



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

Mr. Steven E. Passen  
Plant Manager  
Progress Energy Carolinas, Inc.  
Richmond County Combustion Turbine Facility  
198 Energy Way  
Hamlet, NC 28345

Dear Mr. Passen:

SUBJECT: Air Quality Permit No. 08759T12  
Facility ID: 7700070  
Carolina Power and Light Company d/b/a Progress Energy Carolinas, Inc.  
Richmond County Combustion Turbine Facility  
Hamlet, North Carolina  
Richmond County  
Fee Class: Title V

In accordance with your completed Air Quality Permit Application for Renewal of a Title V permit received November 27, 2007, we are forwarding herewith Air Quality Permit No. 08759T12 to Carolina Power and Light Company d/b/a Progress Energy Carolinas, Inc., Richmond County Combustion Turbine Facility, Hamlet, Richmond County, North Carolina authorizing the construction and operation, of the emission source(s) and associated air pollution control device(s) specified herein. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant per 15A North Carolina Administrative Code 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.

The Permittee shall file a Title V Air Quality Permit Application pursuant to 15A NCAC 2Q .0504 for the air emission sources (ID Nos. ES-13 through ES-18, Tower5, and TK-5) and control devices (ID Nos. CD13-SCR and CD14-SCR) on or before 12 months after commencing operation.

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

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**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](http://www.ncair.org)

One  
North Carolina  
*Naturally*

Mr. Steven E. Passen

Enter XX

Page 2

subject to any term or condition of the attached permit reviews, understands, and abides by the condition(s) of the attached permit that are applicable to that particular emission source.

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

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

The construction of new air pollution emission source(s) and associated air pollution control device(s), or modifications to the emission source(s) and air pollution control device(s) described in this permit must be covered under an Air Quality Permit issued by the Division of Air Quality prior to construction unless the Permittee has fulfilled the requirements of 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 until XX<sup>1</sup>, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein.

The changes made to the permit are summarized in the attachment to this letter. Should you have any questions concerning this matter, please contact Mr. Michael Gordon, Environmental Engineer II, at (919) 715-6243.

Sincerely yours,

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

Enclosure

c: Gregg Worley, EPA Region 4  
Fayetteville Regional Office

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<sup>1</sup> The Phase II Acid Rain permit requirements shall be effective from January 1, 2006 until December 31, 2010.

**Air Quality Permit No. 08759T12**  
**Progress Energy Carolinas, Inc.**  
**Richmond County Combustion Turbine Facility**  
**Insignificant Activities under 15A NCAC 2Q .0503(8)**

<b>Emission Source I.D.</b>	<b>Emission Source Description</b>	<b>Regulatory Basis for Exemption</b>
I-2	Seven, 6,200 gallons each, lube oil reservoirs	2Q .0503(8)
I-3	Seven, 500 gallons each, false start drain tanks	2Q .0503(8)
I-4	Seven, 5,000 gallons each, CT wash tanks	2Q .0503(8)
I-5	One 20 kW emergency generator for microwave equipment	2Q .0503(8)
I-6	One 3,857 gallons steam turbine lube oil reservoir	2Q .0503(8)
I-7	One 281 gallons steam turbine oil drain tank	2Q .0503(8)
I-8	One 316 gallons steam turbine seal oil vacuum tank	2Q .0503(8)
I-9	Three, 200 gallons each, fuel gas coalescer drain tanks	2Q .0503(8)
I-10	One 100 Gallon Portable Diesel Tank	2Q .0503(8)
I-11	One 300 Gallon Diesel Tank	2Q .0503(8)
I-12	One 300 Gallon Gasoline Tank	2Q .0503(8)
I-ES-19	One 2.6 million Btu/hr, natural gas dew point heater for ES-13	2Q .0503(8)
I-ES-20	One 2.6 million Btu/hr, natural gas dew point heater for ES-14	2Q .0503(8)

**ATTACHMENT**  
**Air Quality Permit No. 08759T12**  
**Progress Energy Carolinas, Inc.**  
**Richmond County Combustion Turbine Facility**

The following changes were made to the Progress Energy Carolinas, Inc. - Richmond County Combustion Turbine Facility Air Permit No. 08759T11:

<b>Old Page No.</b>	<b>New Page No.</b>	<b>Part, Section, or Condition No.</b>	<b>Change</b>
-	-	Cover	Amended to reflect current permit number, issue date, effective date, and associated application information
Insignificant Activity List	Emissions Source Table	Attachment	Removed affected boilers (ID No. I-1) from the insignificant activity list.
-	-	Emissions Source Table	Updated Table to reflect changes to permit (addition of Case-by-Case MACT 112(j) designations, addition of I-1(now ES-19, ES-20, and ES-21) to the Title V permit, etc.)
-	-	Throughout	Removed 2Q .0501(c)2 statements related to operation in mode 6/6Q and the incorporation of NO <sub>x</sub> CEMS as an alternative method of compliance found in the emissions source table, Section 2.1.A, and 2.1.B (Significant modification application ID No. 7700070.09C has been incorporated into this renewal)
11-12	-	2.1.A.4	Removed NO <sub>x</sub> SIP requirements incorporated under 2D .2400. Requirements have been placed in the new Section 2.5 for CAIR
19-20	-	2.1.B.4	Removed NO <sub>x</sub> SIP requirements incorporated under 2D .2400. Requirements have been placed in the new Section 2.5 for CAIR
42-44	-	2.1.F.7 to 2.1.F.9	Removed Federal Only and State Only requirements listed under 2D .1418 and 40 CFR 52 Subpart II. Requirements are now part of Section 2.5 (CAIR).
44	-	2.1 F.10	Removed this condition since acid rain application has been submitted.
-	-	2.1.E.6, 2.1.G.6, 2.1.H.5	Added Case-by-Case 112(j) requirements for natural gas boilers and heaters.
-	46-48	2.1.K	Added previously insignificant 8.75 MMBtu/hr natural gas heaters to the Title V permit due to 112(j) applicability and added corresponding requirements (ID No's. ES-21, ES-22, and ES-23)
-	48-50	2.1.L	Added previously insignificant 2.6 MMBtu/hr natural gas heaters to the Title V permit due to 112(j) applicability and added corresponding requirements (ID No's. ES-19 and ES-20)
-	52	2.3	Revised Acid Rain Effective dates and application date. Added Units 13 and 14 to requirements.
-	53-54	2.4	Added CAIR Permit Section and attached associated application as part of this permit
Page 55	Page 55	General Conditions	Updated General Conditions to latest revision

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



Division of Air Quality

## AIR QUALITY PERMIT

Permit No.	Replaces Permit No.(s)	Effective Date*	Expiration Date*
08759T12	08759T11	XX	XXXX

\* 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 construct and operate the emission source(s) and associated air pollution control device(s) specified herein, in accordance with the terms, conditions, and limitations within this permit. This permit is issued under the provisions of Article 21B of Chapter 143, General Statutes of North Carolina as amended, and Title 15A North Carolina Administrative Codes (15A NCAC), Subchapters 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: Carolina Power and Light Company  
d/b/a Progress Energy Carolinas, Inc.

Facility ID: 7700070

Facility Site Location: 198 Energy Way  
City, County, State, Zip: Hamlet, Richmond County, NC 28345

Mailing Address: 198 Energy Way  
City, State, Zip: Hamlet, NC 28345

Application Number: 7700070.07B, 7700070.09A, 7700070.09B, 7700070.09C,  
7700070.09D

Complete Application Date: November 27, 2007, December 23, 2008, June 16, 2009,  
September 3, 2009, December 14, 2009

Primary SIC Code: 4911

Division of Air Quality Fayetteville Regional Office  
Regional Office Address: 225 Green Street, Suite 714, Fayetteville, NC 28301

Permit issued this the XX day of XXXXX, XXXX

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

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

SECTION 2: SPECIFIC LIMITATIONS AND CONDITIONS

2.1 - Emission Source(s) Specific Limitations and Conditions

(Including specific requirements, testing, monitoring, recordkeeping, and  
reporting requirements)

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

(Including specific requirements, testing, monitoring, recordkeeping, and  
reporting requirements)

2.3 - Phase II Acid Rain Permit Requirements

SECTION 3: GENERAL PERMIT CONDITIONS

ATTACHMENT

List of Acronyms

Acid Rain Permit Application dated December 14, 2009

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

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

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Units 1 through 4, and Unit 6 <b>PSD</b> <b>NSPS Subpart GG</b>	Five natural gas/No. 2 fuel oil-fired simple-cycle internal combustion turbines (1,628 million Btu per hour nominally rated heat input each, when firing natural gas, 1,819 million Btu per hour nominally rated heat input each, when firing No. 2 fuel oil), each equipped with dual fuel dry Low-NO <sub>x</sub> combustors when firing natural gas and water injection when firing No. 2 fuel oil for NO <sub>x</sub> control	N/A	No Controls
Unit 7 and Unit 8 <b>PSD</b> <b>NSPS Subpart GG</b>	Two natural gas/No. 2 fuel oil-fired combined-cycle internal combustion turbines (1,628 million Btu per hour nominally rated heat input each, when firing natural gas, 1,819 million Btu per hour nominally rated heat input each, when firing No. 2 fuel oil), each equipped with a heat recovery steam generator and a steam turbine, and dual fuel dry Low-NO <sub>x</sub> combustors when firing natural gas and water injection when firing No. 2 fuel oil for NO <sub>x</sub> control	Unit 7 SCR Unit 8 SCR	Selective Catalytic Reduction
TK-1 and TK-2 <b>PSD</b>	Two, No. 2 fuel oil, fixed-roof storage tanks (not to exceed 5 million gallons capacity each, actual capacity 3.1 million gallons each) with atmospheric vents.	N/A	No Controls
Tower 4 <b>PSD</b>	One cooling tower with drift eliminators (123,220 gallons per minute recirculating water flow rate)	N/A	No Controls
ES-10 <b>PSD</b> <b>NSPS Subpart Dc</b> <b>Case-by-Case MACT 112(j)</b>	One natural gas fired auxiliary boiler (16.74 million Btu per hour nominally rated heat input)	N/A	No Controls
ES-13 and ES-14 <b>PSD</b> <b>NSPS Subpart KKKK</b> <b>MACT Subpart YYYY</b>	<p>Two natural gas/No. 2 fuel oil-fired simple/combined cycle internal combustion turbines, each equipped with a heat recovery steam generator, dry Low-NO<sub>x</sub> combustors and water injection control, both equipped with a common steam turbine</p> <p style="text-align: center;">Simple-cycle mode of operation:</p> <p>2,084 million Btu per hour heat input rate each when firing natural gas 1,983 million Btu per hour heat input rate each when firing No. 2 fuel oil</p> <p style="text-align: center;">Combined-cycle mode of operation:</p> <p>2,225 million Btu per hour heat input rate each for gas turbine when firing natural gas and 390 million Btu per hour heat input rate each for duct burner when firing natural gas</p> <p>1,983 million Btu per hour heat input rate each for gas turbine when firing No. 2 fuel and no duct burner firing in each heat recovery steam generator when firing No. 2 fuel oil</p>	CD13-SCR and CD14-SCR	Selective Catalytic Reduction (applicable for combined-cycle mode of operation only)

<b>Emission Source ID No.</b>	<b>Emission Source Description</b>	<b>Control Device ID No.</b>	<b>Control Device Description</b>
ES-15 <b>PSD</b> NSPS Subpart Dc Case-by-Case MACT 112(j)	One natural gas-fired auxiliary boiler (16.74 million Btu per hour heat input rate)	N/A	No Controls
ES-16, ES-17 and ES-18 <b>PSD</b> Case-by-Case MACT 112(j)	Three natural gas-fired fuel gas heaters (5 million Btu per hour heat input rate each)	N/A	No Controls
ES-19, ES-20, and ES-21 Case-by-Case MACT 112(j)	Three natural gas-fired fuel gas heaters (8.75 million Btu per hour heat input rate each)	N/A	No Controls
Tower5 <b>PSD</b>	One multi-cell cooling tower with drift eliminators (150,000 gallons per minute recirculation water flow rate)	N/A	No Controls
TK-5 <b>PSD</b>	One No. 2 fuel oil fixed-roof storage tank with atmospheric vents (not to exceed 3.5 million gallons capacity)	N/A	No Controls

## SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS

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

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

- A. Five natural gas/No. 2 fuel oil-fired simple-cycle internal combustion turbines (1,628 million Btu per hour nominally rated heat input each, when firing natural gas, 1,819 million Btu per hour nominally rated heat input each, when firing No. 2 fuel oil), each equipped with dual fuel dry Low-NO<sub>x</sub> combustors when firing natural gas and water injection when firing No. 2 fuel oil for NO<sub>x</sub> control (ID Nos. Unit 1, Unit 2, Unit 3, Unit 4, and Unit 6)**

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

REGULATED POLLUTANT	LIMITS/STANDARDS	APPLICABLE REGULATION
Visible Emissions	20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent opacity if (i) no six-minute period exceeds 87 percent opacity, (ii) no more than one six-minute period exceeds 20 percent opacity in any hour, and (iii) no more than four six-minute periods exceed 20 percent opacity in any 24-hour period.	15A NCAC 2D .0521
Sulfur Dioxide	As defined in specific conditions	15A NCAC 2D .0524 (40 CFR Part 60 Subpart GG)
Nitrogen Oxides	As defined in specific conditions  See section 2.4	15A NCAC 2D .0524 (40 CFR Part 60 Subpart GG)  15A NCAC 2D .2400 (40 CFR Part 96)
Various	As defined in specific conditions	15A NCAC 2D .0530
Hazardous Air Pollutants	As defined in specific conditions and Section 2.2 A.1.	15A NCAC 2D .1112
Sulfur Dioxide Nitrogen Oxides	Phase II Acid Rain Permit Requirements (See Section 2.3)	15A NCAC 2Q .0402

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

- a. Visible emissions from this source shall not be more than **20 percent opacity** (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. [15A NCAC 2D .0521(d)]

**Testing** [15A NCAC 2D .2601]

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

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

- c. To assure compliance, the Permittee shall perform a Method 9 test for 1 hour using a pre-approved protocol to be submitted in accordance with 15A NCAC 2D .2600 and General Condition JJ before the source operates more than 1100 hours using No. 2 fuel oil. This monitoring procedure shall be repeated before each subsequent 1100 hours of operation, from the time of the last test, using No. 2 fuel oil. If the results of this test are above the limit given in Section 2.1 A.1.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

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

- d. The Permittee shall keep records of the hours and associated dates, when these sources are in operation, and the dates and results of performance of Method 9 tests. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

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

- e. The Permittee shall submit the results of the Method 9 test within 30 days of completion of the test or at the end of the quarter. All instances of deviations from the requirements of this permit must be clearly identified.

