 02Q .0711

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.

3. 15A NCAC 02Q .0504: OPTION FOR OBTAINING CONSTRUCTION AND OPERATION PERMIT

Permitting [15A NCAC 02Q .0504(d)]

a. For completion of the two-step significant modification process pursuant to 15A NCAC 02Q .0501(c)(2) or (d)(2), the Permittee shall file an amended application following the procedures of Section 15A NCAC 02Q .0500 within one year from the date of beginning operation of these sources (ID No. F-4).

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

b. The Permittee shall notify the Regional Office in writing of the date of beginning operation of these sources (ID No. F-4), postmarked no later than 30 days after such date.

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

A. Facility-wide Toxics Demonstration

STATE-ONLY REQUIREMENT

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

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

Emission Source	Toxic Air Pollutant	Emission Limit		
		(lb/yr)	(lb/day)	(lb/hr)
Lee IC Units No. 10 and 11 (per turbine)	Sulfuric acid		3.23E+02	2.84E+01
	Benzene	1.33E+04		
	Formaldehyde			2.10E+02
	Toluene		1.87E+06	1.55E+05
	Arsenic	1.31E+01		
	Beryllium	6.53E+00		
	Cadmium	4.85E+02		
	Chromium VI		2.40E+01	
	Manganese		7.55E+03	
	Mercury		1.45E+02	
	Nickel		2.76E+01	
Lee IC Units No. 12 and 13 (per turbine)	Sulfuric acid		3.22E+02	2.83E+01
	Benzene	1.25E+04		
	Formaldehyde			1.97E+02
	Toluene		1.77E+06	1.47E+05

	Arsenic	1.23E+01		
	Beryllium	6.19E+00		
	Cadmium	4.58E+02		
	Chromium VI		2.27E+01	
	Manganese		7.15E+03	
	Mercury		1.37E+02	
	Nickel		2.61E+01	
ID No.4 Gasoline storage tank - 1,000 gallons * potentials shown until remodeled – see permit Section 2.2.A.1.b	Benzene*	1.11E+01		
	Hexane*		2.40E-02	
	Toluene*		1.14E-01	4.77E-03
ES-30 Feed silo	Arsenic	2.03E-03		
	Beryllium	3.97E-03		
	Cadmium	8.07E-04		
	Chromium VI		4.56E-05	
	Manganese		2.63E-03	
	Mercury		9.78E-05	
	Nickel		7.08E-04	
ES-31 STAR® feedstock processing reactor	Sulfuric acid		3.98E+00	3.50E-01
	Benzene	3.25E+02		
	Formaldehyde			6.75E-01
	Hexane		5.75E+03	
	Toluene		5.24E+02	4.35E+01
	Arsenic	7.72E+00		
	Beryllium	1.50E+01		
	Cadmium	6.83E+01		
	Chromium VI		7.75E-02	
	Manganese		4.59E+00	
	Mercury		1.13E+00	
	Nickel		1.59E+00	
ES-34 EHE- external heat exchanger 1	Arsenic	3.13E+00		
	Beryllium	6.14E+00		
	Cadmium	1.24E+00		
	Chromium VI		3.21E-02	
	Manganese		1.85E+00	
	Mercury		6.90E-02	
	Nickel		4.99E-01	
ES-35 EHE- external heat exchanger 2	Arsenic	3.13E+00		
	Beryllium	6.14E+00		
	Cadmium	1.24E+00		
	Chromium VI		3.21E-02	

	Manganese		1.85E+00	
	Mercury		6.90E-02	
	Nickel		4.99E-01	
ES-36 Transfer silo	Arsenic	2.03E-03		
	Beryllium	3.97E-03		
	Cadmium	8.07E-04		
	Chromium VI		4.56E-05	
	Manganese		2.63E-03	
	Mercury		9.78E-05	
	Nickel		7.08E-04	
ES-37 Storage dome	Arsenic	2.03E-03		
	Beryllium	3.97E-03		
	Cadmium	8.07E-04		
	Chromium VI		7.96E-05	
	Manganese		4.60E-03	
	Mercury		1.71E-04	
	Nickel		1.24E-03	
ES-38 Loadout silo	Arsenic	1.02E-03		
	Beryllium	1.99E-03		
	Cadmium	4.05E-04		
	Chromium VI		6.84E-05	
	Manganese		3.94E-03	
	Mercury		1.47E-04	
	Nickel		1.06E-03	
ES-38A Loadout silo chute 1A	Arsenic	5.08E-04		
	Beryllium	9.94E-04		
	Cadmium	2.02E-04		
	Chromium VI		2.28E-05	
	Manganese		1.31E-03	
	Mercury		4.89E-05	
	Nickel		3.56E-04	
ES-38B Loadout silo chute 1B	Arsenic	5.08E-04		
	Beryllium	9.94E-04		
	Cadmium	2.02E-04		
	Chromium VI		2.28E-05	
	Manganese		1.31E-03	
	Mercury		4.89E-05	
	Nickel		3.56E-04	
I-F-1 Wet ash receiving transfer to shed	Arsenic	4.45E-04		
	Beryllium	8.74E-04		
	Cadmium	1.77E-04		
	Chromium VI		6.98E-06	
	Manganese		4.04E-04	

