



North Carolina Department of Environment and Natural Resources
Division of Air Quality

Beverly Eaves Perdue
Governor

B. Keith Overcash, P.E.
Director

Dee Freeman
Secretary

XX XX, 2010

Mr. Scott Dial
Combined Cycle Site Manager
Plant Rowan County
Southern Power Company
5755 North Carolina 801 Highway
Salisbury, NC 28147

Dear Mr. Dial:

SUBJECT: Air Quality Permit No. 08758T14
Facility ID: 8000163
Plant Rowan County
Salisbury, North Carolina
Rowan County
Fee Class: Title V

In accordance with your completed Air Quality Permit Application for significant modification of your Title V permit as per application received September 9, 2009, we are forwarding herewith Air Quality Permit No. 08758T14 to Plant Rowan County, Salisbury, Rowan 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 2Q .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.

Permitting Section

1641 Mail Service Center, Raleigh, North Carolina 27699-1641
2728 Capital Blvd., Raleigh, North Carolina 27604
Phone: 919-715-6235 / FAX 919-733-5317 / Internet: www.ncair.org

One
North Carolina
Naturally

Mr. Scott Dial

XX XX, 2010

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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 GS 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 GS 143-215.108A and may subject the Permittee to civil or criminal penalties as described in GS 143-215.114A and 143-215.114B.

This Air Quality Permit shall be effective from XX XX, 2010 until June 30, 2013 is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein. The Phase II Acid Rain permit requirements shall be effective from January 1, 2006 until December 31, 2010.

Should you have any questions concerning this matter, please contact Jeff Twisdale at (919) 715-6260.

Sincerely yours,

Donald R. van der Vaart, Ph.D., P.E., J.D.
Chief

Enclosure

c: Gregg Worley, EPA Region 4
Mooresville Regional Office
Central Files

Changes to the Permit

The following table lists the changes associated with this permit action:

Old Page No. [Air Permit No. 08758T13]	New Page No. [Air Permit No. 08758T14]	Condition No.	Changes
NA	NA	Cover letter	Changed dates, permit and app number, etc. Inserted note indicating this is a significant modification of the Title V permit; Removed notification statement re: assess nonattainment added fee. Removed copy for G. Woods
NA	NA	Insignificant List and Table of Changes	Removed heater (ID No. I-7) from insignificant activity list and updated the Table of Changes
NA	NA	Permit Cover	Changed dates, permit and app number, etc.
Page 4	Page 3	SECTION 1 Source Table	Added 112(j) identifier to the auxiliary boiler (ID No. ES-6)
Page 4	Page 4	SECTION 1 Source Table	Added process heater (ID No. ES-8) and 112(j) identifier
Page 23	Page 24	Section 2.1 D.	Revised Table for 112(j) affected boiler (ID No. ES-6) by adding 2D .1109
NA	Pages 27	Section 2.1 D.6.	Added new condition for 2D .1109 requiring best combustion practices for 112(j)
NA	Pages 43 - 45	Section 2.1 G.1 - 4	Added new Table and specific conditions for the process heater (ID No. ES-8)
Page 45-53	Page 50-58	Section 3 General Conditions	Inserted New General Conditions (v 3.1) with revised BB. citation and addition of NN. title and citations

List of Insignificant Activities under 15A NCAC 2Q .0503(8)

Emission Source I.D. No.	Emission Source Description
I-ST1	Seven, 6,200 gallons each, lube oil reservoirs
I-ST2	Five, 500 gallons each, false start drain tanks
I-ST3	Seven, 5,000 gallons each, CT wash tanks
I-ST4	Four, 16,500 gallons each, 19.5 % aqueous ammonia tanks
I-ST5	One 6,000 gallon sodium hypochlorite (bleach) tank
I-ST6	One 6,000 gallon sulfuric acid tank

State of North Carolina,
Department of Environment,
and Natural Resources



Division of Air Quality

AIR QUALITY PERMIT

Permit No.	Replaces Permit No.	Effective Date	Expiration Date
08758T14	08758T13	XX XX, 2010	June 30, 2013

* Effective dates for the Phase II Acid Rain portion of this permit may differ from these dates.

Until such time as this permit expires or is modified or revoked, the below named Permittee is permitted to 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 2D and 2Q, and other applicable Laws.

Pursuant to Title 15A NCAC, Subchapter 2Q, 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: **Plant Rowan County**
Facility ID: **8000163**

Facility Site Location: **5755 North Carolina 801 Highway**
City, County, State, Zip: **Salisbury, Rowan County, NC 28144**

Mailing Address: **5755 North Carolina 801 Highway**
City, State, Zip: **Salisbury, NC 28144**

Application Number: **8000163.09C**
Complete Application Date: **September 9, 2009**
Primary SIC Code: **4911**

Division of Air Quality,
Regional Office Address: **Mooreville Regional Office**
610 East Center Avenue, Suite 301
Mooreville, NC 28115

Permit issued this the XX of XX, 2010.

Donald R. van der Vaart, Ph.D., P.E., J.D., Chief, Air Permits Section
By Authority of the Environmental Management Commission

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ATTACHMENTS

List of Acronyms

CAIR Permit Application dated July 3, 2007

Acid Rain Permit Application dated June 14, 2005

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

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

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device
Unit 1, Unit 2, and Unit 3 (PSD, NSPS Subpart GG, MACT Subpart YYYYY)	Three natural gas/No. 2 fuel oil-fired simple-cycle internal combustion turbines (1,628 million Btu per hour heat input rate each, when firing natural gas, 1,875 million Btu per hour heat input rate each, when firing No. 2 fuel oil), each equipped with dual fuel dry Low-NO _x combustors and having water injection capability for NO _x control	NA	NA
Unit 4*** (PSD, NSPS Subpart GG, MACT Subpart YYYYY)	One natural gas/No. 2 fuel oil-fired combined-cycle internal combustion turbine (1,628 million Btu per hour heat input rate, when firing natural gas, 1,875 million Btu per hour heat input rate, when firing No. 2 fuel oil), equipped with a heat recovery steam generator and a steam turbine, and dual fuel dry Low-NO _x combustors and having water injection capability for NO _x control	Unit 4 SCR	Selective catalytic reduction
Unit 5*** (PSD, NSPS Subpart GG, MACT Subpart YYYYY)	One natural gas-fired combined-cycle internal combustion turbine (1,628 million Btu per hour heat input), equipped with a heat recovery steam generator and a steam turbine, and dual fuel dry Low-NO _x combustors	Unit 5 SCR	Selective catalytic reduction
TK-1* and TK-2*	Two No. 2 fuel oil, fixed-roof storage tanks (not to exceed 3.6 million gallons capacity each, actual capacity 3.1 million gallons each) with atmospheric vents	NA	NA
Tower 1 (PSD)	One cooling tower with drift eliminators (123,220 gallons per minute recirculating water flow rate)	NA	NA
ES-6 (NSPS Subpart Dc, RACT, 112(j))	One firetube design natural gas-fired auxiliary boiler (16.74 million Btu per hour maximum heat input rate)	NA	NA

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device
ES6A** and ES6B** (PSD, NAA NSR, NSPS Subpart KKKK, MACT Subpart YYYY)	Two natural gas-fired combined-cycle internal combustion turbines, each equipped with a heat recovery steam generator and dry Low-NO _x combustors, both equipped with a common steam turbine (1,914 million Btu per hour heat input rate each without duct firing and 2,456 million Btu per hour heat input rate each with duct firing)	CD6A-SCR** and CD6B-SCR** CD6A-Ox Cat** and CD6B-Ox Cat**	Selective catalytic reduction in series with catalytic oxidation
ES7 (PSD)	One multi-cell cooling tower with drift eliminators (145,000 gallons per minute recirculation water flow rate)	NA	NA
ES-8 (112(j))	One natural gas-fired process heater (4.0 million Btu per hour maximum heat input rate)	NA	NA

* These sources (ID Nos. TK-1 and TK-2) are listed for information purposes only. They have no applicable requirements.

** These air emission sources (ID Nos. ES-6A and ES-6B) and control devices (ID Nos. CD6A-SCR, CD6B-SCR, CD6A-Ox Cat, and CD6B-Ox Cat) are listed as a 15A NCAC 2Q .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.

*** The replacement of existing inlet air foggers with evaporative coolers on the combustion turbines (ID Nos. Unit 4 and Unit 5) is listed as a minor modification per 15A NCAC 2Q .0515. The compliance certification as described in General Condition P is required. Unless otherwise notified by NC DAQ, the affected terms of this permit (excluding the permit shield as described General Condition R) for these sources shall become final on March 7, 2009. Until this date, the affected permit terms herein reflect the proposed operating language that the Permittee shall operate this source under pursuant to 15A NCAC 2Q .0515(f).

SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS

2.1 - Emission Source(s) Specific Limitations and Conditions

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

A. Three natural gas/No. 2 fuel oil-fired simple-cycle internal combustion turbines (ID Nos. Unit 1, Unit 2, and Unit 3) with water injection capability for NO_x control (ID Nos. CD-U1, CD-U2, and CD-U3) respectively

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 2D .0521
Sulfur dioxide Nitrogen oxides	As defined in specific condition	15A NCAC 2D .0524 (40 CFR 60 Subpart GG)
Opacity Nitrogen oxides Sulfur dioxide Carbon monoxide Volatile organic compounds Particulates/PM ₁₀ Sulfuric acid	As defined in specific condition	15A NCAC 2D .0530
Hazardous air pollutants	National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines -No requirements per 63.6090(b)(4)	15A NCAC 2D .1111 (40 CFR 63, Subpart YYYY)
Nitrogen oxides	See Section 2.3 A.	15A NCAC 2D .2403 and 2D.2405
Toxic air pollutants	State-enforceable only See Section 2.2 A.2	15A NCAC 2D .1104

1. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources (**ID Nos. Unit 1 through Unit 3**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

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

- c. No monitoring/recordkeeping is required for visible emissions from the firing of natural gas in these sources (**ID Nos. Unit 1 through Unit 3**).

- d. To assure compliance, prior to these sources (**ID Nos. Unit 1 through Unit 3**) operating more than 1100 hours using No. 2 fuel oil and for each subsequent 1100 hours of operation after the last test (excluding any hours while firing natural gas), the Permittee shall observe the emission points of these sources (**ID Nos. Unit 1 through Unit 3**) for any visible emissions above normal. The observations must be made for each 1100 operating hour period to ensure compliance with this requirement. If visible emissions 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 emissions points of the emission source in accordance with 15A NCAC 2D .2601 (Method 9) for 12 minutes is below the limit given in Section 2.1 A.1.a above.

If the above-normal emissions are not corrected per i. above or if the demonstration in ii. above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

- e. 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.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

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

- f. No reporting is required for visible emissions from the firing of natural gas in these sources (**ID Nos. Unit 1 through Unit 3**).
- g. The Permittee shall submit a summary report of the observations 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 2D .0524: NEW SOURCE PERFORMANCE STANDARDS

- a. For these sources (**ID Nos. Unit 1 through Unit 3**), the Permittee shall comply with all applicable provisions, including the requirements for emission standards, notification, testing, reporting, recordkeeping, and monitoring in accordance with 15A NCAC 2D .0524, "New Source Performance Standards (NSPS)" as promulgated in 40 CFR Part 60, Subpart GG, including Subpart A "General Provisions".
- b. As required by 15A NCAC 2D .0524, for these sources (**ID Nos. Unit 1 through Unit 3**), the Permittee shall comply with the following emission standards at all times, except during start-up, shutdown, and malfunction:

Affected Facility	Pollutant	Emission Limits
Unit 1 through Unit 3	Nitrogen oxides	0.011% by volume at 15% O ₂ and on a dry basis (110 ppmvd at 15% O ₂), while firing natural gas or No. 2 fuel oil ¹
Unit 1 through Unit 3	Sulfur dioxide	0.015% by volume at 15% O ₂ and on a dry basis (150 ppmvd at 15% O ₂), while firing natural gas or No. 2 fuel oil or 0.8% by weight sulfur (8,000 ppmw) in natural gas or No. 2 fuel oil

Testing [15A NCAC 2D .2601]

- 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 A.2.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

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

- d. The Permittee is subject to the following monitoring and recordkeeping requirements:
- i. As per 60.334(a), for these sources (**ID Nos. Unit 1 through Unit 3**) which are using water injection to control NO_x emissions, the Permittee shall install, calibrate, maintain and operate a continuous monitoring system to monitor and record fuel consumption and the ratio of water to fuel being fired. If the fuel consumption or the ratio of water to fuel being fired is not monitored and recorded continuously for each source (**ID Nos. Unit 1 through Unit 3**), the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524. If any unit operating hour, excluding the unit operating hour during start-up, shut-down or malfunction, for which the average water to fuel ratio, as measured by the continuous monitoring system, falls below the acceptable water to fuel ratio needed to demonstrate compliance with the limit given in Section 2.1 A.2.b above, as established during the performance test required in 60.8 or any performance test required in Appendix E to Part 75, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524. If any unit operating hour, including the unit operating hour during start-up, shut-down or malfunction, for which the average water to fuel ratio, as measured by the continuous monitoring system, falls below the acceptable water to fuel ratio needed to demonstrate compliance with the limit given in Section 2.1 A.2.b above, as established during the performance test required in 60.8 or any performance test required in Appendix E to Part 75, the Permittee may be deemed in noncompliance with 15A NCAC 2D .0524, specifically, with the requirements of 40 CFR 60.11(d).
 - ii. As per 60.334(b), for these sources (**ID Nos. Unit 1 through Unit 3**) which have commenced construction, reconstruction or modification after October 3, 1977 but before July 8, 2004, and which uses water injection to control NO_x emissions, as an alternative to operating the continuous monitoring system described in Section 2.1 A.2.d.i above, the Permittee may install, certify, maintain, operate, and quality-assure a continuous emission monitoring system (CEMS) consisting of NO_x and O₂ monitors, according to the requirements of 40 CFR 60 Appendix B or 40 CFR 75. The CEMS shall comply with all applicable requirements of 60.334(b). If the CEMS does not comply with the requirements of 60.334(b) or the NO_x emissions from these turbines exceed the emission limit in Section 2.1 A.2.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

¹ Emission limit of nitrogen oxides for these sources (**ID Nos. Unit 1 through Unit 3**) is based upon manufacturer's rated heat rates of 9,330 btu/kw-hr for No. 2 fuel oil and 9,290 btu/kw-hr for natural gas, at a peak load of 100%. The emission limit accounts for no credit for fuel-bound nitrogen in either natural gas or No. 2 fuel oil (i.e., F = 0% by volume).