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

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements in accordance with 15A NCAC 2D .0524, "New Source Performance Standards (NSPS)" as promulgated in 40 CFR Part 60, Subpart GG, including Subpart A "General Provisions." [15A NCAC 2D .0524]
- b. **NSPS Emissions Limitations** - As required by 15A NCAC 2D .0524, the following permit limits shall not be exceeded:

AFFECTED FACILITY	POLLUTANT	EMISSION LIMIT
Combustion Turbines (ID Nos. Unit 1- 4, and Unit 6)	Nitrogen Oxides	$STD^* = 0.0075 \times [(14.4) / Y^{**}] + F^{***}$
	Sulfur Dioxide	0.015 percent by volume **** or 0.8 percent weight sulfur in fuel

\* STD = allowable nitrogen oxide emissions in percent by volume at 15 percent O<sub>2</sub> on a dry basis.

\*\* Y = manufacturer's rated heat rate at manufacturer's rated load or actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. Y shall not exceed 14.43 kJ/w-h.

\*\*\* F = NO<sub>x</sub> emission allowance for fuel bound nitrogen as defined in 40CFR60.332(a)(3).

\*\*\*\* Allowable sulfur dioxide emissions at 15 percent O<sub>2</sub> on a dry basis.

**Testing** [15A NCAC 2D .2601]

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

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

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

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

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

**Alternative A**

- i. The nitrogen content of the fuel being fired in each combustion turbine shall be monitored as specified in 40 CFR 60.334(h) to demonstrate compliance with the nitrogen oxides standard as specified in 40 CFR 60.332, using the test methods and procedures in 40 CFR 60.335, except as follows:
  1. When firing fuel oil, as an alternate to sampling each occasion that fuel oil is transferred to each storage tank from any other source (as specified in 40 CFR 60.334(i)(1)), the Permittee may sample each tank to determine nitrogen content after all shipments have been transferred into the tank and prior to placing the tank in service for supply to the turbines. Samples shall be analyzed for nitrogen content in accordance with ASTM Method D4629.
  2. Monitoring of fuel nitrogen content shall not be required while pipeline natural gas is the only fuel being fired in the combustion turbines.
- ii. As required by 40 CFR 60.334(a), using the test methods and procedures in 40 CFR 60.335(c)(2), for each combustion turbine, a continuous monitoring system shall be installed and operated to monitor and record fuel consumption and the ratio of water-to-fuel being fired. The monitoring device shall be calibrated and maintained in accordance with the manufacturer's specifications. This system shall be accurate to within 5.0 percent and must be approved by the DAQ prior to installation.

**Alternative B**

- i. The Permittee shall demonstrate compliance with the NO<sub>x</sub> emission limit using a continuous emission monitoring system (CEMS) installed, certified, maintained, operated, and quality-assured in accordance with 40 CFR Part 75. The missing data substitution methodology provided in 40 CFR 75, subpart D, is not required for purposes of identifying excess emissions. Instead, periods of missing CEMS data are to be reported as monitor downtime in the excess emissions and monitoring performance report required in 40 CFR 60.7(c). A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour, for either NO<sub>x</sub> concentration or diluents (or both). The CEMS shall comply with all applicable requirements of 40 CFR 60.334 and 40 CFR 75. If the CEMS does not comply with the applicable requirements of 40 CFR 60.334 and 40 CFR 75, or the NO<sub>x</sub> emissions from these turbines exceed the emission limits set forth in 40 CFR 60.332, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

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

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

- f. Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction.
- g. For the purpose of reports required under 40 CFR 60.7(c), periods of excess emissions for sulfur dioxide shall be reported for any daily period during which the sulfur content of the fuel being fired exceeds 0.8 percent by weight.
- h. For the purpose of reports required under 40 CFR 60.7(c), periods of excess emissions for nitrogen oxides shall be reported:
  - i. For any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with 40 CFR 60.332 by the performance test required in 40 CFR 60.8 or any period during which the fuel-bound nitrogen is greater than the maximum nitrogen content allowed by the fuel-bound nitrogen allowance used during the performance test required in 40 CFR 60.8.
  - ii. Where the Permittee has elected to install a CEMS according to Alternative B of 2.1.A.2.e above, reporting shall be in accordance with 40 CFR 60.334(j)(1)(iii). Data must be reduced to hourly averages as specified in 40 CFR 60.13(h). An hour of excess emissions shall be any unit operating hour in which the 4-hour rolling average NO<sub>x</sub> concentration exceeds the applicable emission limit in Section 2.1.A.2.b. A “4-hour rolling average NO<sub>x</sub> concentration” is the arithmetic average of the average NO<sub>x</sub> concentration measured by the CEMS for a given hour (corrected to 15 percent O<sub>2</sub> and, if required under 40 CFR 60.335(b)(1), to ISO standard conditions) and the three unit operating hour average NO<sub>x</sub> concentrations immediately preceding that unit operating hour. Each report shall include the ambient conditions (temperature, pressure, and humidity) at the time of the excess emission period and (if the owner or operator has claimed an emission allowance for fuel bound nitrogen) the nitrogen content of the fuel during the period of excess emissions. You do not have to report ambient conditions if you opt to use the worst-case ISO correction factor as specified in 40 CFR 60.334(b)(3)(ii), or if you are not using the ISO correction equation under the provisions of 40 CFR 60.335(b)(1). The Permittee shall comply with all applicable reporting requirements of 40 CFR 60.334.
- i. The Permittee shall submit in writing the excess emissions of sulfur dioxide and nitrogen oxides as well as the sulfur content and fuel-bound nitrogen content of the No. 2 fuel oil fired in the combustion turbines and the number of hours of operation of each combustion turbine by January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September.

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

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

AFFECTED SOURCE	POLLUTANT	BACT EMISSION LIMIT		BACT CONTROLS
		Natural Gas	No. 2 Fuel Oil	
		Lbs/MMBtu ppm	Lbs/MMBtu ppm	
Combustion Turbines (ID Nos. Unit 1- 4, and Unit 6), per turbine	Opacity	20%	20%	Combustion Control
	Nitrogen Oxides	During initial BACT testing:	0.175 42 ppmvd <sup>b</sup> (24-hour rolling average) <sup>c</sup>	Natural Gas: Dry-Low NOx  Fuel Oil: Water Injection
		0.037 9 ppmvd <sup>b</sup> (24-hour rolling average) <sup>c</sup>		
		After initial BACT testing:		
		0.043 10.5 ppmvd <sup>b</sup> (24-hour rolling average) <sup>c</sup>		
	Sulfur Dioxide	0.0006	0.054	0.05% Sulfur Fuel Oil
	Carbon Monoxide	0.018 9 ppmvd	0.037 20 ppmvd	Combustion Control
	VOC's	0.0017 1.4 ppmvw	0.004 3.5 ppmvw	Combustion Control
Particulates/PM-10 (Front half)	0.0055	0.009	Combustion Control	
Sulfuric Acid	N/A	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% O<sub>2</sub>.
- 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 shall not exceed two hours in any 24-hour block period beginning at midnight. When using natural gas, start-up shall be defined as the period from initial firing to mode 6/6Q (as defined by the manufacturers Dry low NOx control system information) and shutdown shall be defined as the period from mode 6/6Q to flame out. When using fuel oil, start-up shall be the period from initial firing to “water injection in-service” and shutdown shall be from the cessation of water injection to flameout. The facility shall not operate the turbines outside of mode 6/6Q when firing natural gas or without water injection when firing fuel oil at any time after startup and prior to shutdown. Unit emissions shall comply with those given in Section 2.1.A.3.a.i. once mode 6/6Q is reached or, when firing fuel oil, water injection is initiated. Any operation outside of these parameters shall be deemed a startup, shutdown, or malfunction event.

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

AFFECTED SOURCE	POLLUTANT	EMISSION LIMIT				
		Annual (tons/yr)*	Pounds per 24-hour	Pounds per 8-hour	Pounds per 3-hour	Pounds per 1-hour
Combustion Turbines (ID Nos. Unit 1- 4, Unit 6, Unit 7, and Unit 8), total	Nitrogen Dioxide	1757.0				
	Sulfur Dioxide	357.4	16,632		2079	
	Carbon Monoxide			3640		455
	Particulates/PM-10 (Front Half)	151.8	2856			

\* Tons per rolling consecutive 12-month period. Annual emissions for the combustion turbines are for all seven turbines firing fuel oil for 1000 hours per year, five 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 emission testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A. 3. a. 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 combustion turbine (ID Nos. Unit 1 through Unit 4, and Unit 6) 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 simple-cycle combustion turbine (ID Nos. Unit 1 through Unit 4, and Unit 6) 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 combustion turbine (ID Nos. Unit 1 through Unit 4, and Unit 6) 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 per turbine), and during compliance testing.
- 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 combustion turbines are firing No. 2 fuel oil only.
- j. The Permittee shall monitor operations to demonstrate compliance with the BACT emission limits as follows:
- i. Determine the sulfur content of the fuel being fired in each combustion turbine in accordance with Section 2.1 A. 2. d. i.
  - ii. Determine nitrogen oxide emissions according to:
    1. The requirements of 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.
    2. If the facility has installed CEMS for NO<sub>x</sub> monitoring, emissions shall be determined according to Alternative B under Section 2.1.A.2.e.

Note: If Appendix E is being used in lieu of a NO<sub>x</sub> 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)]

- k. The Permittee shall submit in writing the following reports by January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September:
- 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 0.043 lb/MMBtu (10.5 ppmvd) when firing natural gas and 0.175 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<sub>x</sub> concentrations are obtained at normal operating conditions as defined by 2.1.A.3.a(ii) and at least 15 minutes apart.

**B. Two natural gas/No. 2 fuel oil-fired combined-cycle internal combustion turbines (1,628 million Btu per hour nominally rated heat input each, when firing natural gas, 1,819 million Btu per hour nominally rated heat input each, when firing No. 2 fuel oil), each equipped with a heat recovery steam generator and a steam turbine, and dual fuel dry Low-NO<sub>x</sub> combustors when firing natural gas and water injection when firing No. 2 fuel oil for NO<sub>x</sub> control (ID Nos. Unit 7 and Unit 8), and associated SCR's (ID No. Unit 7 SCR and Unit 8 SCR)**

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

REGULATED POLLUTANT	LIMITS/STANDARDS	APPLICABLE REGULATION
Visible Emissions	20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent opacity if (i) no six-minute period exceeds 87 percent opacity, (ii) no more than one six-minute period exceeds 20 percent opacity in any hour, and (iii) no more than four six-minute periods exceed 20 percent opacity in any 24-hour period.	15A NCAC 2D .0521
Sulfur Dioxide	As defined in specific conditions	15A NCAC 2D .0524 (40 CFR Part 60 Subpart GG)
Nitrogen Oxides	As defined in specific conditions  See Section 2.4	15A NCAC 2D .0524 (40 CFR Part 60 Subpart GG)  15A NCAC 2D .2400 (40 CFR Part 96 CAIR)
Various	As defined in specific conditions	15A NCAC 2D .0530
Hazardous Air Pollutants	See Section 2.2 A.1.	15A NCAC 2D .1112
Sulfur Dioxide Nitrogen Oxides	Phase II Acid Rain Permit Requirements (See Section 2.3)	15A NCAC 2Q .0402

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

- a. Visible emissions from this source shall not be more than **20 percent opacity** (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. [15A NCAC 2D .0521(d)]

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

- c. To assure compliance, the Permittee shall perform a Method 9 test for 1 hour using a pre-approved protocol to be submitted in accordance with 15A NCAC 2D .2610 and General Condition JJ before the source operates more than 1100 hours using No. 2 fuel oil. This monitoring procedure shall be repeated before each subsequent 1100 hours of operation, from the time of the last test, using No. 2 fuel oil. If the results of this test are above the limit given in Section 2.1 B.1.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

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

- d. The Permittee shall keep records of the hours and associated dates, when these sources are in operation, and the dates and results of performance of Method 9 tests. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

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

- e. The Permittee shall submit the results of the Method 9 test within 30 days of completion of the test or at the end of the quarter. All instances of deviations from the requirements of this permit must be clearly identified.