	Mercury		1.51E-05	
	Nickel		1.09E-04	
I-F-2 Wet ash receiving transfer to hopper	Arsenic	8.91E-04		
	Beryllium	1.75E-03		
	Cadmium	3.54E-04		
	Chromium VI		1.40E-05	
	Manganese		8.10E-04	
	Mercury		3.01E-05	
	Nickel		2.18E-04	
I-F-3 Wet ash receiving unloading pile	Arsenic	1.43E-03		
	Beryllium	2.80E-03		
	Cadmium	5.68E-04		
	Chromium VI		1.47E-05	
	Manganese		8.45E-04	
	Mercury		3.15E-05	
	Nickel		2.28E-04	
F-4 Ash basin I-F-5 Ash handling I-ES-39A Screener I-ES-40A Crusher	Arsenic	7.51E-01		
	Beryllium	1.47E+00		
	Cadmium	2.99E-01		
	Chromium VI		7.82E-03	
	Manganese		4.49E-01	
	Mercury		1.67E-02	
	Nickel		1.21E-01	

b. Prior to startup of the STAR® project sources, the Permittee shall submit an application including a modeling demonstration to the NCDAQ for the purpose of updating the air toxics emission rates in Section 2.2.A.1.a above as necessary for final as-built equipment locations showing compliance with 15A NCAC 2D .1100. All sources at the facility, excluding sources exempt from evaluation in 15A NCAC 2Q .0702, emitting these toxic air pollutants shall be included in the evaluation.

Monitoring/Recordkeeping/Reporting

c. No monitoring, recordkeeping or reporting is required since the electric utility boilers (ID Nos. Unit 1 Boiler, Unit 2 Boiler and Unit 3 Boiler) have been retired.

STATE-ONLY REQUIREMENT

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

a. As of January 4, 2012 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

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-NO_x 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)

CONDITIONS FOR THIS EQUIPMENT ARE NOT SHIELDED PURSUANT TO 15A NCAC 02Q .0512(a).

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, VOCs, 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)	Applicable Regulation
nitrogen oxides	3414.6	15A NCAC 02Q.0317(a)(1) (PSD avoidance)
sulfur dioxide	14,663.1	
particulate matter	218.2	
PM-10	218.2	
PM-2.5	218.2	
carbon monoxide	829.3	
VOCs	65.1	
sulfuric acid	64.3	
lead	0.77	

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

b. The Permittee shall keep records of the monthly emissions from each source (ID Nos. Lee IC Unit 1A, Lee IC Unit 1B, Lee IC Unit 1C, ES-31, EHE-34 and EHE-35) in a logbook (written or in electronic format). The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530(g) if these records are not kept or if any of the above limits are exceeded. Emissions shall be determined as follows:

Nitrogen Oxides

Emissions of nitrogen oxides from Lee IC Unit 1A, Lee IC Unit 1B and Lee IC Unit 1C shall be determined using a continuous emissions monitoring (CEM) system meeting the requirements of 15A NCAC 02D .0613 - 40 CFR Part 60 Appendix B "Performance Specifications" and Appendix F "Quality Assurance Procedures." If the owner or operator has installed a nitrogen oxides 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, and used to calculate total nitrogen oxide emissions in accordance with the following equation. 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 and may be bias adjusted according to the procedures of 40 CFR Part 75.

Total emissions of nitrogen oxides =

$$\textit{Lee IC Unit 1A CEMS + Lee IC Unit 1B CEMS + Lee IC Unit 1C CEMS} + 5.36^{*}\frac{tons}{rolling\ 12\ months} \leq 3414.6\frac{tons}{rolling\ 12\ months}$$

* This number represents the potential emissions from the small-emitting STAR® ancillary sources (all sources except ES-31, ES-34 and ES-35) in this and in the following equations as applicable.

Sulfur Dioxide

Emissions of sulfur dioxide shall be determined in accordance with the following equation.

$$Total\ emissions\ of\ sulfur\ dioxide =$$

$$\left(\frac{0.00152\ lb}{mmBtu}\right)\left(\frac{mmBtu\ SC-oil,Lee\ IC\ Unit\ 1A}{rolling\ 12\ months}+\frac{mmBtu\ SC-oil,Lee\ IC\ Unit\ 1B}{rolling\ 12\ months}+\frac{mmBtu\ SC-oil,Lee\ IC\ Unit\ 1C}{rolling\ 12\ months}\right)\left(\frac{ton}{2000\ lb}\right)+$$

$$\left(\frac{0.0006\ lb}{mmBtu}\right)\left(\frac{mmBtu\ SC-gas,Lee\ IC\ Unit\ 1A}{rolling\ 12\ months}+\frac{mmBtu\ SC-gas,Lee\ IC\ Unit\ 1B}{rolling\ 12\ months}+\frac{mmBtu\ SC-gas,Lee\ IC\ Unit\ 1C}{rolling\ 12\ months}\right)\left(\frac{ton}{2000\ lb}\right)+$$

$$\left(\frac{0.00152\ lb}{mmBtu}\right)\left(\frac{mmBtu\ CC-oil,Lee\ IC\ Unit\ 1A}{rolling\ 12\ months}+\frac{mmBtu\ CC-oil,Lee\ IC\ Unit\ 1B}{rolling\ 12\ months}+\frac{mmBtu\ CC-oil,Lee\ IC\ Unit\ 1C}{rolling\ 12\ months}\right)\left(\frac{ton}{2000\ lb}\right)+$$

$$\left(\frac{0.0006\ lb}{mmBtu}\right)\left(\frac{mmBtu\ CC-gas,Lee\ IC\ Unit\ 1A}{rolling\ 12\ months}+\frac{mmBtu\ CC-gas,Lee\ IC\ Unit\ 1B}{rolling\ 12\ months}+\frac{mmBtu\ CC-gas,Lee\ IC\ Unit\ 1C}{rolling\ 12\ months}\right)\left(\frac{ton}{2000\ lb}\right)+$$

$$0.35^{*}\ \frac{tons}{rolling\ 12\ months} \le 14{,}663.1\ \frac{tons}{rolling\ 12\ months}$$