- iii. As per 60.334(c), for these sources (**ID Nos. Unit 1 through Unit 3**) which have commenced construction, reconstruction or modification after October 3, 1977, but before July 8, 2004, and which does not use water injection to control NO_x emissions, the Permittee may, for purposes of determining excess emissions, use a CEMS that meets the requirements of 60.334(b). The Permittee has previously submitted and received DAQ approval of a petition for an alternative procedure in 40 CFR 75 Appendix E, for continuously monitoring compliance with the applicable NO_x emission limit in Section 2.1 A.2.b above. Hence, as an alternate to the requirement to use CEMS to monitor NO_x emissions, the Permittee has elected to continue to use the approved procedure in 40 CFR 75 Appendix E. If the Permittee does not comply with the requirements of 40 CFR 75 Appendix E or the monitoring under 40 CFR 75 Appendix E indicates NO_x emissions except during start-up, shutdown, and malfunction from the turbines exceed the emission limit in Section 2.1 A.2.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.
- iv. As per 60.334(g), the water to fuel ratio that is required to be continuously monitored for these sources (**ID Nos. Unit 1 through Unit 3**) in Section 2.1 A.2.d.i above, shall be monitored during the performance test required under 60.8, to establish acceptable values and ranges. The Permittee may supplement the performance test data with engineering analyses, design specifications, manufacturer's recommendations and other relevant information to define the acceptable parametric ranges more precisely. The Permittee shall develop and keep on-site a parameter monitoring plan, which explains the procedures used to document proper operation of the NO_x emission controls. The plan shall include the parameter(s) monitored and the acceptable range(s) of the parameter(s) as well as the basis for designating the parameter(s) and acceptable range(s). Any supplemental data such as engineering analyses, design specifications, manufacturer's recommendations and other relevant information shall be included in the monitoring plan. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if the parameter monitoring plan is not developed or kept on-site. If these sources (**ID Nos. Unit 1 through Unit 3**) are also subject to 40 CFR 75 and that use the low mass emissions methodology in 75.19 or the NO_x emission measurement methodology in Appendix E to 40 CFR 75, the Permittee may meet the requirements of this Section by developing and keeping on-site (or at a central location for unmanned facilities) a quality-assurance plan, as described in 75.19(e)(5) or in Section 2.3 of Appendix E and Section 1.3.6 of Appendix B to 40 CFR 75. If the Permittee does not comply with the requirements of 75.19 or Appendix E to 40 CFR 75, as applicable, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.
- v. As per 60.334(h)(2), monitoring for nitrogen content of the natural gas and fuel oil, combusted in these sources (**ID Nos. Unit 1 through Unit 3**) is not required².
- vi. As per 60.334(h)(3), the Permittee may elect not to monitor the total sulfur content of the natural gas combusted in these sources (**ID Nos. Unit 1 through Unit 3**), even though a DAQ approved existing custom fuel monitoring schedule requires the Permittee to monitor natural gas combusted in these sources (**ID Nos. Unit 1 through Unit 3**) using the procedures of 40 CFR 75 Appendix D in Section 2.1 A.2.d.vii below. If provision of this Section is elected, the Permittee shall use one of the following sources of information to make the required demonstration that the gaseous fuel combusted in these sources (**ID Nos. Unit 1 through Unit 3**) does qualify as a natural gas in 60.331(u):
- A. The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20 grains/100 scf or less; or

² The Permittee has not claimed any credit for fuel bound nitrogen in either natural gas or fuel oil for establishing the emission limit for NO_x.

- B. Representative fuel sampling data, which show that the sulfur content of the gaseous fuel does not exceed 20 grains/100 scf. At a minimum, the amount of fuel sampling data specified in Section 2.3.1.4 or 2.3.2.4 of Appendix D to 40 CFR 75 is required. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524, if the gaseous fuel fired in the combustion turbines does not qualify as a natural gas in 60.331(u) or the Permittee does not make the above demonstration, or the SO₂ emissions excluding the emissions during start-up, shutdown, and malfunction from the turbines exceed the emission limit in Section 2.1 A.2.b above.
- vii. As per 60.334(h)(4) and the DAQ approved custom fuel monitoring schedule, for these sources (**ID Nos. Unit 1 through Unit 3**), the Permittee shall sample each tank of fuel oil 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 for fuel oil shall be analyzed for sulfur content in accordance with 40 CFR Part 75, Appendix D. In addition, the Permittee shall sample and analyze for sulfur content of natural gas in accordance with 40 CFR Part 75, Appendix D. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524, if the fuel oil or natural gas fired in the combustion turbines does not comply with the sulfur content limit in Section 2.1 A.2.b above or the SO₂ emissions excluding the emissions during start-up, shutdown, and malfunction from these turbines exceed the emission limit in Section 2.1 A.2.b above, or the Permittee does not comply with the requirements of DAQ approved custom fuel monitoring schedule.

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

- e. The Permittee is required to REPORT to the Regional Supervisor, DAQ, in WRITING, of the following:
- i. For each source (**ID Nos. Unit 1 through Unit 3**), required to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content or fuel nitrogen content under 40 CFR 60 Subpart GG, the Permittee shall submit reports of excess emissions and monitor downtime, in accordance with 60.7(c). Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. For the purpose of reports required under 60.7(c), periods of excess emissions and monitor downtime that shall be reported are defined below [60.334(j)]:
- A. When using water to fuel ratio monitoring, excess emissions for NO_x shall be defined as any unit operating hour for which the average water to fuel ratio, as measured by the continuous monitoring system, falls below the acceptable water to fuel ratio needed to demonstrate compliance with Section 2.1 A.2.b above, as established during the performance test required in 60.8 or any performance test required in Appendix E to Part 75. Any unit operating hour in which no water is injected into the turbine shall also be considered an excess emission [60.334(j)(1)(i)(A)].
- B. When using water to fuel ratio monitoring, a period of monitor downtime for NO_x shall be defined as any unit operating hour in which water is injected into the turbine, but the essential parametric data needed to determine water to fuel ratio are unavailable or invalid [60.334(j)(1)(i)(B)].
- C. When using water to fuel ratio monitoring, each excess emission report for NO_x shall include the average water to fuel ratio, average fuel consumption, ambient conditions (temperature, pressure, and humidity), gas turbine load, and (if applicable) the nitrogen content of the fuel during each excess emission. The Permittee does not have to report ambient conditions, if Permittee opts to use the worst case ISO correction factor as specified in 60.334(b)(3)(ii), or if Permittee is not using the ISO correction equation under the provisions of 60.335(b)(1) [60.334(j)(1)(i)(C)].

- D. When using NO_x and diluent CEMS, excess emissions for NO_x shall be defined as any unit operating hour in which the 4-hour rolling average NO_x concentration exceeds the emission limit in Section 2.1 A.2.b above. For the purposes of this Subpart, a “4-hour rolling average NO_x concentration” is the arithmetic average of the average NO_x concentration measured by the CEMS for a given hour (corrected to 15 percent O₂) and the three unit operating hour average NO_x concentrations immediately preceding that unit operating hour [60.334(j)(1)(iii)(A)].
 - E. When using NO_x and diluent CEMS, a period of monitor downtime for NO_x shall be defined as any unit operating hour in which sufficient data are not obtained to validate the hour, for either NO_x concentration or diluent (or both) [60.334(j)(1)(iii)(B)].
 - F. When using NO_x and diluent CEMS, each excess emission report for NO_x shall include the ambient conditions (temperature, pressure, and humidity) at the time of the excess emission period and (if the owner or operator has claimed an emission allowance for fuel bound nitrogen) the nitrogen content of the fuel during the period of excess emissions. The Permittee does not have to report ambient conditions, because the Permittee has elected not to use the optional ISO correction equation [60.334(j)(1)(iii)(C)].
 - G. When not using water to fuel ratio monitoring and not using NO_x and diluent CEMS, excess emissions for NO_x shall be defined as 4-hour rolling unit operating hour average in which any monitored parameter does not achieve the target value or is outside the acceptable range in the quality assurance plan in Section 2.3 of Appendix E to 40 CFR 75.
 - H. When not using water to fuel ratio monitoring and not using NO_x and diluent CEMS, a period of monitor downtime shall be a unit operating hour in which any of the required parametric data are either not recorded or are invalid.
 - I. When the Permittee is required to monitor the sulfur content of the fuel in Section 2.1 A.2.d.vii above, excess emissions for SO₂, while sampling of gaseous fuel and fuel oil samples obtained using daily sampling, flow proportional sampling, or sampling from the unit's storage tank, shall be defined as 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 gas turbine exceeds 0.8 weight percent and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit. The requirement of this Section does not apply to natural gas, if the Permittee elects not to monitor the total sulfur content of the natural gas as per Section 2.1 A.2.d.vi above [60.334(j)(2)(i)].
 - J. When the Permittee is required to monitor the sulfur content of the fuel in Section 2.1 A.2.d.vii above, a period of monitor downtime for SO₂ shall begin when a required sample is not taken by its due date. A period of monitor downtime shall also begin on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime shall include only unit operating hours, and ends on the date and hour of the next valid sample. The requirement of this Section does not apply to natural gas, if the Permittee elects not to monitor the total sulfur content of the natural gas as per Section 2.1 A.2.d.vi above [60.334(j)(2)(iii)].
- ii. The Permittee shall submit all reports required under **60.7(c)** for these sources (**ID Nos. Unit 1 through Unit 3**), postmarked by the 30th day following the end of each calendar quarter [60.334(j)(5)].
 - iii. For these sources (**ID Nos. Unit 1 through Unit 3**), the Permittee shall submit the results of sampling for sulfur content of No. 2 fuel oil fired, and the natural gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract or the results of sampling of natural gas, as appropriate, postmarked by the 30th day following the end of each calendar quarter.

The quarterly reports, acceptable to the Regional Air Quality Supervisor, shall be postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and October 30 for the calendar year for the preceding three-month period between July and September.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if the reporting requirements in conditions ii. and iii. are not met.

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

3. 15A NCAC 2D .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 source (**ID No. Unit 1 through Unit 3**) shall not exceed:

AFFECTED SOURCE	POLLUTANT	BACT EMISSION LIMITS ^a		BACT CONTROLS
		Natural Gas	No. 2 Fuel Oil	
		lb/mmBtu ppm	lb/mmBtu ppm	
Unit 1 through Unit 3	Opacity	20%	20%	combustion control
	Nitrogen oxides	0.045 10.5 ppmvd ^b (24-hour rolling average) ^c	0.176 42 ppmvd ^b (24-hour rolling average) ^c	natural gas: dry-low NO _x fuel oil: water injection
	Sulfur dioxide	0.0006	0.0515	0.05% sulfur fuel oil
	Carbon monoxide	0.018 9 ppmvd	0.037 20 ppmvd	combustion control
	VOCs	0.0015 1.4 ppmvw	0.004 3.5 ppmvw	combustion control
	Particulates/PM ₁₀ (front half)	0.0055	0.009	combustion control
	sulfuric acid		fuel oil sulfur content	0.05% sulfur fuel oil

a BACT limits shall apply at all times except as provided under Section 2.1 A.3.a.ii.
 b ppmvd = parts per million by volume on a dry basis at 15% O₂.
 c 24-hour rolling average is calculated using only actual operating hours (periods of zero emissions when not operating are not included).

- ii. Emissions resulting from start-up, shutdown or malfunction above those given in Section 2.1 A.3.a.i are permitted provided that optimal operational practices are adhered to and periods of excess emissions are minimized. For the simple-cycle turbines, periods of excess emissions due to start-up and/or shutdown or operation below 50% load shall not exceed two hours in any 24-hour block period beginning at midnight. Start-up is defined as the period from initial firing to 50% load. Shutdown is defined as the period from 50% load to flame out.
- b. The following emission limits apply in order to demonstrate compliance with the National Ambient Air Quality Standards as required by 15A NCAC 2D .0530; 40 CFR 51.166(k):

AFFECTED SOURCE	POLLUTANT	EMISSION LIMIT				
		Annual (tons/yr) ^a	per 24-hour (lb)	per 8-hour (lb)	per 3-hour (lb)	per 1-hour (lb)
Unit 1 through Unit 5, total	nitrogen dioxide	1224.4				
	sulfur dioxide	257.3	11,580		1447.5	
	carbon monoxide			2680		335
	particulates/PM ₁₀ (front half)	125.8	2040			

^a Tons per rolling consecutive 12-month period. Annual emissions for the combustion turbines are for all five turbines firing fuel oil for 1000 hours per year, three simple-cycle turbines firing natural gas for 1000 hours per year and two combined-cycle turbines firing natural gas for 7760 hours per year, at 100% load.