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

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements in accordance with 15A NCAC 2D .0524, "New Source Performance Standards (NSPS)" as promulgated in 40 CFR Part 60, Subpart GG, including Subpart A "General Provisions." [15A NCAC 2D .0524]
- b. NSPS Emissions Limitations - As required by 15A NCAC 2D .0524, the following permit limits shall not be exceeded:

AFFECTED FACILITY	POLLUTANT	EMISSION LIMIT
Combustion Turbines (ID No.'s. Unit 7 And Unit 8)	Nitrogen Oxides	Std* = 0.0075 X [(14.4) / Y**] + F***
	Sulfur Dioxide	0.015 Percent By Volume**** Or 0.8 Percent Weight Sulfur In Fuel

\* STD = allowable nitrogen oxides emissions in percent by volume at 15 percent O<sub>2</sub> on a dry basis.

\*\* Y = manufacturer's rated heat rate at manufacturer's rated load or actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. Y shall not exceed 14.43 kJ/w-h.

\*\*\* F = NOx emission allowance for fuel bound nitrogen as defined in 40CFR60.332(a)(3).

\*\*\*\* Allowable sulfur dioxide emissions at 15 percent O<sub>2</sub> on a dry basis.

**Testing** [15A NCAC 2D .2601]

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

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

- d. The sulfur content of the fuel being fired in each combustion turbine shall be monitored as specified in 40 CFR 60.334(b) to demonstrate compliance with the sulfur dioxide standard in 40 CFR 60.333, using the test methods and procedures in 40 CFR 60.335, except as follows:
  - i. When firing fuel oil, as an alternate to sampling each occasion that fuel oil is transferred to each storage tank from any other source (as specified in 40 CFR 60.334(b)(1)), the Permittee may sample each tank to determine sulfur content after all shipments have been transferred into the tank and prior to placing the tank in service for supply to the turbines. Samples shall be analyzed for sulfur content in accordance with 40 CFR Part 75, Appendix D.
  - ii. When firing natural gas, the procedures from 40 CFR Part 75, Appendix D shall be used to sample and analyze for sulfur content. If the sulfur content of the fuel burned in each combustion turbine is not monitored as specified above or the sulfur dioxide emission rate of combustion turbine is above the limit given in Section 2.1 B. 2. b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.
- e. The Permittee shall demonstrate compliance with the NO<sub>x</sub> emissions limit through one of the alternative compliance methods (A or B) described below. Compliance Alternative B as provided for in 40 CFR 60.334(b), shall be the mandatory method for compliance demonstration if at any time a unit is subject to Acid Rain provisions and is no longer classified as a "peaking unit" under 40 CFR 72.2.

**Alternative A**

- i. The nitrogen content of the fuel being fired in each combustion turbine shall be monitored as specified in 40 CFR 60.334(h) to demonstrate compliance with the nitrogen oxides standard as specified in 40 CFR 60.332, using the test methods and procedures in 40 CFR 60.335, except as follows:
  1. When firing fuel oil, as an alternate to sampling each occasion that fuel oil is transferred to each storage tank from any other source (as specified in 40 CFR 60.334(i)(1)), the Permittee may sample each tank to determine nitrogen content after all shipments have been transferred into the tank and prior to placing the tank in service for supply to the turbines. Samples shall be analyzed for nitrogen content in accordance with ASTM Method D4629.
  2. Monitoring of fuel nitrogen shall not be required while pipeline natural gas is the only fuel being fired in the combustion turbines.
- ii. As required by 40 CFR 60.334(a), using the test methods and procedures in 40 CFR 60.335(c)(2), for each combustion turbine, a continuous monitoring system shall be installed and operated to monitor and record fuel consumption and the ratio of water-to-fuel being fired. The monitoring device shall be calibrated and maintained in accordance with the manufacturer's specifications. This system shall be accurate to within 5.0 percent and must be approved by the DAQ prior to installation.

**Alternative B**

- i. The Permittee shall demonstrate compliance with the NO<sub>x</sub> emission limit using a continuous emission monitoring system (CEMS) installed, certified, maintained, operated, and quality-assured in accordance with 40 CFR Part 75. The missing data substitution methodology provided in 40 CFR 75, subpart D, is not required for purposes of identifying excess emissions. Instead, periods of missing CEMS data are to be reported as monitor downtime in the excess emissions and monitoring performance report required in 40 CFR 60.7(c). A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour, for either NO<sub>x</sub> concentration or diluent (or both). The CEMS shall comply with all applicable requirements of 40 CFR 60.334 and 40 CFR 75. If the CEMS does not comply with the applicable requirements of 40 CFR 60.334 and 40 CFR 75, or the NO<sub>x</sub> emissions from these turbines exceed the emission limits set forth in 40 CFR 60.332, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

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

- f. Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction.
- g. For the purpose of reports required under 40 CFR 60.7(c), periods of excess emissions for sulfur dioxide shall be reported for any daily period during which the sulfur content of the fuel being fired exceeds 0.8 percent by weight.

- h. For the purpose of reports required under 40 CFR 60.7(c), periods of excess emissions for nitrogen oxides shall be reported:
  - i. For any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with 40 CFR 60.332 by the performance test required in 40 CFR 60.8 or any period during which the fuel-bound nitrogen is greater than the maximum nitrogen content allowed by the fuel-bound nitrogen allowance used during the performance test required in 40 CFR 60.8.
  - ii. Where the Permittee has elected to install a CEMS according to Alternative B of 2.1.B.2.e above, reporting shall be in accordance with 40 CFR 60.334(j)(1)(iii). Data must be reduced to hourly averages as specified in 40 CFR 60.13(h). An hour of excess emissions shall be any unit operating hour in which the 4-hour rolling average NO<sub>x</sub> concentration exceeds the applicable emission limit in Section 2.1.B.2.b. A “4-hour rolling average NO<sub>x</sub> concentration” is the arithmetic average of the average NO<sub>x</sub> concentration measured by the CEMS for a given hour (corrected to 15 percent O<sub>2</sub> and, if required under 40 CFR 60.335(b)(1), to ISO standard conditions) and the three unit operating hour average NO<sub>x</sub> concentrations immediately preceding that unit operating hour. Each report shall include the ambient conditions (temperature, pressure, and humidity) at the time of the excess emission period and (if the owner or operator has claimed an emission allowance for fuel bound nitrogen) the nitrogen content of the fuel during the period of excess emissions. You do not have to report ambient conditions if you opt to use the worst-case ISO correction factor as specified in 40 CFR 60.334(b)(3)(ii), or if you are not using the ISO correction equation under the provisions of 40 CFR 60.335(b)(1). The Permittee shall comply with all applicable reporting requirements of 40 CFR 60.334.
- i. The Permittee shall submit in writing the excess emissions of sulfur dioxide and nitrogen oxides as well as the sulfur content and fuel-bound nitrogen content of the No. 2 fuel oil fired in the combustion turbines and the number of hours of operation of each combustion turbine by January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September.

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

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

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

- a BACT limits shall apply at all times except as provided under Section 2.1 B.3.a.ii.
- b ppmvd = parts per million by volume on a dry basis at 15% O<sub>2</sub>.
- 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<sub>x</sub> emission limit is 2.5 ppmvd for the first 500 hours of operation (on a 24-hour rolling average basis). After 500 hours, the emission limit is 3.5 ppmvd (on a 24-hour rolling average basis). However, the ammonia injection rate shall not exceed that rate established per Section 2.1 B.3.i.i. at each load point. Three months after the 24-hour rolling average exceeds 3.3 ppmvd three times within any rolling 50-hour period, the emission limit changes to 2.5 ppmvd for the next 500 hours of operation. However, the Permittee will not be deemed to be out of compliance until the 24-hour rolling average exceeds 3.5 ppmvd during this three-month period. After any 500-hour period where the 2.5 ppmvd is maintained without exceedance of the 3.3 ppmvd trigger level, the limit reverts back to 3.5 ppmvd.
- e The NO<sub>x</sub> emission limit is 13 ppmvd for the first 500 hours of operation (on a 24-hour rolling average basis). After 500 hours, the emission limit is 18 ppmvd (on a 24-hour rolling average basis). However, the ammonia injection rate shall not exceed that rate established per Section 2.1 B.3.i.i. at each load point. Three months after the 24-hour rolling average exceeds 17 ppmvd three times within any rolling 50 hour period, the emission limit changes to 13 ppmvd for the next 500 hours of operation. However, the Permittee will not be deemed to be out of compliance until the 24-hour rolling average exceeds 18 ppmvd during this three-month period. After any 500 hour period where the 13 ppmvd is maintained without exceedance of the 17 ppmvd trigger level, the limit reverts back to 18 ppmvd

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

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

AFFECTED SOURCE	POLLUTANT	EMISSION LIMIT				
		Annual (tons/yr) <sup>a</sup>	Pounds per 24-hour	Pounds per 8-hour	Pounds per 3-hour	Pounds per 1-hour
Combustion Turbines (ID No.'s Unit 1- 4, Unit 6, Unit 7, and Unit 8), total	Nitrogen Dioxide	1757.0				
	Sulfur Dioxide	357.4	16,632		2079	
	Carbon Monoxide			3640		455
	Particulates/PM-10 (Front Half)	151.8	2856			

<sup>a</sup> Tons per rolling consecutive 12-month period. Annual emissions for the combustion turbines are for all seven turbines firing fuel oil for 1000 hours per year, five 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 emission testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 B. 3. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

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

- d. The maximum annual hours of operation for each combustion turbine (ID No. Unit 7 and Unit 8) 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 combustion turbine (ID Nos. Unit 7 and Unit 8) 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 per turbine), and during compliance testing.
- g. The sulfur content of the No. 2 fuel oil shall not exceed 0.05 percent sulfur by weight.
- h. Water injection shall be used when the combustion turbines are firing No. 2 fuel oil only.
- i. For each combined-cycle combustion turbine (ID Nos. Unit 7 and Unit 8) compliance with the BACT NO<sub>x</sub> and ammonia limits shall be demonstrated as follows for the selective catalytic reduction (SCR) system:
  - i. The Permittee shall install and operate an ammonia flow meter to measure and record the ammonia injection rate to the SCR system. The ammonia injection rates corresponding to maximum ammonia slip of 10 ppmvd and necessary to comply with the BACT NO<sub>x</sub> 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<sub>x</sub> 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.i(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 CEM's, as required in Section 2.1.B.2.e above or the ammonia injection rate to the SCR system is not continuously measured and recorded, as required in Section 2.1.B.3.i(i) above or nitrogen oxide or ammonia emission rate of combustion turbine is above the limit given in Section 2.1.B.3.a(i). above.

- j. Under the provisions of North Carolina General Statute 143-215.108, for each combined-cycle combustion turbine (ID Nos. Unit 7 and Unit 8), the Permittee shall monitor operations to demonstrate compliance with the BACT emission limits as follows:
  - i. Determine the sulfur content of the fuel being fired in each combustion turbine in accordance with Section 2.1.B.2.d(i)
  - ii. Determine nitrogen oxide emissions according to Alternative B under Section 2.1.B.2.e

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

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

- k. The Permittee shall submit in writing the following reports by January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September:
  - i. Periods of excess emissions for sulfur dioxide for any daily period during which the sulfur content of the No. 2 fuel oil being fired exceeds 0.05 percent by weight, within 30 days after each calendar year quarter for the previous 3-month period; and
  - ii. Periods of excess emissions for nitrogen oxides for any 24-hour rolling averaging period during which the concentrations exceed 0.010 lb/MMBtu (2.5 ppmvd) when firing natural gas and 0.054 lb/MMBtu (13 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<sub>x</sub> concentrations are obtained at normal operating conditions as defined by 2.1.B.3.a(ii) and at least 15 minutes apart.

**C. Two No. 2 fuel oil, fixed-roof storage tanks atmospheric vents (not to exceed 5 million gallons capacity each, actual capacity 3.1 million gallons each, ID Nos. TK-1 and TK-2)**

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

REGULATED POLLUTANT	LIMITS/STANDARDS	APPLICABLE REGULATION
VOC's	As defined in specific conditions	15A NCAC 2D .0530

**1. 15A NCAC 2D .0530: PREVENTION OF SIGNIFICANT DETERIORATION**

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

AFFECTED SOURCE	POLLUTANT	EMISSION LIMIT Annual (tons/yr) <sup>a</sup>
Fuel Oil Storage Tanks (ID Nos. TK1 and TK2), total	VOC's	5.79

a. Tons per rolling consecutive 12-month period.

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

- b. The combined maximum throughput for No. 2 fuel oil for two storage tanks shall not exceed 45,480,000 gallons per year.
- c. The Permittee shall keep records for fuel consumed from each storage tank on a monthly basis for No. 2 fuel oil in a written or electronic format. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the amount of fuel oil used is not monitored or the combined annual throughput for two storage tanks exceeds the limit included above in Section 2.1.C.1.b.

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

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

REGULATED POLLUTANT	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	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 this source shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

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

Or

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

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

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

**Testing** [15A NCAC 2D .2601]

- b. If emission testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 D. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

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

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

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

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

AFFECTED SOURCE	POLLUTANT	EMISSION LIMIT	
		Annual (tons/year) <sup>a</sup>	Daily lbs/day
Cooling Tower (ID No. Tower 4)	Particulate/PM-10	6.0	33.12

a Tons per rolling consecutive 12-month period.