Particulate Matter

Emissions of particulate matter shall be determined in accordance with the following equation.

$$Total\ emissions\ of\ particulate\ matter =$$

$$\left(\frac{0.0232\ lb}{mmBtu}\right)\left(\frac{mmBtu\ SC-oil,Lee\ IC\ Unit\ 1A}{rolling\ 12\ months}+\frac{mmBtu\ SC-oil,Lee\ IC\ Unit\ 1B}{rolling\ 12\ months}+\frac{mmBtu\ SC-oil,Lee\ IC\ Unit\ 1C}{rolling\ 12\ months}\right)\left(\frac{ton}{2000\ lb}\right)+$$

$$\left(\frac{0.0074\ lb}{mmBtu}\right)\left(\frac{mmBtu\ SC-gas,Lee\ IC\ Unit\ 1A}{rolling\ 12\ months}+\frac{mmBtu\ SC-gas,Lee\ IC\ Unit\ 1B}{rolling\ 12\ months}+\frac{mmBtu\ SC-gas,Lee\ IC\ Unit\ 1C}{rolling\ 12\ months}\right)\left(\frac{ton}{2000\ lb}\right)+$$

$$\left(\frac{0.0244\ lb}{mmBtu}\right)\left(\frac{mmBtu\ CC-oil,Lee\ IC\ Unit\ 1A}{rolling\ 12\ months}+\frac{mmBtu\ CC-oil,Lee\ IC\ Unit\ 1B}{rolling\ 12\ months}+\frac{mmBtu\ CC-oil,Lee\ IC\ Unit\ 1C}{rolling\ 12\ months}\right)\left(\frac{ton}{2000\ lb}\right)+$$

$$\left(\frac{0.0062\ lb}{mmBtu}\right)\left(\frac{mmBtu\ CC-gas,Lee\ IC\ Unit\ 1A}{rolling\ 12\ months}+\frac{mmBtu\ CC-gas,Lee\ IC\ Unit\ 1B}{rolling\ 12\ months}+\frac{mmBtu\ CC-gas,Lee\ IC\ Unit\ 1C}{rolling\ 12\ months}\right)\left(\frac{ton}{2000\ lb}\right)+$$

$$\left(\frac{number\ hours\ operated,ES-31}{rolling\ 12\ months}\right)(77{,}500\ acfm\ baghouse\ flow\ rate)\left(\frac{0.025\ grains}{acf}\right)\left(\frac{60\ min}{hour}\right)\left(\frac{lb}{7000\ grains}\right)+$$

$$\left(\frac{number\ hours\ operated,ES-34}{rolling\ 12\ months}\right)(32{,}000\ acfm\ baghouse\ flow\ rate)\left(\frac{0.025\ grains}{acf}\right)\left(\frac{60\ min}{hour}\right)\left(\frac{lb}{7000\ grains}\right)+$$

$$\left(\frac{number\ hours\ operated,ES-35}{rolling\ 12\ months}\right)(32{,}000\ acfm\ baghouse\ flow\ rate)\left(\frac{0.025\ grains}{acf}\right)\left(\frac{60\ min}{hour}\right)\left(\frac{lb}{7000\ grains}\right)+$$

$$9.71^{*}\ \frac{tons}{rolling\ 12\ months} \le 218.2\ \frac{tons}{rolling\ 12\ months}$$

where:

mmBtuSC-oil	=	heat input for last 12 month period when burning fuel oil in simple-cycle mode
mmBtuSC-gas	=	heat input for last 12 month period when burning natural gas in simple-cycle mode
mmBtuCC-oil	=	heat input for last 12 month period when burning fuel oil in combined-cycle mode
mmBtuCC-gas	=	heat input for last 12 month period when burning natural gas in combined-cycle mode

PM-10
Emissions of PM-10 shall be determined in accordance with the following equation.

$$Total\ emissions\ of\ PM-10 =$$

$$\left(\frac{0.0232\ lb}{mmBtu}\right)\left(\frac{mmBtu\ SC-oil,Lee\ IC\ Unit\ 1A}{rolling\ 12\ months}+\frac{mmBtu\ SC-oil,Lee\ IC\ Unit\ 1B}{rolling\ 12\ months}+\frac{mmBtu\ SC-oil,Lee\ IC\ Unit\ 1C}{rolling\ 12\ months}\right)\left(\frac{ton}{2000\ lb}\right)+$$

$$\left(\frac{0.0074\ lb}{mmBtu}\right)\left(\frac{mmBtu\ SC-gas,Lee\ IC\ Unit\ 1A}{rolling\ 12\ months}+\frac{mmBtu\ SC-gas,Lee\ IC\ Unit\ 1B}{rolling\ 12\ months}+\frac{mmBtu\ SC-gas,Lee\ IC\ Unit\ 1C}{rolling\ 12\ months}\right)\left(\frac{ton}{2000\ lb}\right)+$$