Testing [15A NCAC 2D .2601]

- 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 A.3.a.i above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

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

- d. The maximum annual hours of operation for each source (**ID Nos. Unit 1 through Unit 3**) shall not exceed 1000 full load equivalent hours per rolling consecutive 12-month period when firing No. 2 fuel oil.
- e. The maximum annual hours of operation for each source (**ID Nos. Unit 1 through Unit 3**) shall not exceed 2000 full load equivalent hours per rolling consecutive 12-month period.
- f. The Permittee shall record and maintain records of the actual number of hours of operation, and the amounts of each fuel burned during each day for each source (**ID Nos. Unit 1 through Unit 3**) in accordance with 40 CFR Part 75. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the above records are not maintained.
- g. Only natural gas shall be burned during summer months (April through October) 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. No more than three sources (**ID Nos. Unit 1 through Unit 4**) shall burn No. 2 fuel oil simultaneously.
- i. The sulfur content of the No. 2 fuel oil shall not exceed 0.05 percent sulfur by weight.
- j. Water injection shall be used when the sources (**ID Nos. Unit 1 through Unit 4**) are firing No. 2 fuel oil only.
- k. The Permittee shall monitor operations to demonstrate compliance with the BACT emission limits as follows:
 - i. Determine the sulfur content of the fuel being fired in each source (**ID No. Unit 1 through Unit 4**) in accordance with Section 2.1 A.2.d.vii above.

- ii. Determine nitrogen oxide emissions as specified in 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. Note: If Appendix E is being used in lieu of a NO_x 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.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the sulfur content of the fuel is not monitored or the nitrogen oxide emissions are not monitored.

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

- i. The Permittee shall submit in writing the following reports postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June:
 - i. periods of excess emissions for sulfur dioxide for any daily period during which the sulfur content of the No. 2 fuel oil being fired exceeds 0.05 percent by weight, within 30 days after each calendar year quarter for the previous 3-month period; and
 - ii. periods of excess emissions for nitrogen oxides for any 24-hour rolling averaging period during which the concentrations exceed 0.045 lb/mmBtu (10.5 ppmvd) when firing natural gas and 0.176 lb/mmBtu (42 ppmvd) when firing No. 2 fuel oil, as determined by the procedure specified in 40 CFR Part 75 Appendix E, postmarked within 30 days after each calendar year quarter for the previous 3-month period. The 24-hour rolling average is calculated using only actual operating hours (periods of zero emissions when not operating are not included). A valid hourly emission rate shall be calculated for each hour in which at least two NO_x concentrations are obtained at loads above 50 percent at least 15 minutes apart.

B. One natural gas/No. 2 fuel oil-fired combined-cycle internal combustion turbine (ID No. Unit 4) with associated SCR (ID No. Unit 4 SCR)

One natural gas-fired combined-cycle internal combustion turbine (ID No. Unit 5) with associated SCR (ID No. Unit 5 SCR)

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Visible emissions	20 percent opacity	15A NCAC 2D .0521
Sulfur dioxide Nitrogen oxides	As defined in specific condition	15A NCAC 2D .0524 (40 CFR 60 Subpart GG)
Opacity Nitrogen oxides Sulfur dioxide Carbon monoxide Volatile organic compounds Particulates/PM ₁₀ Sulfuric acid Ammonia	As defined in specific condition	15A NCAC 2D .0530
Nitrogen oxides (as NO ₂) PM/PM10	As defined in specific condition	15A NCAC 2D .0530(u)

Regulated Pollutant	Limits/Standards	Applicable Regulation
Nitrogen oxides	As defined in specific condition	15A NCAC 2D .0531(o)
Hazardous air pollutants	National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines -No requirements per 63.6090(b)(4)	15A NCAC 2D .1111 (40 CFR 63, Subpart YYYY)
Nitrogen oxides	See Section 2.2 A.	15A NCAC 2D .2403
Toxic air pollutants	State-enforceable only See Section 2.2 A.2	15A NCAC 2D .1104

1. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources (**ID Nos. Unit 4 and Unit 5**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 B.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

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

- c. No monitoring/recordkeeping is required for visible emissions from the firing of natural gas in these sources (**ID Nos. Unit 4 and Unit 5**).
- d. To assure compliance, prior to these sources (**ID Nos. Unit 4 and Unit 5**) operating more than 1100 hours using No. 2 fuel oil and for each subsequent 1100 hours of operation after the last test (excluding any hours while firing natural gas), the Permittee shall observe the emission points of these sources (**ID Nos. Unit 4 and Unit 5**) for any visible emissions above normal. The observations must be made for each 1100 operating hour period to ensure compliance with this requirement. If visible emissions 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 emissions points of the emission source in accordance with 15A NCAC 2D .2601 (Method 9) for 12 minutes is below the limit given in Section 2.1 B.1.a above.

If the above-normal emissions are not corrected per i. above or if the demonstration in ii. above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

- e. 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.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

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

- f. No reporting is required for visible emissions from the firing of natural gas in these sources (**ID Nos. Unit 4 and Unit 5**).
- g. The Permittee shall submit a summary report of the observations 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 2D .0524: NEW SOURCE PERFORMANCE STANDARDS

- a. For these sources (**ID Nos. Unit 4 and Unit 5**), the Permittee shall comply with all applicable provisions, including the requirements for emission standards, notification, testing, reporting, recordkeeping, and monitoring in accordance with 15A NCAC 2D .0524, "New Source Performance Standards (NSPS)" as promulgated in 40 CFR Part 60, Subpart GG, including Subpart A "General Provisions."
- b. As required by 15A NCAC 2D .0524, for these sources (**ID Nos. Unit 4 and Unit 5**), the Permittee shall comply with the following emission standards at all times, except during start-up, shutdown, and malfunction:

Affected Facility	Pollutant	Emission Limits
Unit 4 and Unit 5	Nitrogen oxides	0.011% by volume at 15% O ₂ and on a dry basis (110 ppmvd at 15% O ₂), while firing natural gas or No. 2 fuel oil ³
Unit 4 and Unit 5	Sulfur dioxide	0.015% by volume at 15% O ₂ and on a dry basis (150 ppmvd at 15% O ₂), while firing natural gas or No. 2 fuel oil or 0.8% by weight sulfur (8,000 ppmw) in natural gas or No. 2 fuel oil

Testing [15A NCAC 2D .2601]

- 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 B.2.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

³ Emission limit of nitrogen oxides for these sources (**ID Nos. Unit 4 and Unit 5**) is based upon manufacturer's rated heat rates of 9,330 btu/kw-hr for No. 2 fuel oil and 9,290 btu/kw-hr for natural gas, at a peak load of 100%. The emission limit accounts for no credit for fuel-bound nitrogen in either natural gas or No. 2 fuel oil (i.e., F = 0% by volume).

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

- d. The Permittee is subject to the following monitoring and recordkeeping requirements:
- i. As per 60.334(b), for these sources (**ID Nos. Unit 4 and Unit 5**) which have commenced construction, reconstruction or modification after October 3, 1977 but before July 8, 2004, and which uses water injection to control NO_x emissions, as an alternative to operating the continuous monitoring system described in 60.334(a), the Permittee has elected to install, certify, maintain, operate, and quality-assure a continuous emission monitoring system (CEMS) consisting of NO_x and O₂ monitors, according to the requirements of 40 CFR 60 Appendix B or 40 CFR 75. The CEMS shall comply with all applicable requirements of 60.334(b). If the CEMS does not comply with the requirements of 60.334(b) or the NO_x emissions excluding the emissions during start-up, shutdown, and malfunction from the turbines exceed the emission limit in Section 2.1 B.2.b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

If the NO_x emissions during start-up, shutdown, and malfunction from the turbines exceed the emission limit in Section 2.1 B.2.b above, the Permittee may be deemed in noncompliance with 15A NCAC 2D .0524, specifically with the requirements of 40 CFR 60.11(d).

- ii. As per 60.334(c), for these sources (**ID Nos. Unit 4 and Unit 5**) which have commenced construction, reconstruction or modification after October 3, 1977, but before July 8, 2004, and which does not use water injection to control NO_x emissions, the Permittee has elected, for purposes of determining excess emissions, a CEMS that meets the requirements of 60.334(b). If the CEMS does not comply with the requirements of 60.334(b) or the NO_x emissions excluding the emissions during start-up, shutdown, and malfunction from the turbines exceed the emission limit in Section 2.1 B.2.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

If the NO_x emissions during start-up, shutdown, and malfunction from the turbines exceed the emission limit in Section 2.1 B.2.b above, the Permittee may be deemed in noncompliance with 15A NCAC 2D .0524, specifically with the requirements of 40 CFR 60.11(d).

- iii. As per 60.334(h)(2), monitoring for nitrogen content of the natural gas and fuel oil, combusted in these sources (**ID Nos. Unit 4 and Unit 5**) is not required⁴.
- iv. As per 60.334(h)(3), the Permittee may elect not to monitor the total sulfur content of the natural gas combusted in these sources (**ID Nos. Unit 4 and Unit 5**), even though a DAQ approved existing custom fuel monitoring schedule requires the Permittee to monitor natural gas combusted in these sources (**ID Nos. Unit 4 and Unit 5**) using the procedures of 40 CFR 75 Appendix D in Section 2.1 B.2.d.v below. If provision of this Section is elected, the Permittee shall use one of the following sources of information to make the required demonstration that the gaseous fuel combusted in these sources (**ID Nos. Unit 4 and Unit 5**) does qualify as a natural gas in 60.331(u):
- A. The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20 grains/100 scf or less; or
- B. Representative fuel sampling data, which show that the sulfur content of the gaseous fuel does not exceed 20 grains/100 scf. At a minimum, the amount of fuel sampling data specified in Section 2.3.1.4 or 2.3.2.4 of Appendix D to 40 CFR 75 is required.

⁴ The Permittee has not claimed any credit for fuel bound nitrogen in either natural gas or fuel oil for establishing the emission limit for NO_x.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524, if the gaseous fuel fired in these sources (**ID Nos. Unit 4 and Unit 5**) does not qualify as a natural gas in 60.331(u) or the Permittee does not make the above demonstration, or the SO₂ emissions excluding the emissions during start-up, shutdown, and malfunction from the turbines exceed the emission limit in Section 2.1 B.2.b above.

- v. As per 60.334(h)(4) and the DAQ approved custom fuel monitoring schedule, for these sources (**ID Nos. Unit 4 and Unit 5**), the Permittee shall sample each tank of fuel oil 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 for fuel oil shall be analyzed for sulfur content in accordance with 40 CFR Part 75, Appendix D. In addition, the Permittee shall sample and analyze for sulfur content of natural gas in accordance with 40 CFR Part 75, Appendix D.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524, if the fuel oil or natural gas fired in these sources (**ID Nos. Unit 4 and Unit 5**) does not comply with the sulfur content limit in Section 2.1 B.2.b above or the SO₂ emissions excluding the emissions during start-up, shutdown, and malfunction from these sources (**ID Nos. Unit 4 and Unit 5**) exceed the emission limit in Section 2.1 B.2.b above, or the Permittee does not comply with the requirements of DAQ approved custom fuel monitoring schedule.

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

- e. The Permittee is required to REPORT to the Regional Supervisor, DAQ, in WRITING, of the following:
 - i. For each affected unit (**ID Nos. Unit 4 and Unit 5**), required to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content or fuel nitrogen content under 40 CFR 60 Subpart GG, the Permittee shall submit reports of excess emissions and monitor downtime, in accordance with 60.7(c). Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. For the purpose of reports required under 60.7(c), periods of excess emissions and monitor downtime that shall be reported are defined below [60.334(j)]:
 - A. When using NO_x and diluent CEMS, excess emissions for NO_x shall be defined as any unit operating hour in which the 4-hour rolling average NO_x concentration exceeds the emission limit in Section 2.1 B.2.b above. For the purposes of this Subpart, a “4-hour rolling average NO_x concentration” is the arithmetic average of the average NO_x concentration measured by the CEMS for a given hour (corrected to 15 percent O₂) and the three unit operating hour average NO_x concentrations immediately preceding that unit operating hour [60.334(j)(1)(iii)(A)].
 - B. When using NO_x and diluent CEMS, a period of monitor downtime for NO_x shall be defined as any unit operating hour in which sufficient data are not obtained to validate the hour, for either NO_x concentration or diluent (or both) [60.334(j)(1)(iii)(B)].
 - C. When using NO_x and diluent CEMS, each excess emission report for NO_x shall include the ambient conditions (temperature, pressure, and humidity) at the time of the excess emission period and (if the owner or operator has claimed an emission allowance for fuel bound nitrogen) the nitrogen content of the fuel during the period of excess emissions. The Permittee does not have to report ambient conditions, because the Permittee has elected not to use the optional ISO correction equation [60.334(j)(1)(iii)(C)].