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

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

**E. One natural gas-fired auxiliary boiler (16.74 million Btu per hour nominally rated heat input, ID No. ES-10)**

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	0.395 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 (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent opacity if (i) no six-minute period exceeds 87 percent opacity, (ii) no more than one six-minute period exceeds 20 percent opacity in any hour, and (iii) no more than four six-minute periods exceed 20 percent opacity in any 24-hour period.	15A NCAC 2D .0521
None	Recordkeeping	15A NCAC 2D .0524 (40 CFR 60 Subpart Dc)
Nitrogen Oxides (as NO <sub>2</sub> ) Carbon Monoxide VOC PM/PM <sub>10</sub>	As defined in specific conditions	15A NCAC 2D .0530
HAP's	Best Combustion Practices	15A NCAC 2D .1109

**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-10) into the atmosphere, shall not exceed 0.395 pounds per million Btu heat input. [15A NCAC 2D .0503(a)]

**Testing** [15A NCAC 2D .2601]

- b. If emission testing is required, the testing shall be performed in accordance General Condition JJ. If the results of this test are above the limit given in Section 2.1 E. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 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-10).

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

- a. Emissions of sulfur dioxide from this source (ID No. ES-10) shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]

**Testing** [15A NCAC 2D .2601]

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

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

- a. Visible emissions from this source (ID No. ES-10) shall not be more than 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. [15A NCAC 2D .0521(d)]

**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. If the results of this test are above the limit given in Section 2.1 E.3.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

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

- c. No monitoring/recordkeeping/reporting is required for visible emissions from this source.

**4. 15A NCAC 2D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60 SUBPART Dc)**

**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 .0530: PREVENTION OF SIGNIFICANT DETERIORATION**

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

EMISSION SOURCE	POLLUTANT	EMISSION LIMITS	CONTROL TECHNOLOGY
Auxiliary Boiler (ID No. ES-10)	Nitrogen Oxides (as NO <sub>2</sub> )	0.035 lb/million Btu	Low-NOx burner
	Carbon Monoxide	0.037 lb/million Btu	Good combustion control
	VOC (as CH <sub>4</sub> )	0.016 lb/million Btu	Good combustion control
	PM/PM10 (Filterable and condensable)	0.01lb/million Btu	Good combustion control

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

- b. No monitoring/recordkeeping/reporting is required for emissions of NO<sub>x</sub>, CO, VOC, and PM/PM10 from the firing of natural gas in this source.

**6. 15A NCAC 2D .1109: Case-by-Case MACT**

- a. The Permittee shall use best combustion practices when operating the affected boilers (ID No. ES-10). The initial compliance date for this work practice standard and the associated monitoring, recordkeeping, and reporting requirements is **< THREE YEARS AFTER PERMIT ISSUANCE >**. These conditions need not be included on the annual compliance certification until after the initial compliance date.

**Monitoring/Recordkeeping**

- 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 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 boilers are not inspected and maintained as required above.

- c. 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)]

- d. No reporting is required.

**F. Two natural gas/No. 2 fuel oil-fired simple/combined cycle internal combustion turbines, each equipped with a heat recovery steam generator, dry Low-NO<sub>x</sub> combustors and water injection control, both equipped with a common steam turbine (ID Nos. ES-13 and ES-14), and associated SCR's (ID Nos. CD13-SCR and CD14-SCR)**

**Simple-cycle mode of operation:**

- 2,084 million Btu per hour heat input rate each when firing natural gas
- 1,983 million Btu per hour heat input rate each when firing No. 2 fuel oil

**Combined-cycle mode of operation:**

- 2,225 million Btu per hour heat input rate each for gas turbine when firing natural gas and 390 million Btu per hour heat input rate each for duct burner when firing natural gas
- 1,983 million Btu per hour heat input rate each for gas turbine when firing No. 2 fuel and no duct burner firing in each heat recovery steam generator when firing No. 2 fuel oil

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	0.19 lb/million Btu each [When duct burners are operating in heat recovery units]	15A NCAC 2D .0503
Visible Emissions	20 percent opacity each	15A NCAC 2D .0521
Nitrogen Oxides	15 ppm at 15 percent O <sub>2</sub> each or 0.43 lb/MWh each  [When firing natural gas in either combustion turbine only or both combustion turbine and heat recovery unit]  42 ppm at 15 percent O <sub>2</sub> each or 1.3 lb/MWh each  [When firing No. 2 fuel oil in either combustion turbine only or both combustion turbine and heat recovery unit]  96 ppm at 15 percent O <sub>2</sub> each or 4.7 lb/MWh each  [When firing natural gas or No. 2 fuel oil, turbine is operating at less than 75 percent peak load or turbine is operating at less than 0°F]	15A NCAC 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 <sub>2</sub> ) Carbon Monoxide VOC PM/PM <sub>10</sub>	As defined in specific conditions	15A NCAC 2D .0530
Sulfur Dioxide	As defined in specific conditions	15A NCAC 2D .0530(h) [state-only requirement]
Formaldehyde	91 ppbvd at 15% O <sub>2</sub>	15A NCAC 2D .1111 [MACT Subpart YYYY]
Nitrogen Oxides	See Section 2.5	15A NCAC 2D .2400

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

- a. Emissions of particulate matter from the combustion of natural gas and No. 2 fuel oil that are discharged from these sources (duct burners of heat recovery units of each combustion turbine, ID Nos. ES-13 and ES-14) into the atmosphere shall not exceed 0.19 pound per million Btu heat input. [15A NCAC 2D .0503(a)]

**Testing** [15A NCAC 2D .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 F. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0503.

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

- c. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas and No. 2 fuel oil in these sources (duct burners of heat recovery units of each combustion turbine, ID Nos. ES-13 and ES-14).

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

- a. Visible emissions from these sources (ID Nos. ES-13 and ES-14) 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 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 F. 2. a., the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

- c. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of natural gas and No. 2 fuel oil in these sources (ID Nos. ES-13 and ES-14).

**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<sub>x</sub> emissions (except during startup, shutdowns, and malfunction) from each combustion turbine (ID Nos. ES-13 and ES-14) when either combustion turbine only or when both combustion turbine and heat recovery unit are operating, shall not exceed 15 ppm at 15 percent O<sub>2</sub> or 0.43 lb/MWh when firing natural gas.

NO<sub>x</sub> emissions (except during startup, shutdowns, and malfunction) from each combustion turbine (ID No. ES-13 and ES-14) shall not exceed 42 ppm at 15 percent O<sub>2</sub> or 1.3 lb/MWh when firing No. 2 fuel oil.

NO<sub>x</sub> emissions (except during startup, shutdowns, and malfunction) from each combustion turbine (ID Nos. ES-13 and ES-14) shall not exceed 96 ppm at 15 percent O<sub>2</sub> or 4.7 lb/MWh, when turbine is operating at less than 75 percent peak load or the turbine is operating at less than 0°F.

The Permittee has chosen to comply with NO<sub>x</sub> emission concentration limits.

[§60.4320]

- c. If the total heat input to each combustion turbine (ID Nos. ES-13 and ES-14) is greater than or equal to 50 percent natural gas, the Permittee shall meet the corresponding NOx emission limit in Section 2.1 F.3.b. above for natural gas when the Permittee is burning that fuel. Similarly, when the total heat input to each combustion turbine (ID Nos. ES-13 and ES-14) is greater than 50 percent No. 2 fuel oil, the Permittee shall meet the corresponding emission limit in Section 2.1 F.3.b. above for No. 2 fuel oil for the duration of the time that the Permittee burns No. 2 fuel oil.

[§60.4325]

- d. SO<sub>2</sub> emissions (except during startup, shutdowns, and malfunction) from the combustion turbines (ID Nos. ES-13 and ES-14) 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. ES-13 and ES-14), 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)]

**NOx Testing for Simple-cycle Operation**

- e. The Permittee shall conduct initial performance test and submit a written report for NOx for one of the combustion turbines (ID Nos. ES-13 and ES-14)<sup>2</sup> within 180 days of initial start-up of the first combustion turbine (either ES-13 or ES-14) in simple-cycle mode for both natural gas and No. 2 fuel oil firing or within 60 days after the unit achieves maximum production (either ES-13 or ES-14) in simple-cycle mode for both natural gas and fuel oil firing, whichever occurs first. The Permittee shall conduct the initial performance test in accordance with General Condition JJ.

If the Permittee is choosing to use water to fuel ratio as a monitoring method with no additional add-on control (such as SCR) for demonstrating compliance with NOx emission limit, the Permittee shall operate the water to fuel ratio monitoring system concurrently to determine fuel consumption and water to fuel ratio, for each test run of initial performance test.

The Permittee is not required to perform subsequent annual performance tests for NOx, if water to fuel ratio monitoring is performed continuously to demonstrate compliance with NOx emission limit in Section 2.1 F.3.b. above.

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

As an alternate to subsequent annual tests requirement when the Permittee is not using water injection to comply with NOx emission limit in Section 2.1 F.3.b. above, the Permittee may install, calibrate, maintain and operate either continuous emission monitoring or continuous parameter monitoring for NOx on combustion turbines (ID Nos. ES-13 and ES-14).

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<sup>2</sup> DAQ is requiring initial performance test on only one of two combustion turbines (ID Nos. ES-13 and ES-14). This requirement is contingent upon the stack test results of the tested turbine showing that the margin of compliance with NOx emission limit is high.

If the Permittee elects to install NO<sub>x</sub> CEM's on combustion turbines (ID Nos. ES-13 and ES-14), the performance evaluation of the CEMS may either be conducted separately or (as described in §60.4405), as part of the initial performance test. Data collected during the CEMS RATA may be used to demonstrate compliance for NO<sub>x</sub>. The CEMS shall be certified according to Part 60, Section 60.4345. A NO<sub>x</sub> CEMS that is installed and certified according to Appendix A of Part 75 is also acceptable for use under this Subpart.

If the NO<sub>x</sub> emission result from any annual performance test is less than or equal to 75 percent of the NO<sub>x</sub> emission limit in Section 2.1 F.3.b. above, the frequency of testing can be reduced to once every two years for subsequent performance tests. If the results of any subsequent performance test exceed 75 percent of the NO<sub>x</sub> emission limit, the Permittee shall resume the annual performance tests.

Each performance test (initial and subsequent) for NO<sub>x</sub> shall be conducted at  $\pm 25$  percent of 100 percent peak load or at the highest achievable load point if at least 75 percent peak load cannot be achieved in practice. Three runs shall be required for each performance test (initial and subsequent) and each run shall last for a minimum 20 minutes. Separate performance testing is required for each fuel. The ambient temperature for each test run shall be above 0<sup>o</sup>F.

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

#### NO<sub>x</sub> Testing for Combined-cycle Operation

- f. The Permittee shall conduct initial performance test and submit a written report for NO<sub>x</sub> for one of the combustion turbines (ID Nos. ES-13 and ES-14)<sup>3</sup> within 180 days of initial start-up of the first combustion turbine (either ES-13 or ES-14) in combined-cycle mode for both natural gas and No. 2 fuel oil firing or within 60 days after the unit achieves maximum production (either ES-13 or ES-14) in combined-cycle mode for both natural gas and fuel oil firing, whichever occurs first. The Permittee shall conduct the initial performance test in accordance with General Condition JJ.

If the Permittee is choosing to use water to fuel ratio as a monitoring method with no additional add-on control (such as SCR) for demonstrating compliance with NO<sub>x</sub> emission limit, the Permittee shall operate the water to fuel ratio monitoring system concurrently to determine fuel consumption and water to fuel ratio, for each test run of initial performance test.

The Permittee is not required to perform subsequent annual performance tests for NO<sub>x</sub>, if water to fuel ratio monitoring is performed continuously to demonstrate compliance with NO<sub>x</sub> emission limit in Section 2.1 F.3.b. above.

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

As an alternate to subsequent annual tests requirement when the Permittee is not using water injection to comply with NO<sub>x</sub> emission limit in Section 2.1 F.3.b. above, the Permittee may install, calibrate, maintain and operate either continuous emission monitoring or continuous parameter monitoring for NO<sub>x</sub> on combustion turbines (ID Nos. ES-13 and ES-14).

If the Permittee elects to install NO<sub>x</sub> CEM's on combustion turbines (ID Nos. ES-13 and ES-14), the performance evaluation of the CEMS may either be conducted separately or (as described in §60.4405), as part of the initial performance test. Data collected during the CEMS RATA may be used to demonstrate compliance for NO<sub>x</sub>. The CEMS shall be certified according to Part 60, Section 60.4345. A NO<sub>x</sub> CEMS that is installed and certified according to Appendix A of Part 75 is also acceptable for use under this Subpart.

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<sup>3</sup> DAQ is requiring initial performance test on only one of two combustion turbines (ID Nos. ES-13 and ES-14). This requirement is contingent upon the stack test results of the tested turbine showing that the margin of compliance with NO<sub>x</sub> emission limit is high.

If the NO<sub>x</sub> emission result from any annual performance test is less than or equal to 75 percent of the NO<sub>x</sub> emission limit in Section 2.1 F.3.b. above, the frequency of testing can be reduced to once every two years for subsequent performance tests. If the results of any subsequent performance test exceed 75 percent of the NO<sub>x</sub> emission limit, the Permittee shall resume the annual performance tests.