$$\left(\frac{0.0244\ lb}{mmBtu}\right)\left(\frac{mmBtu\ CC-oil,Lee\ IC\ Unit\ 1A}{rolling\ 12\ months}+\frac{mmBtu\ CC-oil,Lee\ IC\ Unit\ 1B}{rolling\ 12\ months}+\frac{mmBtu\ CC-oil,Lee\ IC\ Unit\ 1C}{rolling\ 12\ months}\right)\left(\frac{ton}{2000\ lb}\right)+$$

$$\left(\frac{0.0062\ lb}{mmBtu}\right)\left(\frac{mmBtu\ CC-gas,Lee\ IC\ Unit\ 1A}{rolling\ 12\ months}+\frac{mmBtu\ CC-gas,Lee\ IC\ Unit\ 1B}{rolling\ 12\ months}+\frac{mmBtu\ CC-gas,Lee\ IC\ Unit\ 1C}{rolling\ 12\ months}\right)\left(\frac{ton}{2000\ lb}\right)+$$

$$\left(\frac{number\ hours\ operated,ES-31}{rolling\ 12\ months}\right)(0.92)(77{,}500\ acfm\ baghouse\ flow\ rate)\left(\frac{0.025\ grains}{acf}\right)\left(\frac{60\ min}{hour}\right)\left(\frac{lb}{7000\ grains}\right)+$$

$$\left(\frac{number\ hours\ operated,ES-34}{rolling\ 12\ months}\right)(0.92)(32{,}000\ acfm\ baghouse\ flow\ rate)\left(\frac{0.025\ grains}{acf}\right)\left(\frac{60\ min}{hour}\right)\left(\frac{lb}{7000\ grains}\right)+$$

$$\left(\frac{number\ hours\ operated,ES-35}{rolling\ 12\ months}\right)(0.92)(32{,}000\ acfm\ baghouse\ flow\ rate)\left(\frac{0.025\ grains}{acf}\right)\left(\frac{60\ min}{hour}\right)\left(\frac{lb}{7000\ grains}\right)+$$

$$4.873^{*}\ \frac{tons}{rolling\ 12\ months} \le 218.2\ \frac{tons}{rolling\ 12\ months}$$

PM-2.5
Emissions of PM-2.5 shall be determined in accordance with the following equation.

$$Total\ emissions\ of\ PM-2.5 =$$

$$\left(\frac{0.0232\ lb}{mmBtu}\right)\left(\frac{mmBtu\ SC-oil,Lee\ IC\ Unit\ 1A}{rolling\ 12\ months}+\frac{mmBtu\ SC-oil,Lee\ IC\ Unit\ 1B}{rolling\ 12\ months}+\frac{mmBtu\ SC-oil,Lee\ IC\ Unit\ 1C}{rolling\ 12\ months}\right)\left(\frac{ton}{2000\ lb}\right)+$$

$$\left(\frac{0.0074\ lb}{mmBtu}\right)\left(\frac{mmBtu\ SC-gas,Lee\ IC\ Unit\ 1A}{rolling\ 12\ months}+\frac{mmBtu\ SC-gas,Lee\ IC\ Unit\ 1B}{rolling\ 12\ months}+\frac{mmBtu\ SC-gas,Lee\ IC\ Unit\ 1C}{rolling\ 12\ months}\right)\left(\frac{ton}{2000\ lb}\right)+$$

$$\left(\frac{0.0244\ lb}{mmBtu}\right)\left(\frac{mmBtu\ CC-oil,Lee\ IC\ Unit\ 1A}{rolling\ 12\ months}+\frac{mmBtu\ CC-oil,Lee\ IC\ Unit\ 1B}{rolling\ 12\ months}+\frac{mmBtu\ CC-oil,Lee\ IC\ Unit\ 1C}{rolling\ 12\ months}\right)\left(\frac{ton}{2000\ lb}\right)+$$

$$\left(\frac{0.0062\ lb}{mmBtu}\right)\left(\frac{mmBtu\ CC-gas,Lee\ IC\ Unit\ 1A}{rolling\ 12\ months}+\frac{mmBtu\ CC-gas,Lee\ IC\ Unit\ 1B}{rolling\ 12\ months}+\frac{mmBtu\ CC-gas,Lee\ IC\ Unit\ 1C}{rolling\ 12\ months}\right)\left(\frac{ton}{2000\ lb}\right)+$$

$$\left(\frac{number\ hours\ operated,ES-31}{rolling\ 12\ months}\right)(0.53)(77{,}500\ acfm\ baghouse\ flow\ rate)\left(\frac{0.025\ grains}{acf}\right)\left(\frac{60\ min}{hour}\right)\left(\frac{lb}{7000\ grains}\right)+$$

$$\left(\frac{number\ hours\ operated,ES-34}{rolling\ 12\ months}\right)(0.53)(32{,}000\ acfm\ baghouse\ flow\ rate)\left(\frac{0.025\ grains}{acf}\right)\left(\frac{60\ min}{hour}\right)\left(\frac{lb}{7000\ grains}\right)+$$

$$\left(\frac{number\ hours\ operated,ES-35}{rolling\ 12\ months}\right)(0.53)(32{,}000\ acfm\ baghouse\ flow\ rate)\left(\frac{0.025\ grains}{acf}\right)\left(\frac{60\ min}{hour}\right)\left(\frac{lb}{7000\ grains}\right)+$$

$$1.262^{*}\ \frac{tons}{rolling\ 12\ months} \le 218.2\ \frac{tons}{rolling\ 12\ months}$$

Carbon Monoxide
Emissions of carbon monoxide shall be determined in accordance with the following equation.