- D. When the Permittee is required to monitor the sulfur content of the fuel in Section 2.1 B.2.d.v above, excess emissions for SO₂, while sampling of gaseous fuel and fuel oil samples obtained using daily sampling, flow proportional sampling, or sampling from the unit's storage tank, shall be defined as 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 gas turbine exceeds 0.8 weight percent and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit. The requirement of this Section does not apply to natural gas, if the Permittee elects not to monitor the total sulfur content of the natural gas as per Section 2.1 B.2.d.iv above [60.334(j)(2)(i)].
- E. When the Permittee is required to monitor the sulfur content of the fuel in Section 2.1 B.2.d.v above, a period of monitor downtime for SO₂ shall begin when a required sample is not taken by its due date. A period of monitor downtime shall also begin on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime shall include only unit operating hours, and ends on the date and hour of the next valid sample. The requirement of this Section does not apply to natural gas, if the Permittee elects not to monitor the total sulfur content of the natural gas as per Section 2.1 B.2.d.iv above [60.334(j)(2)(iii)].
- ii. The Permittee shall submit all reports required under **60.7(c)** for these sources (**ID Nos. Unit 4 and Unit 5**), postmarked by the 30th day following the end of each calendar quarter [60.334(j)(5)].
- iii. For these sources (**ID Nos. Unit 4 and Unit 5**), the Permittee shall submit the results of sampling for sulfur content of No. 2 fuel oil fired, and the natural gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract or the results of sampling of natural gas, as appropriate, postmarked by the 30th day following the end of each calendar quarter.
- iv. All instances of deviations from the requirements of this permit must be clearly identified.

The quarterly reports, acceptable to the Regional Air Quality Supervisor, shall be postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and October 30 for the calendar year for the preceding three-month period between July and September.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if the reporting requirements in conditions ii. and iii. are not met.

- f. 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 2D .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 source (**ID No. Unit 4 and Unit 5**) shall not exceed:

AFFECTED SOURCE	POLLUTANT	BACT EMISSION LIMITS ^a		BACT CONTROLS
		Natural Gas	No. 2 Fuel Oil	
		lb/mmBtu ppm	Lb/mmBtu ppm	
Unit 4 and Unit 5	Opacity	20%	20%	combustion control
	nitrogen oxides	0.010 2.5 ppmvd ^b (24-hour rolling average) ^{c,d}	0.054 13 ppmvd ^b (24-hour rolling average) ^{c,e}	natural gas: dry-low NO _x and SCR fuel oil: water injection and SCR
	sulfur dioxide	0.0006	0.054	0.05% sulfur fuel oil
	carbon monoxide	0.018 9 ppmvd	0.037 20 ppmvd	combustion control
	VOCs	0.00172 1.4 ppmvw	0.004 3.5 ppmvw	combustion control
	particulates/PM ₁₀ (front half)	0.0055	0.009	combustion control
	sulfuric acid		fuel oil sulfur content	0.05% sulfur fuel oil
	ammonia	10 ppmvd	10 ppmvd	

^a BACT limits shall apply at all times except as provided under Section 2.1 B.3.a.ii BACT limits for No. 2 fuel oil firing are applicable to Unit 4 only and are not applicable to Unit 5.

^b ppmvd = parts per million by volume on a dry basis at 15% O₂.

^c 24-hour rolling average is calculated using only actual operating hours (periods of zero emissions when not operating are not included).

^d The NO_x emission limit is 2.5 ppmvd for the first 500 hours of operation (on a 24-hour rolling average basis). After 500 hours, the emission limit is 3.5 ppmvd (on a 24-hour rolling average basis). However, the ammonia injection rate shall not exceed that rate established per Section 2.1 B.3.j.i at each load point. Three months after the 24-hour rolling average exceeds 3.3 ppmvd three times within any rolling 50-hour period, the emission limit changes to 2.5 ppmvd for the next 500 hours of operation. However, the Permittee will not be deemed to be out of compliance until the 24-hour rolling average exceeds 3.5 ppmvd during this three-month period. After any 500-hour period where the 2.5 ppmvd is maintained without exceedance of the 3.3 ppmvd trigger level, the limit reverts back to 3.5 ppmvd.

^e The NO_x emission limit is 13 ppmvd for the first 500 hours of operation (on a 24-hour rolling average basis). After 500 hours, the emission limit is 18 ppmvd (on a 24-hour rolling average basis). However, the ammonia injection rate shall not exceed that rate established per Section 2.1 B.3.j.i at each load point. Three months after the 24-hour rolling average exceeds 17 ppmvd three times within any rolling 50-hour period, the emission limit changes to 13 ppmvd for the next 500 hours of operation. However, the Permittee will not be deemed to be out of compliance until the 24-hour rolling average exceeds 18 ppmvd during this three-month period. After any 500-hour period where the 13 ppmvd is maintained without exceedance of the 17 ppmvd trigger level, the limit reverts back to 18 ppmvd.

- ii. Emissions resulting from start-up, shutdown or malfunction above those given in Section 2.1. B.3.a.i are permitted provided that optimal operational practices are adhered to and periods of excess emissions are minimized. For these sources (**ID Nos. Unit 4 and Unit 5**), periods of excess emissions due to start-up and/or shutdown or operation below 50% load shall not exceed six hours in any 24-hour block period beginning at midnight. Start-up is defined as the period from initial firing to 50% load. Shutdown is defined as the period from 50% load to flame out.

- b. The following emission limits apply in order to demonstrate compliance with the National Ambient Air Quality Standards as required by 15A NCAC 2D .0530; 40 CFR 51.166(k):

AFFECTED SOURCE	POLLUTANT	EMISSION LIMIT				
		Annual (tons/yr) ^a	per 24-hour (lb)	per 8-hour (lb)	per 3-hour (lb)	per 1-hour (lb)
Unit 1 through Unit 5, total	nitrogen dioxide	1224.4				
	sulfur dioxide	257.3	11,580		1447.5	
	carbon monoxide			2680		335
	particulates/PM ₁₀ (front half)	125.8	2040			

^a Tons per rolling consecutive 12-month period. Annual emissions for the combustion turbines are for all five turbines firing fuel oil for 1000 hours per year, three simple-cycle turbines firing natural gas for 1000 hours per year and two combined-cycle turbines firing natural gas for 7760 hours per year, at 100% load.

Testing [15A NCAC 2D .2601]

- 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 B.3.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

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

- d. The maximum annual hours of operation for this source (**ID No. Unit 4**) shall not exceed 1000 full load equivalent hours per rolling consecutive 12-month period when firing No. 2 fuel oil.
- e. The Permittee shall record and maintain records of the actual number of hours of operation, and the amounts of each fuel burned during each day for each source (**ID Nos. Unit 4 and Unit 5**) in accordance with 40 CFR Part 75. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the above records are not maintained.
- f. Only natural gas shall be burned during summer months (April through October) 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.
- g. No more than three sources (**ID Nos. Unit 1 through Unit 4**) shall burn No. 2 fuel oil simultaneously.
- h. The sulfur content of the No. 2 fuel oil shall not exceed 0.05 percent sulfur by weight.
- i. Water injection shall be used when the sources (**ID Nos. Units 1 through Unit 4**) are firing No. 2 fuel oil only.
- j. For each source (**ID Nos. Unit 4 and Unit 5**), compliance with the BACT NO_x and ammonia limits shall be demonstrated as follows for the selective catalytic reduction (SCR) system:
- i. The Permittee shall install and operate an ammonia flow meter to measure and record the ammonia injection rate to the SCR system. The ammonia injection rates corresponding to a maximum ammonia slip of 10 ppmvd and necessary to comply with the BACT NO_x limits shall be established (and made available to the Division of Air Quality upon request) during the initial performance tests when firing No. 2 fuel oil and natural gas at 50, 70, 85 and 100 percent of peak load.
 - ii. The SCR shall operate at all times that the turbine is operating except during turbine start-up and shutdown periods to the extent recommended by the manufacturer and operated in a manner so as to minimize ammonia slip.

iii. During NO_x CEM downtimes or malfunctions, the Permittee shall operate at 100% of the ammonia injection rate determined during the performance test as specified in Section 2.1 B.3.j.i for each load range.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the nitrogen oxide emissions are not monitored using CEMs, as required in Section 2.1 B.2.d.i and ii above or the ammonia injection rate to the SCR system is not continuously measured and recorded, as required in Section 2.1 B.3.j.i above or nitrogen oxide or ammonia emission rate of combustion turbine is above the limit given in Section 2.1 B.3.a.i above.

k. Under the provisions of North Carolina General Statute 143-215.108, for each source (**ID Nos. Unit 4 and Unit 5**), the Permittee shall monitor operations to demonstrate compliance with the BACT emission limits as follows:

i. Determine the sulfur content of the fuel being fired in each combustion turbine in accordance with Section 2.1 B.2.d.v above.

ii. Determine nitrogen oxide emissions as specified in Section 2.1 B.2.d.i and ii above.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the records required in Section 2.1 B.2.d.i and ii above are not kept or the nitrogen oxide emission rate of combustion turbine is above the limit given in Section 2.1 B.3.b above.

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

l. The Permittee shall submit in writing the following reports postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June:

i. 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; and

ii. periods of excess emissions (calculated according to the requirements of 40 CFR 60.13(h)) and monitoring systems performance report and/or a summary report form and monitoring report for the nitrogen oxide CEMS. Written reports shall include information required in 40 CFR 60.7(c) and (d). This report shall also contain the emission limitation as specified in Section 2.1 B.3.a.i above.

4. 15A NCAC 2D .0530(u): PREVENTION OF SIGNIFICANT DETERIORATION

a. The Permittee has used projected actual emissions to avoid applicability of prevention of significant deterioration requirements for a project consisting of replacement of inlet air foggers with evaporative coolers on the combustion turbines (ID Nos. Unit 4 and Unit 5).

For NO_x (as NO₂) emissions, the Permittee shall comply with the record keeping and reporting requirements in Section 2.1 B.5.b. and c. below. If the Permittee does not comply with the record keeping requirements in Section 2.1 B.5.b. below for NO_x (as NO₂) emissions, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

For PM/PM₁₀ emissions, the Permittee shall comply with the following record keeping and reporting requirements.

b. The Permittee shall maintain records of annual emissions for PM/PM₁₀ in tons per year on a calendar year basis for five years following the resumption of regular operations after the installation of evaporative coolers on the combustion turbines (ID Nos. Unit 4 and Unit 5).

The Permittee shall make the information, documented and maintained in this Section 2.1 B.4.b., available to the Director or the general public pursuant to the requirements in 40 CFR 70.4(b)(3)(viii).

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the records required in Section 2.1 B.4.b. above are not kept.

- c. The Permittee shall submit a report for PM/PM10 emissions to the director within 60 days after the end of each calendar year during which the records in Section 2.1 B.4.b. must be generated. The report shall contain the items listed in 40 CFR 51.166(r)(6)(v)(a) through (c).

The reported projected actual emissions for each of the five calendar years for PM/PM10 will be compared to the projected actual emissions of PM/PM10 as included in the Plant Rowan County permit application 8000163.08B.

If the Director of Division of Air Quality determines that actual emissions for PM/PM10 for Unit 4 and Unit 5 for any of the reported five years have exceeded the respective projected actual emissions as included in permit application 8000163.08B and he/she further determines that this increase in emissions of PM/PM10 is due to the installation of evaporative coolers on the combustion turbines (ID Nos. Unit 4 and Unit 5) and such increased emissions in PM/PM10 would have resulted in a significant emissions increase and a significant net emissions increase at the time of submittal of application for installation of the evaporative coolers on the combustion turbines (ID Nos. Unit 4 and Unit 5), the Permittee shall be deemed in violation of 15A NCAC 2D .0530.

5. 15A NCAC 2D .0531(o): NONATTAINMENT AREA NEW SOURCE REVIEW

- a. The Permittee has used projected actual emissions to avoid applicability of nonattainment area new source review requirements for a project consisting of replacement of inlet air foggers with evaporative coolers on the combustion turbines (ID Nos. Unit 4 and Unit 5).

For NOx emissions, the Permittee shall comply with the following record keeping and reporting requirements.

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

- b. The Permittee shall maintain records of annual emissions for NOx in tons per year on a calendar year basis for five years following the resumption of regular operations after the installation of evaporative coolers on the combustion turbines (ID Nos. Unit 4 and Unit 5).

The Permittee shall make the information, documented and maintained in this Section 2.1 B.5.b., available to the Director or the general public pursuant to the requirements in 40 CFR 70.4(b)(3)(viii).

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0531 if the records required in Section 2.1 B.5.b. above are not kept.

- c. The Permittee shall submit a report for NOx emissions to the director within 60 days after the end of each calendar year during which the records in Section 2.1 B.5.b. must be generated. The report shall contain the items listed in 40 CFR 51.165(a)(6)(v)(A) through (C).

The reported projected actual emissions for each of the five calendar years for NOx will be compared to the projected actual emissions of NOx as included in the Plant Rowan County permit application 8000163.08B.

If the Director of Division of Air Quality determines that actual emissions for NOx for Unit 4 and Unit 5 for any of the reported five years have exceeded the respective projected actual emissions as included in permit application 8000163.08B and he/she further determines that this increase in emissions of NOx is due to the installation of evaporative coolers on the combustion turbines (ID Nos. Unit 4 and Unit 5) and such increased emissions in NOx would have resulted in a significant emissions increase and a significant net emissions increase at the time of submittal of application for installation of the evaporative coolers on the combustion turbines (ID Nos. Unit 4 and Unit 5), the Permittee shall be deemed in violation of 15A NCAC 2D .0531.

C. One cooling tower with drift eliminators (ID No. Tower 1)

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	$E = 4.10P^{0.67}$ for $P \leq 30$ tons per hour $E = 55.0P^{0.11} - 40$ for $P > 30$ tons per hour Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 2D .0515
Particulates/PM ₁₀	Less than 33.12 pounds per day AND Less than 6.0 tons per consecutive rolling 12-month period	15A NCAC 2D .0530

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

- a. Emissions of particulate matter from this source (**ID No. Tower 1**) shall not exceed an allowable emission rate as calculated by the following equation:

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

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

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 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and 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 2D .0515.