Each performance test (initial and subsequent) for NO<sub>x</sub> shall be conducted at  $\pm 25$  percent of 100 percent peak load or at the highest achievable load point if at least 75 percent peak load cannot be achieved in practice. Three runs shall be required for each performance test (initial and subsequent) and each run shall last for a minimum 20 minutes. Separate performance testing is required for each fuel. The ambient temperature for each test run shall be above 0<sup>o</sup>F.

Compliance with the applicable NO<sub>x</sub> emission limit shall be demonstrated by measuring the combined emissions of both units (ID Nos. ES-13 and ES-14) 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. ES-13 and ES-14). 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<sub>x</sub> emissions after the duct burner rather than directly after the turbine. The duct burner shall be in operation during the performance test.

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

[§60.8, and §§60.4340, 60.4400 and 60.4405]

- g. The Permittee shall conduct the initial performance test for SO<sub>2</sub> on one of the combustion turbines (ID Nos. ES-13 and ES-14) in accordance with General Condition JJ within 180 days of initial start-up of combustion turbines (ID Nos. ES-13 and ES-14)<sup>4</sup> for both natural gas and fuel oil firing or within 60 days after the unit achieves maximum production (either ES-13 or ES-14) for both natural gas and fuel oil firing, whichever occurs first.

The Permittee shall conduct each subsequent test on combustion turbines (ID Nos. ES-13 and ES-14) in accordance with General Condition JJ for SO<sub>2</sub> on an annual basis (no more than 14 calendar months following the previous performance test) for both natural gas and fuel oil firing.

If the results of any performance test are above the emission limit for SO<sub>2</sub> in Section 2.1 F.3.d. 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 SO<sub>2</sub> emission limit and can instead opt for fuel sulfur determination as per Section 2.1. F.3.m. below to comply with the SO<sub>2</sub> emission limit. If the Permittee chooses to opt for fuel sulfur determination to comply with the SO<sub>2</sub> emission limit, the Permittee shall perform monitoring in accordance with Section 2.1 F.3.m. below.

[§60.8, and §§60.4360 and 60.4415]

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<sup>4</sup> DAQ is requiring initial performance test on only one of two combustion turbines (ID Nos. ES-13 and ES-14). This requirement is contingent upon the stack test results of the tested turbine showing that the margin of compliance with SO<sub>2</sub> emission limit is high.

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

- h. The Permittee shall operate and maintain the combustion turbines (ID Nos. ES-13 and ES-14) including dry low NO<sub>x</sub> burners, selective catalytic reduction systems, water to fuel ratio monitoring equipment, and any other monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions and in accordance with manufacturer's guidelines at all times including during start-up, shutdown, and malfunction. [§60.4333]
- i. If the Permittee is using water injection to control NO<sub>x</sub> emissions, the Permittee shall install, calibrate, maintain and operate continuous monitoring system to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbines (ID Nos. ES-13 and ES-14) when burning a fuel that requires water injection for compliance. If the Permittee does not monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbines (ID Nos. ES-13 and ES-14) when burning No. 2 fuel oil, the shall be deemed in noncompliance with 15A NCAC 2D .0524.
- j. As an alternate to the water to fuel ratio monitoring in Section 2.1 F.3.i. above, the Permittee can install, certify, maintain, and operate a continuous emission monitoring system (CEMS) consisting of a NO<sub>x</sub> monitor and a diluent gas (oxygen (O<sub>2</sub>) or carbon dioxide (CO<sub>2</sub>)) monitor, to determine the hourly NO<sub>x</sub> emission rate in parts per million (ppm) or pounds per million British thermal units (lb/MMBtu).

If NO<sub>x</sub> CEM's do not comply with the requirements of §§60.4335(b) and 60.4345 or the NO<sub>x</sub> emissions (except during startup, shutdowns, and malfunction) from the combustion turbines (ID No. ES-13 and ES-14) exceed the emission limit in Section 2.1 F.3.b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

- k. As an alternate to the annual performance tests to demonstrate continuous compliance in Section 2.1 F.e. and f. above for NO<sub>x</sub> (i.e., when water injection is not used to comply with NO<sub>x</sub> emission limit in Section 2.1 F.3.b. above), the Permittee can install, calibrate, maintain and operate a NO<sub>x</sub> CEM as per §§60.4335(b) and 60.4345 or the Permittee can install, calibrate, maintain and operate NO<sub>x</sub> continuous parameter monitoring system measuring appropriate parameters to determine whether the combustion turbines (ID Nos. ES-13 and ES-14) are operating in low-NO<sub>x</sub> 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 turbine (ID Nos. ES-13 and ES-14) are also regulated under Part 75.

If the NO<sub>x</sub> CEM's do not comply with the requirements of §§60.4335(b) and 60.4345 or the NO<sub>x</sub> emissions (except during startup, shutdowns, and malfunction) from the combustion turbines (ID No. ES-13 and ES-14) exceed the emission limit in Section 2.1 F.3.b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

If NO<sub>x</sub> continuous parameter monitoring systems are not operating or the NO<sub>x</sub> continuous parameter monitoring systems indicate that the combustion turbine is not operating in a low-NO<sub>x</sub> mode or SCR's are not operating to control NO<sub>x</sub> 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<sub>x</sub> emissions (except during startup, shutdowns, and malfunction) from combustion turbines (ID Nos. ES-13 and ES-14) exceed the NO<sub>x</sub> emission limit in Section 2.1 F.3.b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

[§60.4335 and 60.4340]

- l. The water to fuel ratio or other parameters, which are continuously monitored as described in §§80.4335 and 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<sub>x</sub> 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 turbines (ID Nos. ES-13 and ES-14) are 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 (alternative to a parameter monitoring 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]

- m. If the Permittee opts to determine fuel sulfur to comply with the fuel sulfur content limit in Section 2.1 F.3.d. above, the Permittee shall monitor total sulfur content of the fuel being fired in the combustion turbines (ID Nos. ES-13 and ES-14), except as provided in §60.4365 (See Section 2.1 F.3.n. 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 F.3.d. above.

The Permittee shall determine sulfur content value of natural gas once per unit operating day if the fuel is supplied without intermediate bulk storage and the Permittee is not demonstrating fuel sulfur content using the options in §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 SO<sub>2</sub> emissions (except during startup, shutdowns, and malfunction) exceeding emission limit in Section 2.1 F.3.d. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

[§§60.4360, 60.4370, and 60.4415]

- n. As an alternate to Section 2.1 F.3.m. above, the Permittee can choose not to monitor the total potential sulfur emissions of the fuel combusted in the turbines (ID Nos. ES-13 and ES-14), if it can be demonstrated that the potential sulfur emissions do not exceed 0.06 lb SO<sub>2</sub>/million Btu emission limit.

The Permittee can perform this demonstration by using the fuel quality characteristics in a current, valid purchase contract, tariff sheet, or transportation contract for the fuel, specifying that the maximum total sulfur content for oil use is 0.05 weight percent (500 ppmw), the total sulfur content for natural gas use is 20 grains of sulfur or less per 100 standard cubic feet and has the potential sulfur emissions of less than 0.06 lb SO<sub>2</sub>/million Btu.

The other option for this demonstration is through representative fuel sampling data showing that the potential sulfur emissions of the fuel does not exceed 0.06 lb SO<sub>2</sub>/million Btu. In this case, the Permittee shall provide at a minimum the amount of data in Section 2.3.1.4 or 2.3.2.4. of Appendix D of Part 75.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524, if the Permittee does not make the above demonstration for natural gas and fuel oil, or the demonstration indicate that the total sulfur content of natural gas and fuel oil exceed the sulfur content limit of 20 grains per 100 standard cubic feet and 0.05 weight percent (500 ppmw), respectively, or the SO<sub>2</sub> emissions excluding the emissions during start-up, shutdown, and malfunction, from the combustion turbines (ID Nos. ES-13 and ES-14) exceed the emission limit in Section 2.1 E.3.c. above.

[§§60.4365]

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

- o. 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)]
- p. 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)]
- q. 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. [§60.7(a)(5)]
- r. The Permittee shall submit reports of excess emissions and monitor downtime in accordance with §60.7(c) for the combustion turbines (ID Nos. ES-13 and ES-14). 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. [§§60.4375(a) and 60.4395]
  - i. If the combustion turbine is using water to fuel ratio monitoring, excess emissions and monitor downtime shall be determined as below:
    - (A) An excess emission is any unit operating hour for which the 4-hour rolling average water to fuel ratio, as measured by the continuous monitoring system, falls below the acceptable steam or water to fuel ratio needed to demonstrate compliance with §60.4320, as established during the performance test required in §60.8. Any unit operating hour in which no water or steam is injected into the turbine when a fuel is being burned that requires water injection for NO<sub>x</sub> control will also be considered an excess emission.
    - (B) A period of monitor downtime is any unit operating hour in which water or steam is injected into the turbine, but the essential parametric data needed to determine the steam or water to fuel ratio are unavailable or invalid.
  - ii. If the combustion turbine is using NO<sub>x</sub> CEM as described in §§60.4335(B) and 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<sub>x</sub> emission rate exceeds the applicable emission limit in §60.4320. For the purposes of this Subpart, a “30-day rolling average NO<sub>x</sub> emission rate” is the arithmetic average of all hourly NO<sub>x</sub> 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<sub>x</sub> emissions rates for the preceding 30 unit operating days if a valid NO<sub>x</sub> 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<sub>x</sub> concentration, CO<sub>2</sub> or O<sub>2</sub> 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. [§60.4380(b)]
  - iii. For turbines required to monitor combustion parameters or parameters that document proper operation of the NO<sub>x</sub> emission controls, excess emissions and monitor downtime shall be determined as below:
    - (A) 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. [§60.4380(c)(1)]

- (B) If the Permittee opts to monitor combustion parameters or parameters that document proper operation of the NOx emission controls for the turbines, 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)]
- iv. 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) If the option to sample each delivery of fuel oil has been selected, the Permittee shall immediately switch to one of the other oil sampling options (i.e., daily sampling, flow proportional sampling, or sampling from the unit's storage tank) if the sulfur content of a delivery exceeds 0.05 weight percent. The Permittee shall continue to use one of the other sampling options until all of the oil from the delivery has been combusted, and the Permittee shall evaluate excess emissions according to this Section 2.1 F.3.r.iv. When all of the fuel from the delivery has been burned, the Permittee may resume using the as-delivered sampling option.
  - (C) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime ends on the date and hour of the next valid sample.
- s. 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)]
- t. The Permittee shall submit a summary report of monitoring and record keeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

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

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

Emission Source	Pollutant	Mode Of Operation	Emission Limits <sup>*+</sup>		Control Technology
			Natural Gas	No. 2 Fuel Oil	
Combustion Turbines (ID Nos. ES-13 and ES-14)	NOx (as NO <sub>2</sub> )	Combined Cycle With Duct Firing	2 ppmvd at 15% O <sub>2</sub> [30-day rolling average]  [First 500 hours of operation of SCR]  2.5 ppmvd at 15% O <sub>2</sub> [30-day rolling average]	-	Dry-low NOx Combustors and Selective Catalytic Reduction
		Combined Cycle Without Duct Firing	[After 500 hours of operation of SCR] 2 ppmvd at 15% O <sub>2</sub> [30-day rolling average]  [First 500 hours of operation of SCR]	10 ppmvd at 15% O <sub>2</sub> [24-hour rolling average]	

Emission Source	Pollutant	Mode Of Operation	Emission Limits <sup>*+</sup>		Control Technology
			Natural Gas	No. 2 Fuel Oil	
		Simple Cycle	2.5 ppmvd at 15% O <sub>2</sub> [30-day rolling average]  [After 500 hours of operation of SCR]  9 ppmvd at 15% O <sub>2</sub> [24-hour rolling average]	42 ppmvd at 15% O <sub>2</sub> [24-hour rolling average]	Dry-low NOx Combustors (natural gas only) and Water Injection (No. 2 fuel oil only)
Combustion Turbines (ID Nos. ES-13 and ES-14)	CO	Combined Cycle With Duct Firing	8 ppmvd at 15% O <sub>2</sub> at 60%-100% load (Stack Test, 3 run average)	-	good combustion control
		Combined Cycle Without Duct Firing	4 ppmvd at 15% O <sub>2</sub> at 70%-100% load (Stack Test, 3 run average)	10 ppmvd at 15% O <sub>2</sub> at 90%-100% load (Stack Test, 3 run average)	good combustion control
			10 ppmvd at 15% O <sub>2</sub> at 60%-70% load (Stack Test, 3 run average)	20 ppmvd at 15% O <sub>2</sub> at 80%-90% load (Stack Test, 3 run average)	
		Simple Cycle	4 ppmvd at 15% O <sub>2</sub> at 70%-100% load (Stack Test, 3 run average)	10 ppmvd at 15% O <sub>2</sub> at 90%-100% load (Stack Test, 3 run average)	good combustion control
10 ppmvd at 15% O <sub>2</sub> at 60%-70% load (Stack Test, 3 run average)	20 ppmvd at 15% O <sub>2</sub> at 80%-90% load (Stack Test, 3 run average)				
				30 ppmvd at 15% O <sub>2</sub> at 70%-80% load (Stack Test, 3 run average)	