$$Total\ emissions\ of\ CO = Lee\ IC\ Unit\ 1A\ CEMS + Lee\ IC\ Unit\ 1B\ CEMS + Lee\ Unit\ 1C\ CEMS\ +$$

$$\left(\frac{lb\ CO,ES-31}{mmBtu}\right)\left(\frac{mmBtu,ES-31}{rolling\ 12\ months}\right)\left(\frac{tons}{2000\ lb}\right) + 1.16^{*}\left(\frac{tons}{rolling\ 12\ months}\right) \leq 829.3\ \frac{tons}{rolling\ 12\ months}$$

where: $\left(\frac{lb\ CO,ES-31}{mmBtu}\right) = CO\ Emission\ factor\ for\ reactor\ ES-31\ to\ be\ determined\ by\ the\ following\ stack\ test$:

Testing [15A NCAC 02Q .0508(f)]
Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the CO emission limit above by conducting an initial stack test for CO emissions, with the reactor operating within 10% of its maximum heat input rate, in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in Section 3 - General Condition JJ. Testing shall be completed within 90 days of initial start-up of the reactor (ID No. ES-31) and the results submitted according to Section 3 - General Condition JJ. Test results shall be the average of 3 valid test runs.

Test results shall be submitted as required in Section 2.1.B.1.c below and the following information for each test run shall be included:
i. CO emissions (lb/mmBtu).
ii. Reactor heat input (mmBtu/hr).
iii. Reactor flyash raw feed rate (tons per hour).
iv. Flyash loss on ignition (% carbon).

The CO test results (lb/mmBtu) shall be used for ES-31 to calculate the total CO emissions each month in the above equation as soon as the test results have been completed regardless of whether the results have been approved by NCDAQ.

Carbon Monoxide Continuous Emissions Monitoring
The CO CEMS for Lee IC Unit 1A, Lee IC Unit 1B, Lee IC Unit 1C shall meet the requirements of 15A NCAC 02D .0613 except that:
i. 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).
ii. 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.
iii. All grace period provisions from Part 75, Appendix B, §2.2.4 and, §2.3.3 apply.

VOCs
Emissions of VOCs shall be determined in accordance with the following equation.

Total emissions of VOCs =

$$\left(\frac{0.00085\ lb}{mmBtu}\right)\left(\frac{mmBtu\ SC-oil,Lee\ IC\ Unit\ 1A}{12\ months}+\frac{mmBtu\ SC-oil,Lee\ IC\ Unit\ 1B}{12\ months}+\frac{mmBtu\ SC-oil,Lee\ IC\ Unit\ 1C}{12\ months}\right)\left(\frac{ton}{2000\ lb}\right)+$$

$$\left(\frac{0.00077\ lb}{mmBtu}\right)\left(\frac{mmBtu\ SC-gas,Lee\ IC\ Unit\ 1A}{12\ months}+\frac{mmBtu\ SC-gas,Lee\ IC\ Unit\ 1B}{12\ months}+\frac{mmBtu\ SC-gas,Lee\ IC\ Unit\ 1C}{12\ months}\right)\left(\frac{ton}{2000\ lb}\right)+$$

$$\left(\frac{0.0004\ lb}{mmBtu}\right)\left(\frac{mmBtu\ CC-oil,Lee\ IC\ Unit\ 1A}{12\ months}+\frac{mmBtu\ CC-oil,Lee\ IC\ Unit\ 1B}{12\ months}+\frac{mmBtu\ CC-oil,Lee\ IC\ Unit\ 1C}{12\ months}\right)\left(\frac{ton}{2000\ lb}\right)+$$

$$\left(\frac{0.0004\ lb}{mmBtu}\right)\left(\frac{mmBtu\ CC-gas,Lee\ IC\ Unit\ 1A}{12\ months}+\frac{mmBtu\ CC-gas,Lee\ IC\ Unit\ 1B}{12\ months}+\frac{mmBtu\ CC-gas,Lee\ IC\ Unit\ 1C}{12\ months}\right)\left(\frac{ton}{2000\ lb}\right)+$$

$$\left(\frac{lb\ VOCs,ES-31}{mmBtu}\right)\left(\frac{mmBtu,ES-31}{rolling\ 12\ months}\right)\left(\frac{tons}{2000\ lb}\right)+0.43^{*}\left(\frac{tons}{rolling\ 12\ months}\right)\leq 65.1\ \frac{tons}{rolling\ 12\ months}$$

where: $\left(\frac{lb\ VOCs,ES-31}{mmBtu}\right) = VOC\ Emission\ factor\ for\ reactor\ ES-31\ to\ be\ determined\ by\ the\ following\ stack\ test$:

Testing [15A NCAC 02Q .0508(f)]
Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the VOC emission limit above by conducting an initial stack test for VOC emissions, with the reactor operating within 10% of its maximum heat input rate, in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in Section 3 - General Condition JJ. Testing shall be completed within 90 days of initial start-up of the reactor (ID No. ES-31) and the results submitted according to Section 3 - General Condition JJ. Test results shall be the average of 3 valid test runs.

Test results shall be submitted as required in Section 2.1.B.1.c below and the following information for each test run shall be included:
i. VOC emissions (lb/mmBtu).
ii. Reactor heat input (mmBtu/hr).
iii. Reactor flyash raw feed rate (tons per hour).
iv. Flyash loss on ignition (% carbon).

The VOC test results (lb/mmBtu) shall be used for ES-31 to calculate the total VOC emissions each month in the above equation as soon as the test results have been completed regardless of whether the results have been approved by NCDAQ.