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

- c. No monitoring/recordkeeping/reporting is required for particulate matter emissions from this source (**ID No. Tower 1**).

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

- a. In order to demonstrate compliance with the National Ambient Air Quality Standards as required by 15A NCAC 2D .0530; 40 CFR 51.166(k), particulate/PM10 emissions from this source (**ID No. Tower 1**) shall not exceed 33.12 pounds per day and 6.0 tons per consecutive rolling 12-month period.

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

- b. No monitoring/recordkeeping/reporting is required for particulate emissions from this source (**ID No. Tower 1**).

D. One firetube design natural gas fired auxiliary boiler (ID No. ES-6)

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	0.53 pound per million Btu heat input	15A NCAC 2D .0503
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 2D .0516
Visible emissions	20 percent opacity	15A NCAC 2D .0521
None	Recordkeeping	15A NCAC 2D .0524 (40 CFR 60 Subpart Dc)
Nitrogen oxides	Annual Boiler Tune-ups Required	15A NCAC 2D .1407
Hazardous Air Pollutants	Best Combustion Practices	15A NCAC 2D .1109 [CAA § 112(j)]

1. 15A NCAC 2D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

- a. Emissions of particulate matter from the combustion of natural gas that are discharged from this source (**ID No. ES-6**) into the atmosphere shall not exceed 0.53 pounds per million Btu heat input.

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and 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 2D .0503.

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

- c. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas in this source (**ID No. ES-6**).

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

- a. Emissions of sulfur dioxide from this source (**ID No. ES-6**) shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 D.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

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

- c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from natural gas for this source (**ID No. ES-6**).

3. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from this source (**ID No. ES-6**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 D.3.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

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

- c. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of natural gas in this source (**ID No. ES-6**).

4. 15A NCAC 2D .0524: NEW SOURCE PERFORMANCE STANDARDS

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

- a. The Permittee shall record and maintain records of the amounts each fuel combusted during each month. Such records shall be maintained for a period of two years following the date of such record. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if these records are not maintained.

5. 15A NCAC 2D .1407 BOILERS AND INDIRECT PROCESS HEATERS

- a. Facilities with boilers with maximum heat input rate of less than or equal to 50 million Btu per hour shall comply with the annual tune-up requirements of 2D .1414. The Permittee shall maintain records of all tune-ups performed for each source according to 2D .1404 [15A NCAC 2D .1407]

Testing [15A NCAC 2D .2601]

- b. If emission testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ.

Monitoring [15A NCAC 2D .1414(b), 2Q .0508(f)]

- c. When a tune-up to a boiler or indirect-fired process heater is required for compliance with this Section, the owner or operator shall at least annually (on or by December 31st of each calendar year) and according to the manufacturer's recommendations:
 - i. inspect each burner and clean or replace any component of the burner as required;

- ii. inspect the flame pattern and make any adjustments to the burner, or burners, necessary to optimize the flame pattern to minimize total emissions of NO_x and carbon monoxide;
- iii. inspect the combustion control system to ensure proper operation and correct calibration of components that control the air to fuel ratio and adjust components to meet the manufacturer's established operating parameters; and
- iv. inspect any other component of the boilers and make adjustments or repairs as necessary to improve combustion efficiency. The Permittee shall perform the tune-up according to a unit specific protocol approved by the Director. The Director (or designee) shall approve the protocol if it meets the requirements of this Rule. The protocol shall be submitted to the Regional Office for approval.

If tune-ups and inspections are not conducted as per c.i. through iv. above, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .1407 [15A NCAC 2Q .0508(f)].

Recordkeeping [15A NCAC .1414(d), 2Q .0508(f)]

- d. The owner or operator shall maintain records of tune-ups performed to comply with Rule .1404. The following information shall be included for each source:
 - i. identification of the source;
 - ii. the date and time the tune-up started and ended;
 - iii. the person responsible for performing the tune-up; and
 - iv. for boilers the checklist for inspection of the burner, flame pattern, combustion control system, and all other components of the boiler identified in the protocol, noting any repairs or replacements made;
 - v. any stack gas analyses performed after the completion of all adjustments to show that the operating parameters of the boiler, have been optimized with respect to fuel consumption and output; at a minimum these parameters shall be within the range established by the equipment manufacturer to ensure that the emission limitation for nitrogen oxides has not been exceeded; and
 - vi. any other information requested by the Director (or designee) to show that the boiler is being operated and maintained in a manner to minimize the emissions of nitrogen oxides.The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1407 if these records are not maintained [15A NCAC 2Q .0508(f)]
- e. 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 annual tune-up and inspection along with any corrective actions taken; and
 - iii. the results of any corrective actions performed.The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1407 if these records are not maintained.

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

- f. The Permittee shall submit a summary report 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.

6. 15A NCAC 2D .1109: CAA § 112(j); Case-by-Case MACT for Boilers & Process Heaters

- a. The Permittee shall use best combustion practices when operating the Auxiliary Boiler (ID No. ES-6). The initial compliance date for this work practice standard and the associated monitoring, recordkeeping, and reporting requirements is **<ENTER DATE THREE YEARS AFTER PERMIT ISSUANCE>**. These conditions need not be included on the annual compliance certification until after the initial compliance date.

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

- b. To assure compliance, the Permittee shall perform an annual boiler inspection and maintenance as recommended by the manufacturer, or as a minimum, the inspection and maintenance requirement shall satisfy the RACT requirements provided in Section 2.1.D.5. of this permit. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1109 if the affected boiler does not satisfy the monitoring, recordkeeping, and reporting requirements in Section 2.1.D.5.c. through f. of this permit.

- E. Two natural gas-fired combined-cycle internal combustion turbines, each equipped with a heat recovery steam generator and dry Low-NO_x combustors, both equipped with a common steam turbine (1,914 million Btu per hour heat input rate each without duct firing and 2,456 million Btu per hour heat input rate each with duct firing), and associated SCRs (ID Nos. CD6A-SCR and CD6B-SCR) and oxidation catalysts (ID Nos. CD6A-Ox Cat and CD6B-Ox Cat)**

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	0.18 lb/million Btu each [when duct burners are operating in heat recovery units]	15A NCAC 2D .0503
visible emissions	20 percent opacity each	15A NCAC 2D .0521
nitrogen oxides	15 ppm at 15 percent O ₂ each or 0.43 lb/MWh each [when either combustion turbine only or both combustion turbine and heat recovery unit are operating]	15A NCAC 2D .0524 [NSPS Subpart KKKK]
sulfur dioxide	0.9 lb/MWh each or 0.06 lb/million Btu heat input each	15A NCAC 2D .0524 [NSPS Subpart KKKK]
nitrogen oxides (as NO ₂)	As defined in specific conditions	15A NCAC 2D .0530
carbon monoxide	As defined in specific conditions	15A NCAC 2D .0530
PM/PM ₁₀	As defined in specific conditions	15A NCAC 2D .0530
sulfur dioxide	As defined in specific conditions	15A NCAC 2D .0530(h) [state-only requirement]
nitrogen oxides	As defined in specific conditions	15A NCAC 2D .0531

Regulated Pollutant	Limits/Standards	Applicable Regulation
volatile organic compounds	As defined in specific conditions	15A NCAC 2D .0531
volatile organic compounds	As defined in specific conditions	15A NCAC 2D .0902(f) [RACT for VOC]
hazardous air pollutants	Initial notification only	15A NCAC 2D .1111 [MACT Subpart YYYY]
nitrogen oxides	As specified in specific conditions	15A NCAC 2D .1402(d) [RACT for NOx]
nitrogen oxides	See Section 2.3 A.	15A NCAC 2D. 2403 and 2D .2405
nitrogen oxides sulfur dioxide	as specified in specific conditions	15A NCAC 2Q .0402 [40 CFR 72]

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 (duct burners of heat recovery units of each combustion turbine, ID Nos. ES6A and ES6B) into the atmosphere shall not exceed 0.18 pound per million Btu heat input. [15A NCAC 02D .0503(a)]

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance General Condition JJ. If the results of this test are above the limit given in Section 2.1 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 these sources (duct burners of heat recovery units of each combustion turbine, ID Nos. ES6A and ES6B).

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

- a. Visible emissions from these sources (ID Nos. ES6A and ES6B) 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 02D .2601]

- 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 E. 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 in these sources (ID Nos. ES6A and ES6B).

3. 15A NCAC 2D .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 2D .0524 "New Source Performance Standards (NSPS)" as promulgated in 40 CFR Part 60 Subpart KKKK, including Subpart A "General Provisions." [15A NCAC 2D .0524]

Emission Limitations

- b. NO_x emissions (except during startup, shutdowns, and malfunction) from combustion turbines (ID Nos. ES6A and ES6B) when either combustion turbine only or when both combustion turbine and heat recovery unit are operating, shall not exceed 15 ppm at 15 percent O₂ each or 0.43 lb/MWh each.

[§60.4320]

- c. SO₂ emissions (except during startup, shutdowns, and malfunction) from the combustion turbines (ID Nos. ES6A and ES6B) shall not exceed 0.9 lb/MWh gross output each.

Alternatively, the Permittee shall not allow any fuel to be burned in the combustion turbines (ID Nos. ES6A and ES6B) which contains total potential sulfur emissions in excess of 0.06 lb/million Btu heat input each (fuel sulfur content limit).

[§60.4330]

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

- d. The Permittee shall conduct initial performance test for NO_x on one of the combustion turbines (ID Nos. ES6A and ES6B) in accordance with General Condition JJ within 180 days of initial start-up of combustion turbines (ID Nos. ES6A and ES6B)⁵.

The Permittee is required to perform subsequent annual testing (no more than 14 calendar months following the previous performance test) for NO_x in accordance with General Condition JJ for combustion turbines (ID Nos. ES6A and ES6B).

Each performance test for NO_x shall be conducted at ± 25 percent of 100 percent peak load or at the highest achievable load point if at least 75 percent peak load cannot be achieved in practice. Three runs shall be required for each performance test and each run shall last for a minimum 20 minutes. The ambient temperature for each test run shall be above 0°F.

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

⁵ DAQ is requiring initial performance test on only one of two combustion turbines (ID Nos. ES6A and ES6B). This requirement is contingent upon the stack test results of the tested turbine showing that the margin of compliance with NO_x emission limit is high.

Compliance with the applicable NO_x emission limit shall be demonstrated by measuring the combined emissions of both units (ID Nos. ES6A and ES6B) utilizing a common HRSG steam header (as described in §60.4333(b)). Alternatively, the Permittee can develop, demonstrate, and provide information satisfactory to the EPA Administrator on methods for apportioning the combined gross energy output from the heat recovery unit for each of the affected combustion turbines (ID Nos. ES6A and ES6B). The EPA Administrator may approve such demonstrated substitute methods for apportioning the combined gross energy output measured at the steam turbine whenever the demonstration ensures accurate estimation of emissions related under this part.

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

Compliance with the applicable emission limit in §60.4320 (Section 2.1 E.3..b. above) must be demonstrated at each tested load level.

If the Permittee elects to install NO_x CEMs on combustion turbines (ID Nos. ES6A and ES6B), the performance evaluation of the CEMS may either be conducted separately or (as described in §60.4405), as part of the initial performance test.

If three-run arithmetic average of NO_x emission rate from any performance test is above the emission limit for NO_x in Section 2.1 E.3. b. above or initial and subsequent stack tests are not performed, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

[§60.8, and §§60.4400 and 60.4405]

- e. The Permittee shall conduct the initial performance test for SO₂ on one of the combustion turbines (ID Nos. ES6A and ES6B) in accordance with General Condition JJ within 180 days of initial start-up of combustion turbines (ID Nos. ES6A and ES6B)⁶.

The Permittee shall conduct each subsequent test on combustion turbines (ID Nos. ES6A and ES6B) in accordance with General Condition JJ for SO₂ on an annual basis (no more than 14 calendar months following the previous performance test).

If the results of any performance test are above the emission limit for SO₂ in Section 2.1 E.3.c. above or any stack test is not performed, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

The Permittee can opt not to perform any stack tests (either initial or subsequent annual tests) to demonstrate compliance with SO₂ emission limit and can instead opt for fuel sulfur determination as per Section 2.1. E.3.i. below to comply with the SO₂ emission limit. If the Permittee chooses to opt for fuel sulfur determination to comply with the SO₂ emission limit, the Permittee shall perform monitoring in accordance with Section 2.1 E.3.i. below.

[§60.8, and §§60.4360 and 60.4415]

⁶ DAQ is requiring initial performance test on only one of two combustion turbines (ID Nos. ES6A and ES6B). This requirement is contingent upon the stack test results of the tested turbine showing that the margin of compliance with SO₂ emission limit is high.

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

- f. The Permittee shall operate and maintain the combustion turbines (ID Nos. ES6A and ES6B) including dry low NO_x burners, selective catalytic reduction systems, and any monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions and in accordance with manufacturer's guidelines at all times including during start-up, shutdown, and malfunction. [§60.4333]
- g. As an alternate to the annual performance tests to demonstrate continuous compliance in Section 2.1 E.3.d. above for NO_x, the Permittee can install, calibrate, maintain and operate a NO_x CEM as per §§60.4335(b) and 60.4345 **or** the Permittee can install, calibrate, maintain and operate NO_x continuous parameter monitoring system measuring appropriate parameters to determine whether the combustion turbines (ID Nos. ES6A and ES6B) are operating in low-NO_x mode and to verify the proper operation of SCRs, **or** instead upon DAQ approval, the Permittee can perform parametric monitoring described in Section 2.3 of Part 75 appendix E or in §75.19(c)(1)(iv)(H), if the combustion turbines (ID Nos. ES6A and ES6B) are also regulated under Part 75.