Emission Source	Pollutant	Mode Of Operation	Emission Limits <sup>*+</sup>		Control Technology
			Natural Gas	No. 2 Fuel Oil	
Combustion Turbines (ID Nos. ES-13 and ES-14)	VOC (as CH <sub>4</sub> )	Combined Cycle With Duct Firing	3 ppmvd at 15% O <sub>2</sub> at 60%-100% load (Stack Test, 3 run average)	-	good combustion control
		Combined Cycle Without Duct Firing	1 ppmvd at 15% O <sub>2</sub> at 70%-100% load (Stack Test, 3 run average)	10 ppmvd at 15% O <sub>2</sub> at 70%-100% load (Stack Test, 3 run average)	good combustion control
		Simple Cycle	5 ppmvd at 15% O <sub>2</sub> at 60%-70% load (Stack Test, 3 run average)	10 ppmvd at 15% O <sub>2</sub> at 70%-100% load (Stack Test, 3 run average)	good combustion control
			1 ppmvd at 15% O <sub>2</sub> at 70%-100% load (Stack Test, 3 run average)		
		5 ppmvd at 15% O <sub>2</sub> at 60%-70% load (Stack Test, 3 run average)			
Combustion Turbines (ID Nos. ES-13 and ES-14)	PM/PM10 (filterable and condensable)	Combined Cycle With Duct Firing	0.0059 lb/million Btu (Stack Test, 3 run average)	-	use of natural gas (0.2 grain/100 sft <sup>3</sup> sulfur content)
		Combined Cycle Without Duct Firing	0.0071 lb/million Btu (Stack Test, 3 run average)	0.0435 lb/million Btu (Stack Test, 3 run average)	use of natural gas (0.2 grain/100 sft <sup>3</sup> sulfur content) and No. 2 fuel oil (0.0015%w sulfur content)
		Simple Cycle	0.0069 lb/million Btu (Stack Test, 3 run average)	0.0432 lb/million Btu (Stack Test, 3 run average)	use of natural gas (0.2 grain/100 sft <sup>3</sup> sulfur content) and No. 2 fuel oil (0.0015%w sulfur content)

\* BACT emission limits shall apply to each source (ID Nos. ES-13 and ES-14). Emissions resulting from start-up, shutdown or malfunction above those given in Section 2.1 F.4.a. above are permitted provided that optimal operational practices are adhered to and periods of excess emissions are minimized.

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

For the combined cycle operation using natural gas, periods of excess emissions due to start-up and/or

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

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

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

d. 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 <sup>a</sup>	per 24-hour lbs	per 8-hour lbs	per 1-hour lbs
Combustion Turbines (ID Nos. ES-13 and ES-14)	Nitrogen Oxides (As Nitrogen Dioxide)	545.3	-	-	-
	Particulates/PM-10 (Filterable And Condensable)	-	1,337.3	-	-
	Carbon Monoxide	-	-	1,066.9	133.4

<sup>a</sup> Tons per consecutive 12-month period based on a maximum 2,000 operating hours for simple cycle operations in each combustion turbine (ID Nos. ES-13 and ES-14), a maximum of 1,000 operating hours for fuel oil firing in each combustion turbine (ID Nos. ES-13 and ES-14) in either simple or combined cycle operations, a maximum of 8,760 hours for combined cycle operations for natural gas firing in each combustion turbine (ID Nos. ES-13 and ES-14), and 100% load.

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

e. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limits for NOx, CO, and VOC in Section 2.1 F.4.a. above by testing one of these combustion turbines (ID Nos. ES-13 and ES-14) within 180 days of initial start-up of the first combustion turbine (either ES-13 or ES-14) in simple cycle mode for both natural gas and No. 2 fuel oil firing.

Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limits for NOx, CO, and VOC in Section 2.1 F.4.a. above by testing one of these combustion turbines (ID Nos. ES-13 and ES-14) within 180 days of initial start-up of the first combustion turbine (either ES-13 or ES-14) in combined-cycle mode for both natural gas and No. 2 fuel oil firing. The Permittee shall measure NOx, CO, and VOC emissions for each scenario: combined cycle with duct firing and combined cycle without duct firing.

Details of the emissions testing and reporting requirements can be found in Section 3 - General Condition JJ.

Performance tests for NOx, CO, 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 tests shall be in accordance with the approved testing protocol and Section 2.1 F.4.a. above. The ambient temperature for each test run shall be above 0°F. The averaging time for demonstrating compliance for NOx, CO, and VOC shall be those in the Section 2.1 F.4.a. above.

If the average of all runs of any performance test for NO<sub>x</sub> or CO or VOC emissions exceed the respective emission limits in Section 2.1 F.4.a. above or the stack tests are not performed, 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 F.4.a. and b. above.

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

- f. The maximum annual hours of operation for each combustion turbine (ID Nos. ES-13 and ES-14) shall not exceed 1,000 full load equivalent hours per rolling 12-month period when firing No. 2 fuel oil.
- g. The maximum annual hours of operation for simple cycle operation for each combustion turbine (ID Nos. ES-13 and ES-14) shall not exceed 2,000 full load equivalent hours per rolling 12-month period.
- h. The Permittee shall record and maintain records of the actual number of hours of operation for simple cycle operation and fuel oil firing for each combustion turbine (ID Nos. ES-13 and ES-14). 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 simple cycle operation for any combustion turbine (ID Nos. ES-13 and ES-14) exceeds 2,000 full load equivalent hours per rolling 12-month period or the hours of operation for fuel oil firing in any combustion turbine (ID Nos. ES-13 and ES-14) exceeds 1,000 full load equivalent hours per rolling 12-month period.
- i. 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 per turbine), and during compliance testing.
- j. No monitoring/recordkeeping is required for emissions of CO, VOC, and PM/PM10 from the combustion turbines (ID Nos. ES-13 and ES-14).
- k. The Permittee shall monitor NO<sub>x</sub> emissions from the combustion turbines (ID Nos. ES-13 and ES-14) using CEMS for both simple and combined cycle operations, in order to demonstrate compliance with the NO<sub>x</sub> BACT emission limits. If the NO<sub>x</sub> CEMS does not comply with the requirements of §60.4335(b) and §60.4345 or if the NO<sub>x</sub> emissions (except during startup, shutdowns, and malfunction) exceed the NO<sub>x</sub> BACT emission limits in Section 2.1 F.4.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.
- l. In addition to the NO<sub>x</sub> emissions monitoring requirement in Section 2.1 F.4.i. above, the Permittee shall comply with the following requirements for NO<sub>x</sub> emissions from the combustion turbines (ID Nos. ES-13 and ES-14) when operating in a combined cycle mode of operation:
  - i. The Permittee shall install and operate an ammonia flow meter to measure and record the ammonia injection rate to the SCR system associated with each combustion turbine. The ammonia injection rates corresponding to a maximum ammonia slip of 10 ppmvd and necessary to comply with the NO<sub>x</sub> BACT limits in Section 2.1 F.4.a. above shall be established (and made available to the Division of Air Quality upon request) during the performance test in Section 2.1 F.4.c. above.
  - ii. The SCR shall operate at all times that the turbine is operating in a combined cycle mode of operation, except during turbine start-up and shutdown periods to the extent recommended by the manufacturer and operated in a manner so as to minimize ammonia slip.
  - iii. During NO<sub>x</sub> CEM downtimes or malfunctions, the Permittee shall inject ammonia at a rate determined (in Section 2.1 F.4.j.i. above) to ensure compliance during the performance test in Section 2.1 F.4.c. above when the turbines are operating in combined cycle mode.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the ammonia injection rate to the SCR system is not continuously measured and recorded when the turbine is operating in a combined cycle mode of operation or the ammonia injection rate is less than the injection rate established during the performance test in Section 2.1 F.4.c. above.

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

- m. The Permittee shall submit a written report of the results of each performance test required in Section 2.1 F.4.c. above, before the close of business on the 60th day following the completion of the performance test.
- n. For combustion turbines (ID Nos. ES-13 and ES-14) when operating in either simple cycle or combined cycle mode of operation, 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<sub>x</sub> CEM, excess emissions and monitor downtime due to the combined cycle operations firing natural gas shall be as defined below:
  - (A) An excess emission is any unit operating period in which the 30-day rolling average NO<sub>x</sub> emission rate exceeds the emission limit in Section 2.1 F.4.a. above. A “30-day rolling average NO<sub>x</sub> emission rate” is the arithmetic average of all hourly NO<sub>x</sub> 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<sub>x</sub> emissions rates for the preceding 30 unit operating days if a valid NO<sub>x</sub> 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<sub>x</sub> concentration, CO<sub>2</sub> or O<sub>2</sub> concentration.
- ii. For the NO<sub>x</sub> CEM, excess emissions and monitor downtime due to the combined cycle operations firing fuel oil shall be as defined below:
  - (A) An excess emission is any unit operating period in which the 24-hour rolling average NO<sub>x</sub> emission rate exceeds the emission limit in Section 2.1 F.4.a. above. The 24-hour rolling average is calculated using only actual operating hours (periods of zero emissions when not operating are not included). A valid hourly emission rate shall be calculated for each hour in which at least two NO<sub>x</sub> concentrations are obtained at loads above 70 percent at least 15 minutes apart.
  - (B) A period of monitor downtime is any unit operating hour in which the data for any of the following parameters are either missing or invalid: NO<sub>x</sub> concentration, CO<sub>2</sub> or O<sub>2</sub> concentration.
- iii. For the NO<sub>x</sub> CEM, excess emissions and monitor downtime due to the simple cycle operations firing natural gas shall be as defined below:
  - (A) An excess emission is any unit operating period in which the 24-hour rolling average NO<sub>x</sub> emission rate exceeds the emission limit in Section 2.1 F.4.a. above. The 24-hour rolling average is calculated using only actual operating hours (periods of zero emissions when not operating are not included). A valid hourly emission rate shall be calculated for each hour in which at least two NO<sub>x</sub> concentrations are obtained at loads above 60 percent at least 15 minutes apart.
  - (B) A period of monitor downtime is any unit operating hour in which the data for any of the following parameters are either missing or invalid: NO<sub>x</sub> concentration, CO<sub>2</sub> or O<sub>2</sub> concentration
- iv. For the NO<sub>x</sub> CEM, excess emissions and monitor downtime due to the simple cycle operations firing fuel oil shall be as defined below:
  - (A) An excess emission is any unit operating period in which the 24-hour rolling average NO<sub>x</sub> emission rate exceeds the emission limit in Section 2.1 F.4.a. above. The 24-hour rolling average is calculated using only actual operating hours (periods of zero emissions when not operating are not included). A valid hourly emission rate shall be calculated for each hour in which at least two NO<sub>x</sub> concentrations are obtained at loads above 70 percent at least 15 minutes apart.
  - (B) A period of monitor downtime is any unit operating hour in which the data for any of the following parameters are either missing or invalid: NO<sub>x</sub> concentration, CO<sub>2</sub> or O<sub>2</sub> concentration
- m. The Permittee shall submit a semi-annual summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and record keeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

State-Only Requirement

**5. 15A NCAC 2D .0530(h): PREVENTION OF SIGNIFICANT DETERIORATION**

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

EMISSION SOURCE	POLLUTANT	MODE OF OPERATION	EMISSION LIMITS*		CONTROL TECHNOLOGY
			Natural Gas	No. 2 Fuel Oil	
Combustion Turbines (ID Nos. ES-13 and ES-14)	SO <sub>2</sub> <sup>5</sup>	Combined Cycle With Duct Firing	0.0006 lb/million Btu [1-hour average]	-	Use of natural gas (0.2 grain/100 sft <sup>3</sup> sulfur content)
		Combined Cycle Without Duct Firing	0.0006 lb/million Btu [1-hour average]	0.00152 lb/million Btu [1-hour average]	Use of natural gas (0.2 grain/100 sft <sup>3</sup> sulfur content) and No. 2 fuel oil (0.0015%w sulfur content)
		Simple Cycle	0.0006 lb/million Btu [1-hour average]	0.00152 lb/million Btu [1-hour average]	Use of natural gas (0.2 grain/100 sft <sup>3</sup> sulfur content) and No. 2 fuel oil (0.0015%w sulfur content)

\* BACT emission limits shall apply to each source (ID Nos. ES-13 and ES-14). Emissions resulting from start-up, shutdown or malfunction above those given in Section 2.1 F.5.a. above are permitted provided that optimal operational practices are adhered to and periods of excess emissions are minimized.

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

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

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

**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 SO<sub>2</sub> emission limit in Section 2.1 F.5.a. above, by using

<sup>5</sup> The BACT for this pollutant is a “state-only” requirement.

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 is 0.2 grains or less per 100 standard cubic feet and 0.0015 weight percent or less for No. 2 fuel oil.

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.

Alternatively, the Permittee can demonstrate compliance through representative fuel sampling data showing that the potential sulfur emissions of the fuel does not exceed 0.2 grain sulfur per 100 standard cubic feet and 0.0015 weight percent sulfur for No. 2 fuel oil. 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.

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

- d. No reporting is required for sulfur dioxide emissions from the firing of natural gas and No. 2 fuel oil.