Sulfuric Acid
Emissions of sulfuric acid shall be determined in accordance with the following equation.

$$Total\ Emissions\ (Sulfuric\ Acid) =$$

$$\left(\frac{0.000232\ lb}{mmBtu}\right)\left(\frac{mmBtu\ SC-oil,\ Lee\ IC\ Unit\ 1A}{12\ months}+\frac{mmBtu\ SC-oil,\ Lee\ IC\ Unit\ 1B}{12\ months}+\frac{mmBtu\ SC-oil,\ Lee\ IC\ Unit\ 1C}{12\ months}\right)\left(\frac{ton}{2000\ lb}\right)+$$

$$\left(\frac{0.0000857\ lb}{mmBtu}\right)\left(\frac{mmBtu\ SC-gas,\ Lee\ IC\ Unit\ 1A}{12\ months}+\frac{mmBtu\ SC-gas,\ Lee\ IC\ Unit\ 1B}{12\ months}+\frac{mmBtu\ SC-gas,\ Lee\ IC\ Unit\ 1C}{12\ months}\right)\left(\frac{ton}{2000\ lb}\right)+$$

$$\left(\frac{0.00107\ lb}{mmBtu}\right)\left(\frac{mmBtu\ CC-oil,\ Lee\ IC\ Unit\ 1A}{12\ months}+\frac{mmBtu\ CC-oil,\ Lee\ IC\ Unit\ 1B}{12\ months}+\frac{mmBtu\ CC-oil,\ Lee\ IC\ Unit\ 1C}{12\ months}\right)\left(\frac{ton}{2000\ lb}\right)+$$

$$\left(\frac{0.000402\ lb}{mmBtu}\right)\left(\frac{mmBtu\ CC-gas,\ Lee\ IC\ Unit\ 1A}{12\ months}+\frac{mmBtu\ CC-gas,\ Lee\ IC\ Unit\ 1B}{12\ months}+\frac{mmBtu\ CC-gas,\ Lee\ IC\ Unit\ 1C}{12\ months}\right)\left(\frac{ton}{2000\ lb}\right)\leq 64.3\frac{tons}{12\ months}$$

Lead

No monitoring is required for lead.

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

c. The Permittee shall submit to the DAQ Permitting Section a summary of the results of the initial stack testing for the reactor ES-31 for CO and VOCs, that includes the information in Section 2.2.B.1.b above, and submit a complete permit application to revise the permit accordingly, no later than 30 days after completing the initial stack tests in accordance with General Condition JJ.

d. The Permittee shall submit a semi-annual summary report, acceptable to the Regional Air Quality Supervisor, of emissions of the above pollutants as applicable from each source (Lee IC Unit 1A, Lee IC Unit 1B, Lee IC Unit 1C, ES-31, ES-34 and ES-35) and the total for all sources based on the calculations above (tons per rolling consecutive 12-month period) 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. 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.

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 NO_X 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.
	NO_x 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 June 18, 2014

2.4 - Clean Air Interstate Rule (CAIR) Permit Requirements

ORIS code: 2709

The following sources are affected CAIR units:

PERMITTED SOURCE ID No.
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

A. 15A NCAC 02D .2403: NITROGEN OXIDE EMISSIONS

1. The total nitrogen oxide (NOx) emissions from the affected CAIR units listed above at the H. F. Lee Steam Electric Plant shall not exceed 1591 tons annually for 2015 and later, except as provided in 15A NCAC 02D .2408: [15A NCAC 02D .2403]
   If any of the CAIR sources listed above is a new source for which allocations have not been included in the table in 15A NCAC 02D .2403, the CAIR designated representative may submit a request to be allocated CAIR NOx allowances using the procedures in 40 CFR 96.142(c)(2) and (3).
2. The affected CAIR NOx sources shall comply with the requirements of 15A NCAC 02D .2400 using the trading program and banking set out in 40 CFR Part 96. [15A NCAC 02D .2408]
3. The owner or operator of any unit or source covered under 15A NCAC 02D .2403 shall be subject to the provisions of 40 CFR 96.106(f). [15A NCAC 02D .2403]

Monitoring/Recordkeeping/Reporting [15A NCAC 02D .2403 and 15A NCAC 02D .2407(a)(1)]

4. The Permittee shall comply with the monitoring, recordkeeping, and reporting requirements in 40 CFR 96.106(b) and (e), and 40 CFR 96 Subpart HH for each CAIR NOx unit.
5. The emissions of nitrogen oxides of a CAIR NOx source shall not exceed the number of allowances that it has in its compliance account established and administered under Rule .2408 of this Section.
6. The emissions measurements recorded and reported according to 40 CFR Part 96 Subpart HH shall be used to determine compliance by each CAIR NOx source with its emissions limitation according to 40 CFR 96.106(c) including 96.106(c)(5) and (6).
7. The provisions of 40 CFR 96.106(d) shall be used for excess emissions.

B. 15A NCAC 02D .2405: NITROGEN OXIDE EMISSIONS DURING OZONE SEASON

1. Ozone season NOx emissions from the affected CAIR units listed above at the H. F. Lee Steam Electric Plant shall not exceed 770 tons during the ozone season for 2015 and later, except as provided in 15A NCAC 02D .2408: [15A NCAC 02D .2405(a)(1) and (b)]
   The ozone season shall be defined as the period of time extending from May 1st to September 30th of each calendar year. If any of the CAIR sources listed above is a new source for which allocations have not been included in the table in 15A NCAC 02D .2405, the CAIR designated representative may submit a request to be allocated CAIR NOx ozone season allowances using the procedures in 40 CFR 96.342(c)(2) and (3).