If the NO_x CEMs do not comply with the requirements of §§60.4335(b) and 60.4345 or the NO_x emissions (except during startup, shutdowns, and malfunction) from the combustion turbines (ID Nos. ES6A and ES6B) exceed the emission limit in Section 2.1 E.3.b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

If NO_x continuous parameter monitoring systems are not operating or the NO_x continuous parameter monitoring systems indicate that the combustion turbine is not operating in a low-NO_x mode or SCRs are not operating to control NO_x emissions, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

If the Permittee does not comply with the requirements in Section 2.3 of Part 75 Appendix E or §75.19(c)(1)(iv)(H) or if the NO_x emissions (except during startup, shutdowns, and malfunction) from combustion turbines (ID Nos. ES6A and ES6B) exceed the NO_x emission limit in Section 2.1 E.3.b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524. [§60.4340]

- h. The appropriate parameters, which are continuously monitored as described in §60.4340, shall be monitored during the performance test required under §60.8, to establish acceptable values and ranges. The Permittee may supplement the performance test data with engineering analyses, design specifications, manufacturer's recommendations and other relevant information to define the acceptable parametric ranges more precisely. The Permittee shall develop and keep on-site a parameter monitoring plan, which explains the procedures used to document proper operation of the NO_x emission controls. The parameter monitoring plan shall contain all elements of §60.4355(a)(1) through (a)(6). As an alternative to a parameter monitoring plan in this Section, the Permittee can develop and keep on-site a QA plan as described in §75.19(e)(5) or in Section 2.3 of Appendix E to Part 75 and Section 1.3.6 of Appendix B to Part 75, if the combustion turbine (ID Nos. ES6A and ES6B) is also regulated under Part 75.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if the parameter monitoring plan is not developed or kept on-site.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if the QA plan as described in §75.19(e)(5) or in Section 2.3 of Appendix E to Part 75 and Section 1.3.6 of Appendix B to Part 75, is not developed or kept on-site. [§60.4355]

- i. If the Permittee opts to determine fuel sulfur to comply with the fuel sulfur content limit in Section 2.1 E.3.c. above, the Permittee shall **monitor** total sulfur content of the fuel being fired in the combustion turbine (ID Nos. ES6A and ES6B), except as provided in §60.4365 (See Section 2.1 E.3.j. below).

The sulfur content of the fuel shall be determined using total sulfur methods in §60.4415. Alternatively, the Permittee can use methods in §60.4360 if the total sulfur content of the gaseous fuel during the most recent performance test was less than half the fuel sulfur content limit in Section 2.1.E.3.c. above.

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

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

If fuel sulfur determination from any fuel monitoring occurring in any unit operating hour, results in SO₂ emissions (except during startup, shutdowns, and malfunction) exceeding emission limit in Section 2.1 E.3.c. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

[§§60.4360, 60.4370, and 60.4415]

- j. Alternatively to Section 2.1 E.3.i. above, the Permittee can choose **not to monitor** the total potential sulfur emissions of the fuel combusted in the turbines (ID Nos. ES6A and ES6B), if it can be demonstrated that the potential sulfur emissions do not exceed 0.06 lb SO₂/million Btu emission limit in continental areas.

The Permittee can perform this demonstration by using the fuel quality characteristics in a current, valid purchase contract, tariff sheet, or transportation contract for the fuel, specifying that the total sulfur content for natural gas use in continental areas is 20 grains of sulfur or less per 100 standard cubic feet and has the potential sulfur emissions of less than 0.06 lb SO₂/million Btu in continental areas.

The other option for this demonstration is through representative fuel sampling data showing that the potential sulfur emissions of the fuel does not exceed 0.06 lb SO₂/million Btu in continental areas. In this case, the Permittee shall provide at a minimum the amount of data in Section 2.3.1.4 or 2.3.2.4. of Appendix D of Part 75.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524, if the Permittee does not make the above demonstration for natural gas, or the demonstration indicate that the total sulfur content of natural gas exceeds the sulfur content limit of 20 grains per 100 standard cubic feet or the SO₂ emissions excluding the emissions during start-up, shutdown, and malfunction, from the combustion turbines (ID Nos. ES6A and ES6B) exceed the emission limit in Section 2.1 E.3.c. above.

[§§60.4365]

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

- k. The Permittee shall submit a notification of the date construction of an affected facility is commenced, postmarked no later than 30 days after such date. [§60.7(a)(1)]
- l. The Permittee shall submit a notification of the date of initial start-up of an affected facility, postmarked within 15 days after such date. [§60.7(a)(3)]
- m. The Permittee shall submit a notification of the date upon which demonstration of the continuous monitoring system performance commences in accordance with §60.13(c). Notification shall be postmarked not less than 30 days prior to such date.
- n. The Permittee shall submit reports of excess emissions and monitor downtime in accordance with **§60.7(c)** and as follows;
 - i. The Permittee if required to install continuous monitoring device shall submit excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and-or summary report form (see paragraph (d) of this section) **quarterly**.
 - ii. The Permittee shall report excess emissions for all periods of operation, including start-up, shutdown, and malfunction **quarterly**. These reports shall be postmarked by the 30th day following the end of each 3-month period.
 - iii. If the combustion turbine is a using NO_x CEM as described in §60.4345, excess emissions and monitor downtime shall be determined as below:
 - (A) An excess emissions is any unit operating period in which the 30-day rolling average NO_x emission rate exceeds the applicable emission limit in §60.4320. For the purposes of this Subpart, a “30-day rolling average NO_x emission rate” is the arithmetic average of all hourly NO_x emission data in ppm or ng/J (lb/MWh) measured by the CEM equipment for a given day and the twenty-nine unit operating days immediately preceding that unit operating day. A new 30-day average is calculated each unit operating day as the average of all hourly NO_x emissions rates for the preceding 30 unit operating days if a valid NO_x emission rate is obtained for at least 75 percent of all operating hours.
 - (B) A period of monitor downtime is any unit operating hour in which the data for any of the following parameters are either missing or invalid: NO_x concentration, CO₂ or O₂ concentration, fuel flow rate, steam flow rate, steam temperature, steam pressure, or megawatts. The steam flow rate, steam temperature, and steam pressure are only required if you will use this information for compliance purposes.
 - (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.
- iv. If the Permittee opts to monitor combustion parameters or parameters that document proper operation of the NO_x emission controls for the turbines (ID Nos. ES6A and ES6B), an excess emission shall be defined as a 4-hour rolling unit operating hour average in which any monitored parameter does not achieve the target value or is outside the acceptable range defined in the parameter monitoring plan for the combustion turbines (ID Nos. ES6A and ES6B). [§60.4380(c)(1)]
- v. If the Permittee opts to monitor combustion parameters or parameters that document proper operation of the NO_x emission controls for the turbines (ID Nos. ES6A and ES6B), a period of monitor downtime shall be defined as a unit operating hour in which any of the required parametric data are either not recorded or are invalid. [§60.4380(c)(2)]

- vi. If the Permittee chooses the option to monitor the sulfur content of the fuel, excess emissions and monitoring downtime shall be 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) 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.
- o. The Permittee shall submit a written report of the results of each performance test required in §60.4340(a) before the close of business on the 60th day following the completion of the performance test. [§60.4375(b)]
- p. The quarterly reports, acceptable to the Regional Air Quality Supervisor, shall be postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and October 30 for the calendar year for the preceding three-month period between July and September.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if the reporting requirements are not met.

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

4. 15A NCAC 2D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

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

EMISSION SOURCE	POLLUTANT	EMISSION LIMITS* (AND COMPLIANCE AVERAGING TIME)		CONTROL TECHNOLOGY
		Without Duct Burner	With Duct Burner	
Combustion Turbines (ID Nos. ES6A and ES6B)	NOx (as NO ₂)	2 ppmvd at 15% O ₂ [First 500 hours of operation of SCR] [30-day rolling average] 2.5 ppmvd at 15% O ₂ [After 500 hours of operation of SCR] [30-day rolling average]	2 ppmvd at 15% O ₂ [First 500 hours of operation of SCR] [30-day rolling average] 2.5 ppmvd at 15% O ₂ [After 500 hours of operation of SCR] [30-day rolling average]	dry low-NOx combustors (DLN) and selective catalytic reduction (SCR)
Combustion Turbines (ID Nos. ES6A and ES6B)	CO	8 ppmvd at 15% O ₂ [3-hour average]	8 ppmvd at 15% O ₂ [3-hour average]	good combustion control
Combustion Turbines (ID Nos. ES6A and ES6B)	PM/PM10 (filterable and condensible)	0.0096 lb/million Btu [3-hour average]	0.0099 lb/million Btu [3-hour average]	use of low ash, low sulfur fuel

* BACT emission limits shall apply to each source (ID Nos. ES6A and ES6B) and at all times except during the following: Emissions resulting from start-up, shutdown or malfunction above those given in Section 2.1 E.4.a. above are permitted provided that optimal operational practices are adhered to and periods of excess emissions are minimized. For the combined cycle combustion turbines (ID Nos. ES6A and ES6B), periods of excess emissions due to start-up and/or shutdown or operation below 50% load shall not exceed six hours in any 24-hour block period beginning at midnight. Start-up is defined as the period from initial firing of the combustion turbine until it reaches Mode 6 operation. Shutdown is defined as the period from when the combustion turbine drops out of Mode 6 until flame out.

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 2D .0530 and 40 CFR 51.166(k):

EMISSION SOURCE	POLLUTANT	EMISSION LIMITS			
		Annual tons/yr ^a	per 24-hours lbs	per 8-hours lbs	per 1-hour lbs
Combustion Turbines (ID Nos. ES6A and ES6B)	nitrogen oxides (as nitrogen dioxide)	168.8	-	-	-
	particulates/PM-10 (filterable and condensible)	-	1089.6	-	-
	carbon monoxide	-	-	671.2	83.9

^aTons per consecutive 12-month period based on a maximum 4,000 operating hours of duct firing and 4,760 hours of operation without duct firing in each combustion turbines (ID Nos. ES-6A and ES-6B).

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

- c. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limits for CO in Section 2.1 E.4.a. above for combustion turbines (ID Nos. ES6A and ES6B), by testing one of these combustion turbines (ID Nos. ES6A and ES6B) within 180 days of its initial start-up 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.

Performance test for CO shall be conducted at ± 25 percent of 100 percent peak load or at the highest achievable load point if at least 75 percent peak load cannot be achieved in practice. Number of runs and time required for each run for the performance test shall be in accordance with the approved testing protocol. The ambient temperature for each test run shall be above 0°F. The Permittee shall measure the total CO for both scenarios: Without duct burner and with duct burner firing. The averaging time for demonstrating compliance for CO shall be those in the Section 2.1 E.4.a. above.

If the average of all runs of the performance test for CO emission rate exceeds the emission limits in Section 2.1 E.4. a. and b. above or the stack test is not performed, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

The Permittee shall perform NOx (as NO₂) emission testing to comply with emission limits in Section 2.1 E.4.a. and b. above, pursuant to the requirements in Section 2.1 E.5.c. below. If the Permittee does not perform the emission testing pursuant to the requirements Section 2.1 E.5.c. below or the testing results indicate that the NOx as NO₂ emissions exceed the emission limits in Section 2.1 E.4.a. or b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

No emission testing is required for compliance with PM/PM10 emission limits in Section 2.1 E.4.a. and b. above.

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

- d. The maximum annual hours of operation of each HRSG duct burner associated with each combustion turbine (ID Nos. ES6A and ES6B) shall not exceed 4,000 hours per rolling consecutive 12-month period.

- e. The Permittee shall record and maintain records of the actual number of hours of operation for the HRSG duct burners of combustion turbines (ID Nos. ES6A and ES6B). The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the above records are not maintained or if the hours of operation for each HRSG duct burner of combustion turbines (ID Nos. ES6A and ES6B) exceed 4,000 hours per rolling consecutive 12-month period.
- f. No monitoring/recordkeeping is required for emissions of CO and PM/PM10 from the combustion turbines (ID Nos. ES6A and ES6B).
- g. The Permittee shall monitor NOx (as NO₂) emissions from combustion turbines (ID Nos. ES-6A and ES-6B) as per Section 2.1 E.5.e. and f. below.

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

- h. The Permittee shall submit a written report of the results of each performance test required in Section 2.1 E.4.c. above, before the close of business on the 60th day following the completion of the performance test.
- i. The Permittee shall comply with NOx reporting requirements in Section 2.1 E.5.i. below.
- 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.

5. 15A NCAC 2D .0531: SOURCES IN NONATTAINMENT AREA

- a. The following Lowest Achievable Control Technology (LAER) limits shall not be exceeded:

EMISSION SOURCE	POLLUTANT	EMISSION LIMITS* (AND COMPLIANCE AVERAGING TIME)		CONTROL TECHNOLOGY
		Without Duct Burner	With Duct Burner	
Combustion Turbines (ID Nos. ES6A and ES6B)	NOx	2 ppmvd at 15% O ₂ [30-day rolling average]	2 ppmvd at 15% O ₂ [30-day rolling average]	DLN and SCR
Combustion Turbines (ID Nos. ES6A and ES6B)	VOC	1.4 ppmvd at 15% O ₂ [3-hour average]	2 ppmvd at 15% O ₂ [3-hour average]	good combustion control and catalytic oxidation

* LAER emission limits shall apply to each source (ID Nos. ES6A and ES6B) and at all times except during the following: Emissions resulting from start-up, shutdown or malfunction above those given in Section 2.1 E.5.a. above are permitted provided that optimal operational practices are adhered to and periods of excess emissions are minimized. For the combined cycle combustion turbines (ID Nos. ES6A and ES6B), periods of excess emissions due to start-up and/or shutdown or operation below 50% load shall not exceed six hours in any 24-hour block period beginning at midnight. Start-up is defined as the period from initial firing of the combustion turbine until it reaches Mode 6 operation. Shutdown is defined as the period from when the combustion turbine drops out of Mode 6 until flame out.