**6. 15A NCAC 2D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY [40 CFR 63 Subpart YYYY]**

- a. For combustion turbines (ID Nos. ES-13 and ES-14), the Permittee shall demonstrate compliance upon startup with all applicable provisions, including emission limitations, operating limitations, monitoring, record keeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 2D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart YYYY "National Emission Standards of Hazardous Air Pollutants for Stationary Combustion Turbines".
- b. The formaldehyde emissions from combustion turbines (ID Nos. ES-13 and Es-14) shall not exceed 91 ppbvd at 15 percent O<sub>2</sub>. [Table 1 to 40 CFR 63.6100]
- c. The combustion turbines (ID Nos. ES-13 and ES-14) shall be subject to either of the following operating limitations: If these turbines are equipped with the oxidation catalysts, the Permittee shall maintain the 4-hour rolling average of the catalyst inlet temperature within the range suggested by the catalyst manufacturer. If these turbines are not equipped with the oxidation catalysts, the Permittee shall maintain any operating limitations approved by the EPA. [Table 2 to 40 CFR 63.6100]

The Permittee has chosen to demonstrate compliance with the formaldehyde emission limitation in Section 2.1 F.6.b. above, without installing oxidation catalysts on the combustion turbines (ID Nos. ES-13 and ES-14). The Permittee shall, therefore, be required to maintain any operating limitations approved by EPA.

- d. The Permittee shall be in compliance with the emission limitation and operating limitations at all the time except during startup, shutdown, and malfunctions. [40 CFR 63.6105a)]
- e. The Permittee shall maintain the combustion turbines, oxidation catalyst or other air pollution control equipment (if installed to comply with formaldehyde emission limit) in a manner consistent with good air pollution control practices for minimizing emissions at all times including startup, shutdown, and malfunction. [40 CFR 63.6105(b)]

**Testing** [15A NCAC 2D .1111]

- f. The Permittee shall conduct initial performance tests on combustion turbines (ID Nos. ES-13 and ES-14) for formaldehyde within 180 calendar days from initial startup, in accordance with General Condition JJ. The Permittee shall also conduct subsequent performance tests on an annual basis for formaldehyde. If the average of three one-hour runs of any performance tests, conducted at any load condition within plus or minus 10 percent of 100 percent load, is above the formaldehyde emission limit given in Section 2.1 F.6.b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111.

[40 CFR 63.7(a)(2), 40 CFR 63.6110(a), and 40 CFR 63.6115]

The Permittee shall petition EPA for operating limitations that it will monitor to demonstrate compliance with the formaldehyde emission limit for combustion turbines (ID Nos. ES-13 and ES-14). The petition for additional operating limitations shall contain information as described in 40 CFR 63.6120(f). The Permittee shall measure these parameters during the initial performance test and continuously monitor thereafter.

Alternatively, the Permittee may petition the EPA for approval of no additional operating limitations. The petition for no additional operating limitations shall contain information as described in 40 CFR 63.6120(g).

The Permittee shall not conduct the initial performance test until after EPA approves or disapproves the petition for additional operating limitations or the petition for no additional operating limitations.

If the petition for additional operating limitations or no operating limitations, is not submitted to EPA or the Permittee conducts the initial performance test for formaldehyde before EPA approves or disapproves the petition or the Permittee does not continuously monitor any approved additional operating parameters after EPA approves it, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111.

[40 CFR 63.6120(e), (f), and (g), 40 CFR 63.6125(b) and 40 CFR 63.6140(a)]

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

- g. Except for monitor malfunctions, associated repairs, and required quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments of the monitoring system), the Permittee shall conduct all parametric monitoring at all times the stationary combustion turbines are operating. [40 CFR 63.6135(a)]
- h. The Permittee shall not use data recorded during monitor malfunctions, associated repairs, and required quality assurance or quality control activities for meeting the requirements of this Subpart, including data averages and calculations. The Permittee shall use all the data collected during all other periods in assessing the performance of the control device or in assessing emissions from the new or reconstructed stationary combustion turbines. [40 CFR 63.6135(b)]

**Recordkeeping** [15A NCAC 2Q .0508(f), and 40 CFR 63.6155 and 40 CFR 63.6160]

- i. The Permittee shall keep a copy of each notification and report that the Permittee submitted to comply with this Subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that the Permittee submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv).
- j. The Permittee shall keep records of performance tests and performance evaluations as required in 40 CFR 63.10(b)(2)(viii).
- k. The Permittee shall keep records of the occurrence and duration of each startup, shutdown, or malfunction as required in 40 CFR 63.10(b)(2)(i).
- l. The Permittee shall keep records of the occurrence and duration of each malfunction of the air pollution control equipment, if applicable, as required in 40 CFR 63.10(b)(2)(ii).
- m. The Permittee shall keep records of all maintenance on the air pollution control equipment as required in 40 CFR 63.10(b)(iii).
- n. The Permittee shall keep records for continuous monitoring of the operating limitations that have been included in the approved petition by the EPA.
- o. The Permittee shall maintain all applicable records in such a manner that they can be readily accessed and are suitable for inspection according to 40 CFR 63.10(b)(1).
- p. As specified in 40 CFR 63.10(b)(1), the Permittee shall keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee shall retain the records of the most recent 2 years on site or the records must be accessible on site. The records of the remaining 3 years may be retained off site.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if the records in Section 2.1 F.6.i. through p. above are not maintained.

**Reporting** [15A NCAC 2Q .0508(f), and 40 CFR 63.6140(b), 40 CFR 63.6145 and 40 CFR 63.6150]

- q. The Permittee shall report each instance in which the Permittee did not meet each emission limitation or operating limitation.
- r. The Permittee shall report each instance in which the Permittee did not meet all applicable requirements in Table 7 of this Subpart. These instances are deviations from the emission and operating limitations in this Subpart. These deviations shall be reported according to the requirements in 40 CFR 63.6150.
- s. The Permittee shall submit all applicable reports in Subpart A, "General Provisions".

- t. The Permittee shall submit an Initial Notification not later than 120 calendar days after the start-up.
- u. If the Permittee is required to conduct an initial performance test, the Permittee shall submit a notification of intent to conduct an initial performance test at least 60 calendar days before the initial performance test is scheduled to begin as required in 40 CFR 63.7(b)(1).
- v. If the Permittee is required to comply with the emission limitation for formaldehyde, the Permittee shall submit a Notification of Compliance Status according to 40 CFR 63.9(h)(2)(ii). For each performance test required to demonstrate compliance with the emission limitation for formaldehyde, the Permittee shall submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test.
- w. The Permittee shall submit semiannual compliance report containing the information described in (a)(1) through (a)(4) of 40 CFR 63.6150. The semiannual compliance report shall be submitted by the dates specified in paragraphs (b)(1) through (b)(5) of 40 CFR 63.6150, unless the Administrator has approved a different schedule.
- x. The Permittee shall submit annual reports as per the dates included in (d)(1) through (d)(5) of 40 CFR 63.6150.
- y. 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. One natural gas-fired auxiliary boiler (16.74 million Btu per hour heat input rate, ID No. ES-15)**

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	0.19 pound per million Btu heat input	15A NCAC 2D .0503
Sulfur Dioxide	2.3 pounds per million Btu heat input	15A NCAC 2D .0516
Visible Emissions	20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent opacity if (i) no six-minute period exceeds 87 percent opacity, (ii) no more than one six-minute period exceeds 20 percent opacity in any hour, and (iii) no more than four six-minute periods exceed 20 percent opacity in any 24-hour period.	15A NCAC 2D .0521
None	Recordkeeping	15A NCAC 2D .0524 (40 CFR 60 Subpart Dc)
Nitrogen Oxides (As NO <sub>2</sub> ) Carbon Monoxide Volatile Organic Compounds PM/PM <sub>10</sub>	As defined in specific conditions	15A NCAC 2D .0530
HAP's	Best Combustion Practices	15A NCAC 2D .1109

**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-15) into the atmosphere shall not exceed 0.19 pounds per million Btu heat input. [15A NCAC 2D .0503(a)]

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

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

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

- a. Emissions of sulfur dioxide from this source (ID No. ES-15) shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]

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

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

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

- c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of natural gas for this source (ID No. ES-15).

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

- a. Visible emissions from this source (ID No. ES-15) shall not be more than 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. [15A NCAC 2D .0521(d)]

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

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 G.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 this source (ID No ES-15).

**4. 15A NCAC 2D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60 SUBPART Dc)**

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart Dc, including Subpart A "General Provisions."  
[15A NCAC 2D .0524]

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

- b. In addition to any other recordkeeping required by 40 CFR, 60.48c or recordkeeping requirements of the EPA, the Permittee shall record and maintain records of the amount of each fuel combusted during each operating day.

However, if the Permittee is combusting only natural gas in the affected facility (ID No. ES-15), the Permittee may elect to record and maintain records of the amount of natural gas combusted during each calendar 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 or the records are not maintained for a period of two years following the date of such record. [§60.48c(g)]

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

- c. 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) and §60.48c(a)]
- d. 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) and §60.48c(a)]
- e. The Permittee shall submit a summary report of recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**5. 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	CONTROL TECHNOLOGY
Auxiliary Boiler (ID No. ES-15)	Nitrogen Oxides (as NO <sub>2</sub> )	0.018 lb/million Btu	Low-NOx burner
	Carbon Monoxide	0.037 lb/million Btu	Good combustion control
	VOC (as CH <sub>4</sub> )	0.016 lb/million Btu	Good combustion control
	PM/PM10 (filterable and condensable)	0.01lb/million Btu	Good combustion control

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

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

**6. 15A NCAC 2D .1109: Case-by-Case MACT**

- a. The Permittee shall use best combustion practices when operating the affected boilers (ID No. ES-15). The initial compliance date for this work practice standard and the associated monitoring, recordkeeping, and reporting requirements is **< THREE YEARS AFTER PERMIT ISSUANCE >**. These conditions need not be included on the annual compliance certification until after the initial compliance date.

**Monitoring/Recordkeeping**

- 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 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 boilers are not inspected and maintained as required above.

- c. 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)]

- d. No reporting is required.

**H. Three natural gas-fired fuel gas heaters (5 million Btu per hour heat input rate each, ID Nos. ES-16, ES-17, and ES-18)**

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	0.19 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 (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent opacity if (i) no six-minute period exceeds 87 percent opacity, (ii) no more than one six-minute period exceeds 20 percent opacity in any hour, and (iii) no more than four six-minute periods exceed 20 percent opacity in any 24-hour period.	15A NCAC 2D .0521
Nitrogen Oxides (As NO <sub>2</sub> ) Carbon Monoxide Volatile Organic Compounds PM/PM <sub>10</sub>	As defined in specific conditions	15A NCAC 2D .0530
HAP's	Best Combustion Practices	15A NCAC 2D .1109

**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 these sources (ID Nos. ES-16, ES-17, and ES-18) into the atmosphere shall not exceed 0.19 pounds per million Btu heat input each. [15A NCAC 2D .0503(a)]

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

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 H.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 these sources (ID Nos. ES-16, ES-17, and ES-18).

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

- a. Emissions of sulfur dioxide from these sources (ID Nos. ES-16, ES-17, and ES-18) shall not exceed 2.3 pounds per million Btu heat input each. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]

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

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 H.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 the firing of natural gas for these sources (ID Nos. ES-16, ES-17, and ES-18).

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

- a. Visible emissions from these sources (ID Nos. ES-16, ES-17, and ES-18) shall not be more than 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. [15A NCAC 2D .0521(d)]

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

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 H.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 these sources (ID Nos. ES-16, ES-17, and ES-18).

**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	CONTROL TECHNOLOGY
Fuel Gas Heaters (ID Nos. ES-16, ES-17, and ES-18)	Nitrogen Oxides (as NO <sub>2</sub> )	0.08 lb/million Btu each	Low-NOx burner
	Carbon Monoxide	0.08 lb/million Btu each	Good combustion control
	VOC (as CH <sub>4</sub> )	0.05 lb/million Btu each	Good combustion control
	PM/PM10 (Filterable and condensable)	0.007 lb/million Btu each	Good combustion control

- 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 <sup>a</sup>			
		Annual Tons/yr <sup>a</sup>	Per 24-hour lbs	Per 8-hour lbs	Per 1-hour lbs
Fuel Gas Heaters (ID Nos. ES-16, ES-17, and ES-18)	Nitrogen Oxides (As Nitrogen Dioxide)	3.5	-	-	-
	Particulates/Pm-10 (Filterable And Condensable)	-	1.92	-	-
	Carbon Monoxide	-	-	6.4	0.8

<sup>a</sup> All emission limits include emissions of two fuel gas heaters only. Tons per consecutive 12-month period.

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

- c. Only two fuel gas heaters (ID Nos. ES-16, ES-17, and ES-18) can operate at any given time. The Permittee shall record and maintain records of the operation of fuel gas heaters (ID Nos. ES-16, ES-17, and ES-18). The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the above records are not maintained or if more than two fuel gas heaters operate at any given time.
- d. The Permittee shall make available the records in Section 2.1 H.4. c. above, to the representatives of the DAQ upon request.

**5. 15A NCAC 2D .1109: Case-by-Case MACT**

- a. The Permittee shall use best combustion practices when operating the affected boilers (ID Nos. ES-16, ES-17, and ES-18). The initial compliance date for this work practice standard and the associated monitoring, recordkeeping, and reporting requirements is **< THREE YEARS AFTER PERMIT ISSUANCE >**. These conditions need not be included on the annual compliance certification until after the initial compliance date.

**Monitoring/Recordkeeping**

- 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 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 boilers are not inspected and maintained as required above.

- c. 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)]

- d. No reporting is required.

**I. One multi-cell cooling tower (150,000 gallons per minute recirculation water flow rate, ID No. Tower5)**

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/PM10	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 this source (ID No. Tower5) shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

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

or

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

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

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

**Testing** [15A NCAC 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 2.1 I.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.