2. The affected CAIR NOx Ozone Season sources shall comply with the requirements of 15A NCAC 02D .2400 using the trading program and banking set out in 40 CFR Part 96. [15A NCAC 02D .2408]
3. The owner or operator of any unit or source covered under 15A NCAC 02D .2405 shall be subject to the provisions of 40 CFR 96.306(f). [15A NCAC 02D .2405]

Monitoring/Recordkeeping/Reporting [15A NCAC 02D .2405 and 15A NCAC 02D .2407(a)(3)]

4. The Permittee shall comply with the monitoring, recordkeeping, and reporting requirements in 40 CFR 96.306(b) and (e), and 40 CFR 96 Subpart HHHH for each CAIR Ozone Season NOx unit.
5. The nitrogen oxide ozone season emissions of a CAIR NOx Ozone Season source shall not exceed the number of allowances that it has in its compliance account established and administered under 15A NCAC 02D .2408. For purposes of making deductions for excess emissions for the ozone season in 2008 under the NOx SIP Call (15A NCAC 02D .1400), the Administrator shall deduct allowances allocated under this Rule (15A NCAC 02D .2405) for the ozone season in 2009.
6. The emissions measurements recorded and reported according to 40 CFR Part 96 Subpart HHHH shall be used to determine compliance by each CAIR NOx Ozone Season source with its emissions limitation according to 40 CFR 96.306(c) including 96.306(c)(5) and (6).
7. The provisions of 40 CFR 96.306(d) shall be used for excess emissions.

C. 15A NCAC 02D .2404: SULFUR DIOXIDE EMISSIONS

1. The annual allocation of sulfur dioxide allowances shall be determined by EPA. The allocations for CAIR SO_2 units are listed in the table below (these allocations are from 40 CFR 73.10 except where none is given):

CAIR ID No.	ALLOCATION FOR 2010 AND LATER
Lee IC Unit No. 10	none
Lee IC Unit No. 11	none
Lee IC Unit No. 12	none
Lee IC Unit No. 13	none
Lee IC Unit No. 14	none
Lee IC Unit No. 1A	none
Lee IC Unit No. 1B	none
Lee IC Unit No. 1C	none

2. The affected CAIR SO_2 sources shall comply with the requirements of 15A NCAC 02D .2400 using the trading program and banking set out in 40 CFR Part 96. [15A NCAC 02D .2408]
3. The owner or operator of any unit or source covered under 15A NCAC 02D .2404 shall be subject to the provisions of 40 CFR 96.206(f). [15A NCAC 02D .2404]

Monitoring/Recordkeeping/Reporting [15A NCAC 02D .2404 and 15A NCAC 02D .2407(a)(2)]

4. The Permittee shall comply with the monitoring, recordkeeping, and reporting requirements in 40 CFR 96.206(b) and (e), and 40 CFR 96 Subpart HHH for each CAIR SO_2 unit.
5. The emissions of sulfur dioxides of a source described in Section 2.4.C.1 above shall not exceed the number of allowances that it has in its compliance account established and administered under Rule 15A NCAC 02D .2408.
6. The emissions measurements recorded and reported according to 40 CFR Part 96 Subpart HHH shall be used to determine compliance by each CAIR SO_2 source with its emissions limitation according to 40 CFR 96.206(c) including 96.206(c)(5) and (6).

7. The provisions of 40 CFR 96.206(d) shall be used for excess emissions.

D. CAIR Permit Application

The permit application submitted for this facility, as approved by the Department of Environmental Quality, Division of Air Quality, is part of this permit. The owner and operator of these CAIR NOx and SO_2 sources must comply with the standard requirements and special provisions set forth in the following attached application:

CAIR Permit Application dated June 18, 2014

SECTION 3 - GENERAL CONDITIONS (version 5.2, 04/03/2018)

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

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

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

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

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

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

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

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

action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

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

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

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

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

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

a. the change affects only insignificant activities and the activities remain insignificant after the change; or
b. the change is not covered under any applicable requirement.

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

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

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

Excess Emissions

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

Permit Deviations

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

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

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

2. 15A NCAC 02D .0535(g). Excess emissions during start-up and shut-down shall be considered a violation of the appropriate rule if the owner or operator cannot demonstrate that excess emissions are unavoidable.

J. **Emergency Provisions** [40 CFR 70.6(g)]
The Permittee shall be subject to the following provisions with respect to emergencies:
1. An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the facility, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the facility to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.
2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions specified in 3. below are met.
3. The affirmative defense of emergency shall be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that include information as follows:
   a. an emergency occurred and the Permittee can identify the cause(s) of the emergency;
   b. the permitted facility was at the time being properly operated;
   c. during the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the standards or other requirements in the permit; and
   d. the Permittee submitted notice of the emergency to the DAQ within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
5. This provision is in addition to any emergency or upset provision contained in any applicable requirement specified elsewhere herein.

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

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

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

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

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

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

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

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

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

T. **Insignificant Activities** [15A NCAC 02Q .0503]
Because an emission source or activity is insignificant does not mean that the emission source or activity is exempted from any applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement. The Permittee shall have available at the facility at all times and made

available to an authorized representative upon request, documentation, including calculations, if necessary, to demonstrate that an emission source or activity is insignificant.