- b. The Permittee shall obtain DAQ verified offsetting emission reductions for NO_x and VOC in the amounts of 161 tons and 52 tons, respectively; by the time it commences operation of combustion turbines (ID Nos. ID Nos. ES6A and ES6B).

[15 A NCAC 2D .0531(f)(2)]

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

- c. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limits of both NO_x and VOC in Section 2.1 E.5.a. above for combustion turbines (ID Nos. ES6A and ES6B), by testing one of these combustion turbines (ID Nos. ES6A and ES6B) within 180 days of its initial start-up 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.

Performance test for NO_x and VOC shall be conducted at ± 25 percent of 100 percent peak load or at the highest achievable load point if at least 75 percent peak load cannot be achieved in practice. Number of runs and time required for each run for the performance test shall be in accordance with the approved testing protocol. The ambient temperature for each test run shall be above 0⁰F. The Permittee shall measure the NO_x and VOC emissions for both scenarios: Without duct burner and with duct burner firing. The averaging time for demonstrating compliance for NO_x and VOC emissions shall be those in Section 2.1 E.5.a. above.

If the average of all runs of the performance test for NO_x or VOC emission rates exceed the respective emission limits in Section 2.1 E.5.a. above or the stack test is not performed, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0531.

During the stack test for VOC, the Permittee shall establish a minimum inlet temperature to the oxidation catalyst to assure compliance with the VOC emission limits in Section 2.1 E.5.a. above. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the Permittee does not establish a minimum inlet temperature to the oxidation catalyst during the stack testing for VOC as required in Section 2.1 E.5.c. above.

- d. The Permittee shall comply with the monitoring/recordkeeping requirements in Section 2.1 E.4.d. and e. above. If the Permittee does not comply with the monitoring/recordkeeping requirements in Section 2.1 E.4.d. and e. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0531.

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

- e. The Permittee shall monitor NO_x emissions from the combustion turbines (ID Nos. ES6A and ES6B) using a CEMS in accordance with Section 2.1.E.3.g. above, in order to demonstrate compliance with the NO_x LAER emission limits. If the NO_x CEMS does not comply with the requirements of §60.4335(b) and §60.4345 or if the NO_x emissions (except during startup, shutdowns, and malfunction) exceed the NO_x LAER emission limits in Section 2.1 E.5.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0531.
- f. In addition to the NO_x emissions monitoring requirement in Section 2.1 E.5.e. above, the Permittee shall comply with the following requirements for NO_x emissions from the combustion turbines (ID Nos. ES6A and ES6B):
 - i. The Permittee shall install and operate an ammonia flow meter to measure and record the ammonia injection rate to the SCR system associated with each combustion turbine. The ammonia injection rates corresponding to a maximum ammonia slip of 10 ppmvd and necessary to comply with the LAER NO_x limits in Section 2.1 E.5.a. Table above shall be

established (and made available to the Division of Air Quality upon request) during the performance test in Section 2.1 E.5.c. above.

- ii. The SCR shall operate at all times that the turbine is operating, except during turbine start-up and shutdown periods to the extent recommended by the manufacturer and operated in a manner so as to minimize ammonia slip.
- iii. During NO_x CEM downtimes or malfunctions, the Permittee shall operate at 100% of the ammonia injection rate determined during the performance test in Section 2.1 E.5.c. above.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0531 if the ammonia injection rate to the SCR system is not continuously measured and recorded or the ammonia injection rate is less than the injection rate established during the performance test in Section 2.1 E.5.c. above.

- g. In order to demonstrate continuous compliance with VOC emission limits in Section 2.1 E.5.a. Table above, the Permittee shall continuously monitor the inlet temperature to the oxidation catalyst and maintain the 4-hour rolling average of the inlet temperature higher than
 - i. 1,000 °F until it establishes the minimum inlet temperature to the oxidation catalyst as per Section 2.1 E.5.c. above, or
 - ii. the minimum inlet temperature after establishing it as per Section 2.1 E.5.c. above.

If the Permittee does not continuously monitor the inlet temperature to the oxidation catalyst or any 4-hour rolling average of the inlet temperature is less than 1,000 °F (for the time period until it establishes the minimum inlet temperature to the oxidation catalyst in accordance with Section 2.1 E.5.c. above) or the minimum inlet temperature as established in Section 2.1 E.5.c. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0531.

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

- h. The Permittee shall submit a written report of the results of each performance test required in Section 2.1 E.5.c. above, before the close of business on the 60th day following the completion of the performance test.
- i. For combustion turbines (ID Nos. ES6A and ES6B), the Permittee shall submit reports of excess emissions and monitor downtime in accordance with §60.7(c). The Permittee shall report excess emissions for all periods of operation, including start-up, shutdown, and malfunction. These reports shall be postmarked by the 30th day following the end of each 6-month period.
 - i. For the NO_x CEM, excess emissions and monitor downtime shall be as defined below:
 - (A) An excess emission is any unit operating period in which the 30-day rolling average NO_x emission rate exceeds the emission limit in Section 2.1 E.5.a. above. For the purposes of this Subpart, a “30-day rolling average NO_x emission rate” is the arithmetic average of all hourly NO_x emission data in ppm measured by the continuous emission monitoring equipment for a given day and the twenty-nine unit operating days immediately preceding that unit operating day. A new 30-day average is calculated each unit operating day as the average of all hourly NO_x emissions rates for the preceding 30 unit operating days if a valid NO_x emission rate is obtained for at least 75 percent of all operating hours.
 - (B) A period of monitor downtime is any unit operating hour in which the data for any of the following parameters are either missing or invalid: NO_x concentration, CO₂ or O₂ concentration, fuel flow rate, steam flow rate, steam temperature, steam pressure, or megawatts. The steam flow rate, steam temperature, and steam pressure are only required if you will use this information for compliance purposes.

- (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.
- ii. For VOC emissions, the excess emissions and monitor downtime shall be as defined below:
 - (A) Excess emissions for VOC shall be defined any unit operating hour for which the 4-hour rolling average of the catalyst inlet temperature is outside the temperature range suggested by the catalyst manufacturer.
 - (B) A period of monitor downtime shall be defined as any unit operating hour in which catalyst inlet temperature data are unavailable or invalid.
- 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.

State-Only Requirement

6. 15A NCAC 2D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

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

EMISSION SOURCE	POLLUTANT	EMISSION LIMITS* (AND COMPLIANCE AVERAGING TIME)		CONTROL TECHNOLOGY
		Without Duct Burner	With Duct Burner	
Combustion Turbines (ID Nos. ES6A and ES6B)	SO ₂	0.0006 lb/million Btu [1-hour average]	0.0006 lb/million Btu [1-hour average]	use of natural gas containing 0.2 grain/100 sft ³ sulfur content

* BACT emission limits shall apply to each source (ID Nos. ES6A and ES6B) and at all times except during the following: Emissions resulting from start-up, shutdown or malfunction above those given in Section 2.1 E.6.a. above are permitted provided that optimal operational practices are adhered to and periods of excess emissions are minimized. For the combined cycle combustion turbines (ID Nos. ES6A and ES6B), periods of excess emissions due to start-up and/or shutdown or operation below 50% load shall not exceed six hours in any 24-hour block period beginning at midnight. Start-up is defined as the period from initial firing of the combustion turbine until it reaches Mode 6 operation. Shutdown is defined as the period from when the combustion turbine drops out of Mode 6 until flame out.

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ found in Section 3.

Monitoring/Record keeping [15A NCAC 2D .0530(h)]

- c. The Permittee shall demonstrate compliance with the SO₂ emission limit in Section 2.1 E.6.a. above, by using the fuel quality characteristics in a current, valid purchase contract, tariff sheet, or transportation contract for the fuel, specifying that the total sulfur content for natural gas use in continental areas is 0.2 grains of sulfur or less per 100 standard cubic feet.

The Permittee shall keep records of the valid purchase contract, tariff sheet, or transportation contract for a period of two years after the date on which the record was made.

Reporting [15A NCAC 2D .0530(h)]

- d. No reporting is required for sulfur dioxide emissions from the firing of natural gas.

7. 15A NCAC 2D .0902(f): REASONABLY AVAILABLE CONTROL TECHNOLOGY FOR VOC

- a. The Permittee shall install and operate reasonably available control technology (RACT) for VOC on combustion turbines (ID Nos. ES6A and ES6B) upon start-up.

The LAER requirements for VOC in Section 2.1 E.5. above satisfies the requirements of VOC RACT of this Section 2.1 E.7.

If the Permittee does not comply with the LAER requirements for VOC in Section 2.1 E.5. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0902(f).

[15A NCAC 2D .0902(f) and .0909(g)(2)]

8. 15A NCAC 2D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY [40 CFR 63 Subpart YYYY]

- a. The Permittee shall submit the Initial Notification within 120 days from startup of combustion turbines (ID Nos. ES6A and ES6B) to the DAQ.

[§§ 63.9(b)(2), and §§63.6095(a)(2) and 63.6145(c)]

9. 15A NCAC 2D .1402(d): REASONABLY AVAILABLE CONTROL TECHNOLOGY FOR NO_x

- a. The Permittee shall install and operate reasonably available control technology (RACT) for NO_x on combustion turbines (ID Nos. ES6A and ES6B) upon start-up.

The LAER requirements for NO_x in Section 2.1 E.5. above satisfies the requirements of NO_x RACT of this Section 2.1 E.9.

If the Permittee does not comply with the LAER requirements for NO_x in Section 2.1 E.5. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1402(d).

[15A NCAC 2D .1402(d) and .1403(e)(2)]

10. 15A NCAC 2Q .0402: ACID RAIN PERMITTING PROCEDURES [40 CFR PART 72]

- a. The Permittee shall submit a complete Acid Rain permit application to the DAQ at least 24 months before the date on which the combustion turbines (ID Nos. ES6A and ES6B) commence operation. [15A NCAC 2Q .0402(b) and 40 CFR §72.30(b)(2)(ii)]

F. One multi-cell cooling tower (ID No. ES7)

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 2D .0515
PM/PM-10	as defined in specific conditions	15A NCAC 2D .0530

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

- a. Emissions of particulate matter from the source (ID No. ES7) shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 02D .0515(a)]

$$E = 4.10 \times P^{0.67}$$

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 02D .2601]

- 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 .0515.
- c. **Monitoring/Recordkeeping/Reporting** [15A NCAC 2Q .0508(f)]
No monitoring/recordkeeping/reporting is required for particulate matter emissions from this source (ID No. ES7).

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

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

EMISSION SOURCE	POLLUTANT	EMISSION LIMITS* (AND COMPLIANCE AVERAGING TIME)	CONTROL TECHNOLOGY
Cooling Tower (ID No. ES7)	PM/PM10	0.0005% drift loss [3-hour rolling average]	drift eliminators

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

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

- b. No emission testing is required for compliance with PM/PM10 emission limit for this source (ID No. ES7) in Section 2.1 F.2.a. above.

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

- c. No monitoring/recordkeeping/reporting is required for PM/PM10 emissions from this source (ID No. ES7).

G. One natural gas-fired process heater (ID No. ES-8)

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	0.50 pound per million Btu heat input	15A NCAC 2D .0503
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 2D .0516
Visible emissions	20 percent opacity	15A NCAC 2D .0521
Hazardous Air Pollutants	Best Combustion Practices	15A NCAC 2D .1109 [CAA § 112(j)]

1. 15A NCAC 2D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

- a. Emissions of particulate matter from the combustion of natural gas that are discharged from this source (ID No. ES-8) into the atmosphere shall not exceed 0.50 pounds per million Btu heat input.

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and 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 2D .0503.

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

- c. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas in this source (ID No. ES-8).

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

- a. Emissions of sulfur dioxide from this source (ID No. ES-8) shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and 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 2D .0516.

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

- c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from natural gas for this source (**ID No. ES-8**).

3. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from this source (**ID No. ES-8**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 G.3.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

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

- c. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of natural gas in this source (**ID No. ES-8**).

4. 15A NCAC 2D .1109: CAA § 112(j); Case-by-Case MACT for Boilers & Process Heaters

- c. The Permittee shall use best combustion practices when operating the affected process heater (**ID No. ES-8**). The initial compliance date for this work practice standard and the associated monitoring, recordkeeping, and reporting requirements is **<ENTER DATE THREE YEARS AFTER PERMIT ISSUANCE>**. These conditions need not be included on the annual compliance certification until after the initial compliance date.

Monitoring/Recordkeeping

- d. To assure compliance, the Permittee shall perform an annual process heater 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 2D .1109 if the affected process heater 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 2D .1109 if these records are not maintained.

- Reporting** [15A NCAC 2Q .0508(f)]
- f. No reporting is required for hazardous air pollutants from the firing of natural gas in this source.

2.2- Phase II Acid Rain Permit Requirements

ORIS code: 7826

Effective: January 1, 2006 through December 31, 2010

1. Statement of Basis

Statutory and Regulatory Authorities: In accordance with the provisions of Article 21B of Chapter 143, General Statutes of North Carolina as amended and Titles IV and V of the Clean Air Act, the Department of Environment and Natural Resources, Division of Air Quality issues this permit pursuant to Title 15A North Carolina Administrative Codes, Subchapter 2Q .0400 and 2Q .0500, and other applicable Laws.