**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*	CONTROL TECHNOLOGY
Cooling Tower (ID No. Tower5)	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 I.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. Tower5) in Section 2.1 I.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. Tower5).

**J. One No. 2 fuel oil fixed-roof storage tank with atmospheric vents (not to exceed 3.5 million gallons capacity, ID No. TK-5)**

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
VOC's	As defined in specific conditions	15A NCAC 2D .0530

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

\* Tons per consecutive 12-month period.

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

- b. The maximum throughput for No. 2 fuel oil for the storage tank (ID No. TK5) shall not exceed 28,284,500 gallons per year.
- c. The Permittee shall keep records for the storage tank (ID No. TK-5) on a monthly basis for No. 2 fuel oil in a written or electronic format. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the amount of No. 2 fuel oil used is not monitored or the annual throughput for the storage tank (ID No. TK5) exceeds the limit included in Section 2.1 J.1.a. above.

**K. Three natural gas-fired fuel gas heaters (8.75 million Btu per hour heat input rate each, ID Nos. ES-19, ES-20, and ES-21)**

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	0.19 pound per million Btu heat input	15A NCAC 2D .0503
Sulfur Dioxide	2.3 pounds per million Btu heat input	15A NCAC 2D .0516
Visible Emissions	20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent opacity if (i) no six-minute period exceeds 87 percent opacity, (ii) no more than one six-minute period exceeds 20 percent opacity in any hour, and (iii) no more than four six-minute periods exceed 20 percent opacity in any 24-hour period.	15A NCAC 2D .0521
HAP's	Best Combustion Practices	15A NCAC 2D .1109

**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 these sources (ID Nos. ES-19, ES-20, and ES-21) into the atmosphere shall not exceed 0.19 pounds per million Btu heat input each. [15A NCAC 2D .0503(a)]

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

- b. If emissions testing is required, the testing shall be performed in accordance General Condition JJ. If the results of this test are above the limit given in Section 2.1 K.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 these sources (ID Nos. ES-19, ES-20, and ES-21)).

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

- a. Emissions of sulfur dioxide from these sources (ID Nos. ES-19, ES-20, and ES-21) shall not exceed 2.3 pounds per million Btu heat input each. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]

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

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

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

- a. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of natural gas for these sources (ID Nos. ES-19, ES-20, and ES-21).

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

- a. Visible emissions from these sources (ID Nos. ES-19, ES-20, and ES-21) shall not be more than 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. [15A NCAC 2D .0521(d)]

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

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

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

- b. No monitoring/recordkeeping/reporting is required for visible emissions from these sources (ID Nos. ES-19, ES-20, and ES-21).

**4. 15A NCAC 2D .1109: Case-by-Case MACT**

- a. The Permittee shall use best combustion practices when operating the affected boilers (ID Nos. ES-19, ES-20, and ES-21). The initial compliance date for this work practice standard and the associated monitoring, recordkeeping, and reporting requirements is **< THREE YEARS AFTER PERMIT ISSUANCE >**. These conditions need not be included on the annual compliance certification until after the initial compliance date.

**Monitoring/Recordkeeping**

- 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 include the following:
  - iv. Inspect the burner, and clean or replace any components of the burner as necessary;
  - v. Inspect the flame pattern and make any adjustments to the burner necessary to optimize the flame pattern; and,
  - vi. 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 boilers are not inspected and maintained as required above.
- c. 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)]

- d. No reporting is required.

**L. Two natural gas-fired fuel gas heaters (2.6 million Btu per hour heat input rate each, ID Nos. ES-19 and ES-20)**

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	0.19 pound per million Btu heat input	15A NCAC 2D .0503
Sulfur Dioxide	2.3 pounds per million Btu heat input	15A NCAC 2D .0516
Visible Emissions	20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent opacity if (i) no six-minute period exceeds 87 percent opacity, (ii) no more than one six-minute period exceeds 20 percent opacity in any hour, and (iii) no more than four six-minute periods exceed 20 percent opacity in any 24-hour period.	15A NCAC 2D .0521
HAP's	Best Combustion Practices	15A NCAC 2D .1109

**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 these sources (ID Nos. ES-19 and ES-20) the atmosphere shall not exceed 0.19 pounds per million Btu heat input each. [15A NCAC 2D .0503(a)]

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

- b. If emissions testing is required, the testing shall be performed in accordance General Condition JJ. If the results of this test are above the limit given in Section 2.1 L.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 these sources (ID Nos. ES-19 and ES-20)).

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

- a. Emissions of sulfur dioxide from these sources (ID Nos. ES-19 and ES-20) shall not exceed 2.3 pounds per million Btu heat input each. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]

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

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 L.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 the firing of natural gas for these sources (ID Nos. ES-19 and ES-20).

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

- a. Visible emissions from these sources (ID Nos. ES-19 and ES-20) shall not be more than 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. [15A NCAC 2D .0521(d)]

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

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 L.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 these sources (ID Nos. ES-19 and ES-20).

**4. 15A NCAC 2D .1109: Case-by-Case MACT**

- a. The Permittee shall use best combustion practices when operating the affected boilers (ID Nos. ES-19 and ES-20). The initial compliance date for this work practice standard and the associated monitoring, recordkeeping, and reporting requirements is **< THREE YEARS AFTER PERMIT ISSUANCE >**. These conditions need not be included on the annual compliance certification until after the initial compliance date.

**Monitoring/Recordkeeping**

- e. 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 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 boilers are not inspected and maintained as required above.

- f. 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)]

- g. No reporting is required.

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

- A. Five natural gas/No. 2 fuel oil-fired simple-cycle internal combustion turbines (1,628 million Btu per hour nominally rated heat input each, when firing natural gas, 1,819 million Btu per hour nominally rated heat input each, when firing No. 2 fuel oil), each equipped with dual fuel dry Low-NOx combustors and having water injection capability for NOX control (ID Nos. Unit 1, Unit 2, Unit 3, Unit 4, and Unit 6)**

**Two natural gas/No. 2 fuel oil-fired combined-cycle internal combustion turbines (1,628 million Btu per hour nominally rated heat input each, when firing natural gas, 1,819 million Btu per hour nominally rated heat input each, when firing No. 2 fuel oil), each equipped with a heat recovery steam generator and a steam turbine, and dual fuel dry Low-NOx combustors and having water injection capability for NOX control (ID Nos. Unit 7 and Unit 8), and associated SCR's (ID No. Unit 7 SCR and Unit 8 SCR)**

### **1. 15A NCAC 2D .1112: 112(g) CASE BY CASE MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY**

- a. As a major source with the potential to emit 10 tons per year of any hazardous air pollutant (HAP), as listed in Section 112(b) of the federal Clean Air Act, or 25 tons per year of any combination of HAP, the Permittee shall apply proper combustion control to comply with the MACT requirements as promulgated in 40 CFR 63.43 "Maximum Achievable Control Technology (MACT) Determinations for Constructed and Reconstructed Major Sources."

## 2.3 - Phase II Acid Rain Permit Requirements

**ORIS code: 7805**

**Effective: January 1, 2010 through December 31, 2014**

### 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. SO<sub>2</sub> Allowance Allocations and NO<sub>x</sub> Requirements for each affected unit

		2006	2007	2008	2009	2010
<b>Unit 1 (IC Turbine)</b> <b>Unit 2 (IC Turbine)</b> <b>Unit 3 (IC Turbine)</b> <b>Unit 4 (IC Turbine)</b> <b>Unit 6 (IC Turbine)</b> <b>Unit 7 (IC Turbine)</b> <b>Unit 8 (IC Turbine)</b>	SO <sub>2</sub> allowances, under Tables 2, 3, or 4 of 40 CFR part 73.	NA*	NA*	NA*	NA*	NA*
	NO <sub>x</sub> limit	NA**				

\* SO<sub>2</sub> allowances are not allocated by U.S. EPA for new units under 40 CFR part 72.

\*\* Does not apply for gas or oil-fired units.

### 3. Comments, Notes and Justifications

None.

### 4. Phase II Permit Application (attached)

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

Acid Rain Permit Application dated December 14, 2009

## 2.4 - Clean Air Interstate Rules (CAIR) Permit Requirements

ORIS code: 7805

The following sources are affected CAIR units:

PERMITTED SOURCE ID No.	CAIR ID No.
Unit 1	1
Unit 2	2
Unit 3	3
Unit 4	4
Unit 6	6
Unit 7	7
Unit 8	8

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

- The total nitrogen oxide (NO<sub>x</sub>) emissions from the affected CAIR units listed above at the Richmond County Combustion Turbine Facility shall not exceed, except as provided in 15A NCAC 2D .2408: [15A NCAC 2D .2403]
  - 374 tons annually for 2009-2014
  - 318 tons annually for 2015 and laterIf 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 NO<sub>x</sub> allowances for those sources using the procedures in 40 CFR 96.142(c)(2) and (3).
- The affected CAIR NO<sub>x</sub> 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]
- 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)]

- 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 NO<sub>x</sub> unit.
- The emissions of nitrogen oxides of a CAIR NO<sub>x</sub> source shall not exceed the number of allowances that it has in its compliance account established and administered under Rule .2408 of this Section.
- The emissions measurements recorded and reported according to 40 CFR Part 96 Subpart HH shall be used to determine compliance by each CAIR NO<sub>x</sub> source with its emissions limitation according to 40 CFR 96.106(c) including 96.106(c)(5) and (6).
- 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

- Ozone season NO<sub>x</sub> emissions from the affected CAIR units listed above at the Marshall Steam Station shall not exceed, except as provided in 15A NCAC 2D .2408: [15A NCAC 2D .2405(a)(1) and (b)]
  - 335 tons during the ozone season for 2009-2014; and
  - 285 tons during the ozone season for 2015 and laterThe 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<sub>x</sub> ozone season allowances for those sources using the procedures in 40 CFR 96.342(c)(2) and (3).
- The affected CAIR NO<sub>x</sub> 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]
- 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 NOx unit.
5. The nitrogen oxide ozone season emissions of a CAIR NOx Ozone Season source shall not exceed the number of allowances that it has in its compliance account established and administered under 15A NCAC 2D .2408. For purposes of making deductions for excess emissions for the ozone season in 2008 under the NOx 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 NOx Ozone Season source with its emissions limitation according to 40 CFR 96.306(c) including 96.306(c)(5) and (6).
7. The provisions of 40 CFR 96.306(d) shall be used for excess emissions.

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

1. The annual allocation of sulfur dioxide allowances shall be determined by EPA. The allocations for CAIR SO<sub>2</sub> units are listed in the table below and reflect the absence of allocations listed in 40 CFR 73.10:

SOURCE	ALLOCATION FOR 2000-2009	ALLOCATION FOR 2010 AND LATER
Unit 1	0	0
Unit 2	0	0
Unit 3	0	0
Unit 4	0	0
Unit 6	0	0
Unit 7	0	0
Unit 8	0	0

2. The affected CAIR SO<sub>2</sub> 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 SO<sub>2</sub> unit.
5. The emissions of sulfur dioxides of a source described in Section 2.5.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 SO<sub>2</sub> 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 NOx and SO<sub>2</sub> sources must comply with the standard requirements and special provisions set forth in the following attached application:

CAIR Permit Application dated June 26, 2007

## SECTION 3 - GENERAL CONDITIONS

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 NO<sub>x</sub> 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 re-issuance, 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 I 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 re-issuance 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 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. 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.
3. 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.
4. The testing requirement(s) shall be considered satisfied only upon written approval of the test results by the DAQ.
5. 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 re-issuance, 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.

ATTACHMENT  
**List of Acronyms**

<b>AOS</b>	Alternate Operating Scenario
<b>BACT</b>	Best Available Control Technology
<b>BTU</b>	British thermal unit
<b>CAA</b>	Clean Air Act
<b>CAIR</b>	Clean Air Interstate Rule
<b>CEM</b>	Continuous Emission Monitor
<b>CFR</b>	Code of Federal Regulations
<b>DAQ</b>	Division of Air Quality
<b>DENR</b>	Department of Environment and Natural Resources
<b>EMC</b>	Environmental Management Commission
<b>EPA</b>	Environmental Protection Agency
<b>FR</b>	Federal Register
<b>GACT</b>	Generally Available Control Technology
<b>HAP</b>	Hazardous Air Pollutant
<b>MACT</b>	Maximum Achievable Control Technology
<b>NAA</b>	Non-Attainment Area
<b>NCAC</b>	North Carolina Administrative Code
<b>NCGS</b>	North Carolina General Statutes
<b>NESHAPS</b>	National Emission Standards for Hazardous Air Pollutants
<b>NO<sub>x</sub></b>	Nitrogen Oxides
<b>NSPS</b>	New Source Performance Standard
<b>OAH</b>	Office of Administrative Hearings
<b>PM</b>	Particulate Matter
<b>PM<sub>10</sub></b>	Particulate Matter with Nominal Aerodynamic Diameter of 10 Micrometers or Less
<b>POS</b>	Primary Operating Scenario
<b>PSD</b>	Prevention of Significant Deterioration
<b>RACT</b>	Reasonably Available Control Technology
<b>SIC</b>	Standard Industrial Classification
<b>SIP</b>	State Implementation Plan
<b>SO<sub>2</sub></b>	Sulfur Dioxide
<b>TPY</b>	Tons Per Year
<b>VOC</b>	Volatile Organic Compound