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

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

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

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

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

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

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

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

BB. **Financial Responsibility and Compliance History [**15A NCAC 02Q .0507(d)(4)]
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(e)]

1. If the Permittee has appliances or refrigeration equipment, including air conditioning equipment, which use Class I or II ozone-depleting substances such as chlorofluorocarbons and hydrochlorofluorocarbons listed as refrigerants in 40 CFR Part 82 Subpart A Appendices A and B, the Permittee shall service, repair, and maintain such equipment according to the work practices, personnel certification requirements, and certified recycling and recovery equipment specified in 40 CFR Part 82 Subpart F.
2. The Permittee shall not knowingly vent or otherwise release any Class I or II substance into the environment during the repair, servicing, maintenance, or disposal of any such device except as provided in 40 CFR Part 82 Subpart F.
3. The Permittee shall comply with all reporting and recordkeeping requirements of 40 CFR 82.166. Reports shall be submitted to the EPA or its designee as required.

DD. **Prevention of Accidental Releases - Section 112(r)** [15A NCAC 02Q .0508(h)]

If the Permittee is required to develop and register a Risk Management Plan with EPA pursuant to Section 112(r) of the Clean Air Act, then the Permittee is required to register this plan in accordance with 40 CFR Part 68.

EE. **Prevention of Accidental Releases General Duty Clause - Section 112(r)(1) –** FEDERALLY-ENFORCEABLE ONLY

Although a risk management plan may not be required, if the Permittee produces, processes, handles, or stores any amount of a listed hazardous substance, the Permittee has a general duty to take such steps as are necessary to prevent the accidental release of such substance and to minimize the consequences of any release.

FF. **Title IV Allowances** [15A NCAC 02Q .0508(i)(1)]

This permit does not limit the number of Title IV allowances held by the Permittee, but the Permittee may not use allowances as a defense to noncompliance with any other applicable requirement. The Permittee's emissions may not exceed any allowances that the facility lawfully holds under Title IV of the Federal Clean Air Act.

GG. **Air Pollution Emergency Episode** [15A NCAC 02D .0300]

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

HH. **Registration of Air Pollution Sources** [15A NCAC 02D .0202]

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

II. **Ambient Air Quality Standards** [15A NCAC 02D .0501(c)]

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

JJ. **General Emissions Testing and Reporting Requirements** [15A NCAC 02Q .0508(i)(16)]

Emission compliance testing shall be by the procedures of Section .2600, except as may be otherwise required in Rules .0524, .0912, .1110, .1111, or .1415 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, the Permittee shall perform such testing in accordance with 15A NCAC 02D .2600 and follow the procedures outlined below:

1. The owner or operator of the source shall arrange for air emission testing protocols to be provided to the Director prior to air pollution testing. Testing protocols are not required to be pre-approved by the Director prior to air pollution testing. The Director shall review air emission testing protocols for pre-approval prior to testing if requested by the owner or operator at least **45 days** before conducting the test.

2. Any person proposing to conduct an emissions test to demonstrate compliance with an applicable standard shall notify the Director at least **15 days** before beginning the test so that the Director may at his option observe the test.
3. The owner or operator of the source shall arrange for controlling and measuring the production rates during the period of air testing. The owner or operator of the source shall ensure that the equipment or process being tested is operated at the production rate that best fulfills the purpose of the test. The individual conducting the emission test shall describe the procedures used to obtain accurate process data and include in the test report the average production rates determined during each testing period.
4. Two copies of the final air emission test report shall be submitted to the Director not later than **30 days** after sample collection unless otherwise specified in the specific conditions. The owner or operator may request an extension to submit the final test report. The Director shall approve an extension request if he finds that the extension request is a result of actions beyond the control of the owner or operator.
    a. The Director shall make the final determination regarding any testing procedure deviation and the validity of the compliance test. The Director may:
        i. Allow deviations from a method specified under a rule in this Section if the owner or operator of the source being tested demonstrates to the satisfaction of the Director that the specified method is inappropriate for the source being tested.
        ii. Prescribe alternate test procedures on an individual basis when he finds that the alternative method is necessary to secure more reliable test data.
        iii. Prescribe or approve methods on an individual basis for sources or pollutants for which no test method is specified in this Section if the methods can be demonstrated to determine compliance of permitted emission sources or pollutants.
    b. The Director may authorize the Division of Air Quality to conduct independent tests of any source subject to a rule in this Subchapter to determine the compliance status of that source or to verify any test data submitted relating to that source. Any test conducted by the Division of Air Quality using the appropriate testing procedures described in Section 02D .2600 has precedence over all other tests.

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

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

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

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

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

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

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

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

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

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

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

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

ATTACHMENT

List of Acronyms

AOS	Alternate Operating Scenario
BACT	Best Available Control Technology
Btu	British thermal unit
CAA	Clean Air Act
CAIR	Clean Air Interstate Rule
CEM	Continuous Emission Monitor
CFR	Code of Federal Regulations
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
HAP	Hazardous Air Pollutant
MACT	Maximum Achievable Control Technology
NAA	Non-Attainment Area
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
OAH	Office of Administrative Hearings
PM	Particulate Matter
PM_{10}	Particulate Matter with Nominal Aerodynamic Diameter of 10 Micrometers or Less
POS	Primary Operating Scenario
PSD	Prevention of Significant Deterioration
RACT	Reasonably Available Control Technology
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
tpy	Tons Per Year
VOC	Volatile Organic Compound