2. SO₂ Allowance Allocations and NO_x Requirements for each affected unit

Source	Emission Limit	2006	2007	2008	2009	2010
Unit 1, Unit 2, Unit 3, Unit 4, and Unit 5	SO ₂ allowances, under Tables 2, 3, or 4 of 40 CFR part 73	NA*	NA*	NA*	NA*	NA*
Unit 1, Unit 2, Unit 3, Unit 4, and Unit 5	NO _x limit	NA**				

* SO₂ allowances are not allocated by U.S. EPA for new units under 40 CFR part 72.

** Does not apply for combustion turbine units.

3. Comments, Notes and Justifications

None.

4. Phase II Permit Application (attached)

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

Acid Rain Permit Application dated June 14, 2005

2.4 - Clean Air Interstate Rules (CAIR) Permit Requirements

ORIS code: 7826

The following sources are affected CAIR units:

PERMITTED SOURCE	CAIR ID No.
ID No. Unit 1	Unit 1
ID No. Unit 2	Unit 2
ID No. Unit 3	Unit 3
ID No. Unit 4	Unit 4
ID No. Unit 5	Unit 5

A. 15A NCAC 2D .2403: NITROGEN OXIDE EMISSIONS

1. The total nitrogen oxide (NOx) emissions from the affected CAIR units listed above at the Plant Rowan County, Salisbury, Rowan County, North Carolina facility shall not exceed, except as provided in 15A NCAC 2D .2408: [15A NCAC 2D .2403]
 - a. 25 tons annually for 2009-2014,
 - b. 22 tons annually for 2015 and later, and

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 2D .2403, the CAIR designated representative may submit a request to be allocated CAIR NOx allowances for those sources 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 2D .2400 using the trading program and banking set out in 40 CFR Part 96. [15A NCAC 2D .2408] [15A NCAC 2D .2407]
3. The owner or operator of any unit or source covered under 15A NCAC 2D .2403 shall be subject to the provisions of 40 CFR 96.106(f). [15A NCAC 2D .2403]

Monitoring/Recordkeeping/Reporting [15A NCAC 2D .2403, and 15A NCAC 2D .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 2D .2405: NITROGEN OXIDE EMISSIONS DURING OZONE SEASON

1. Ozone season NOx emissions from the affected CAIR units listed above at the Plant Rowan County, Salisbury, Rowan County, North Carolina shall not exceed, except as provided in 15A NCAC 2D .2408: [15A NCAC 2D .2405(a)(1) and (b)]
 - a. 25 tons during the ozone season for 2009-2014,
 - b. 22 tons during the ozone season for 2015 and later; and

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 2D .2405, the CAIR designated

representative may submit a request to be allocated CAIR NO_x ozone season allowances for those sources using the procedures in 40 CFR 96.342(c)(2) and (3) ⁷.

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

Monitoring/Recordkeeping/Reporting [15A NCAC 2D .2405 and 15A NCAC 2D .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 NO_x unit.
5. The nitrogen oxide ozone season emissions of a CAIR NO_x Ozone Season source shall not exceed the number of allowances that it has in its compliance account established and administered under 15A NCAC 2D .2408. For purposes of making deductions for excess emissions for the ozone season in 2008 under the NO_x SIP Call (15A NCAC 2D .1400), the Administrator shall deduct allowances allocated under this Rule (15A NCAC 2D .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 NO_x 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 2D .2404: SULFUR DIOXIDE EMISSIONS

1. The annual allocation of sulfur dioxide allowances shall be determined by EPA. The allocations for CAIR SO₂ units are listed in the table below (these allocations are from 40 CFR 73.10 except where none is given):

SOURCE	ALLOCATION FOR 2000-2009	ALLOCATION FOR 2010 AND LATER
ID No. Unit 1	None	None
ID No. Unit 2	None	None
ID No. Unit 3	None	None
ID No. Unit 4	None	None
ID No. Unit 5	None	None

2. The affected CAIR SO₂ sources shall comply with the requirements of 15A NCAC 2D .2400 using the trading program and banking set out in 40 CFR Part 96. [15A NCAC 2D .2408]
3. The owner or operator of any unit or source covered under 15A NCAC 2D .2404 shall be subject to the provisions of 40 CFR 96.206(f). [15A NCAC 2D .2404]

Monitoring/Recordkeeping/Reporting [15A NCAC 2D .2404 and 15A NCAC 2D .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 SO₂ unit.

⁷ See letter dated July 23, 2009 from B. Keith Overcash regarding new units (Units 4 and 5) set-aside. For the 2008 ozone season from Unit 4 “the approved 2009 annual NO_x allocation will be 27 tons which includes 19 tons allocated for the ozone season”. For the 2008 ozone season from Unit 5 “the approved 2009 annual NO_x allocation will be 31 tons which includes 22 tons allocated for the ozone season”.

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 2D .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 SO₂ 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 Environment and Natural Resources, Division of Air Quality, is part of this permit. The owner and operator of these CAIR NO_x and SO₂ sources must comply with the standard requirements and special provisions set forth in the following attached application:

CAIR Permit Application dated July 3, 2007

SECTION 3 - GENERAL CONDITIONS (version 3.1)

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

- A. **General Provisions** [NCGS 143-215 and 15A NCAC 2Q .0508(i)(16)]
1. Terms not otherwise defined in this permit shall have the meaning assigned to such terms as defined in 15A NCAC 2D and 2Q.
 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 2Q .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 Environment and Natural Resources upon request.
- C. **Severability Clause** [15A NCAC 2Q .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 2Q .0507(e) and 2Q .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 2Q .0508(i)(2)]

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 2Q .0514]

The Permittee shall submit an application for an administrative permit amendment in accordance with 15A NCAC 2Q .0514.

2. Transfer in Ownership or Operation and Application Submittal Content [15A NCAC 2Q .0524 and 2Q .0505]

The Permittee shall submit an application for an ownership change in accordance with 15A NCAC 2Q.0524 and 2Q .0505.

3. Minor Permit Modifications [15A NCAC 2Q .0515]

The Permittee shall submit an application for a minor permit modification in accordance with 15A NCAC 2Q .0515.

4. Significant Permit Modifications [15A NCAC 2Q .0516]

The Permittee shall submit an application for a significant permit modification in accordance with 15A NCAC 2Q .0516.

5. Reopening for Cause [15A NCAC 2Q .0517]

The Permittee shall submit an application for reopening for cause in accordance with 15A NCAC 2Q .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 2Q .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 2Q .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 2Q .0523(c)]
To the extent that emissions trading is allowed under 15A NCAC 2D, including subsequently adopted maximum achievable control technology standards, emissions trading shall be allowed without permit revision pursuant to 15A NCAC 2Q .0523(c).

I.A. Reporting Requirements for Excess Emissions and Permit Deviations

[15A NCAC 2D .0535(f) and 2Q .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 2D; or by a permit condition; or that exceeds an emission limit established in a permit issued under 15A NCAC 2Q .0700. (*Note: Definitions of excess emissions under 2D .1110 and 2D .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 2D .0524), NESHAPS (15A NCAC 2D .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 2D .0524), NESHAPS (15A NCAC 2D .1110 or .1111), or these rules do NOT define "excess emissions," the Permittee shall report excess emissions in accordance with 15A NCAC 2D .0535 as follows:
 - a. Pursuant to 15A NCAC 2D .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 2D .0535(f)(3).

Permit Deviations

3. Pursuant to 15A NCAC 2Q .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 2D .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 2D .0535

The Permittee shall comply with all other applicable requirements contained in 15A NCAC 2D .0535, including 15A NCAC 2D .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 2D .0535(c)(1) through (7).
2. 15A NCAC 2D .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 2Q .0508(e) and 2Q .0513(b)]

This permit is issued for a fixed term of five years for facilities subject to Title IV requirements and for a term not to exceed five years in the case of all other facilities. This permit shall expire at the end of its term. Permit expiration terminates the facility's right to operate unless a complete renewal application is submitted at least nine months before the date of permit expiration. If the Permittee or applicant has complied with 15A NCAC 2Q .0512(b)(1), this permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of this permit shall remain in effect until the renewal permit has been issued or denied.

L. Need to Halt or Reduce Activity Not a Defense [15A NCAC 2Q .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 2Q .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 2Q .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 2Q .0508(f) and 2Q .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 2Q .0508(n)]

The Permittee shall submit to the DAQ and the EPA (Air and EPCRA Enforcement Branch, EPA, Region 4, 61 Forsyth Street, 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 2Q .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 2Q .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 2Q .0523.
4. A permit shield does not extend to minor permit modifications made under 15A NCAC 2Q .0515.

S. **Termination, Modification, and Revocation of the Permit** [15A NCAC 2Q .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 2Q .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 2Q .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 2Q .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 2Q .0508(i)(10)]

1. The Permittee shall pay all fees in accordance with 15A NCAC 2Q .0200.
2. Payment of fees may be by check or money order made payable to the N.C. Department of Environment and Natural Resources. 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 2Q .0519.

X. **Annual Emission Inventory Requirements** [15A NCAC 2Q .0207]

The Permittee shall report by **June 30 of each year** the actual emissions of each air pollutant listed in 15A NCAC 2Q .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 2Q .0107 and 2Q .0508(i)(9)]

Whenever the Permittee submits information under a claim of confidentiality pursuant to 15A NCAC 2Q .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 2Q .0107.

Z. **Construction and Operation Permits** [15A NCAC 2Q .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 2Q .0100 and .0300.

AA. **Standard Application Form and Required Information** [15A NCAC 2Q .0505 and .0507]

The Permittee shall submit applications and required information in accordance with the provisions of 15A NCAC 2Q .0505 and .0507.

BB. **Financial Responsibility and Compliance History** [15A NCAC 2Q .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 2Q .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 2Q .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 2Q .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 2D .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 2D .0300.

HH. **Registration of Air Pollution Sources** [15A NCAC 2D .0200]

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 2D .0202(b).

II. **Ambient Air Quality Standards** [15A NCAC 2D .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 2D .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 2Q .0508(i)(16)]

If emissions testing is required by this permit or the DAQ or if the Permittee submits emissions testing to the DAQ in support of a permit application or to demonstrate compliance, the Permittee shall perform such testing in accordance with 15A NCAC 2D .2600 and follow the procedures outlined below:

1. The Permittee shall submit a completed Protocol Submittal Form to the DAQ Regional Supervisor at least 45 days prior to the scheduled test date. A copy of the Protocol Submittal Form may be obtained from the Regional Supervisor.
2. The Permittee shall notify the Regional Supervisor of the specific test dates at least 15 days prior to testing in order to afford the DAQ the opportunity to have an observer on-site during the sampling program.
3. During all sampling periods, the Permittee shall operate the emission source(s) under maximum normal operating conditions or alternative operating conditions as deemed appropriate by the Regional Supervisor or his delegate.
4. The Permittee shall submit **two** copies of the test report to the DAQ. The test report shall contain at a minimum the following information:
 - a. a description of the training and air testing experience of the person directing the test;
 - b. a certification of the test results by sampling team leader and facility representative;
 - c. a summary of emissions results and text detailing the objectives of the testing program, the applicable state and federal regulations, and conclusions about the testing and compliance status of the emission source(s);
 - d. a detailed description of the tested emission source(s) and sampling location(s) process flow diagrams, engineering drawings, and sampling location schematics should be included as necessary;
 - e. all field, analytical, and calibration data necessary to verify that the testing was performed as specified in the applicable test methods;
 - f. example calculations for at least one test run using equations in the applicable test methods and all test results including intermediate parameter calculations; and
 - g. documentation of facility operating conditions during all testing periods and an explanation relating these operating conditions to maximum normal operation. If necessary, provide historical process data to verify maximum normal operation.
5. The testing requirement(s) shall be considered satisfied only upon written approval of the test results by the DAQ.
6. The DAQ will review emission test results with respect exclusively to the specified testing objectives as proposed by the Permittee and approved by the DAQ.

KK. **Reopening for Cause** [15A NCAC 2Q .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 2Q .0513(c).

3. Except for the state-enforceable only portion of the permit, the procedures set out in 15A NCAC 2Q .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 2Q .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 2Q .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. During operation the monitoring recordkeeping and reporting requirements as prescribed by the permit shall be implemented within the monitoring period.

MM. Fugitive Dust Control Requirement [15A NCAC 2D .0540] - STATE ENFORCEABLE ONLY

As required by 15A NCAC 2D .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 2D .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 2Q .0501 and .0523]

1. For modifications made pursuant to 15A NCAC 2Q .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 2Q .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 2Q .0523(a)(1)(C), the Permittee shall notify the Director and EPA (EPA - Air Planning Branch, 61 Forsyth St., 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. Mandatory Greenhouse Gas Reporting Requirements [15A NCAC 2Q .0508]
FEDERAL-ENFORCEABLE ONLY**

If the Permittee is subject to requirements of 40 CFR 98.2(a), the Permittee shall submit all required reports to the EPA Administrator in accordance with 40 CFR 98.

ATTACHMENT

List of Acronyms

AOS	Alternate Operating Scenario
BACT	Best Available Control Technology
Btu	British thermal unit
CEM	Continuous Emission Monitor
CFR	Code of Federal Regulations
CAA	Clean Air Act
CAIR	Clean Air Interstate Rule
DAQ	Division of Air Quality
DENR	Department of Environment and Natural Resources
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
PM₁₀	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
SO₂	Sulfur Dioxide
tpy	Tons Per Year
VOC	Volatile Organic Compound