



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

Beverly Eaves Purdue
Governor

B. Keith Overcash, P.E.
Director

Dee Freeman
Secretary

February XXX, 2010

DRAFT

DRAFT

DRAFT

Mr. Terrence W. Ryan
Vice President, Asset Management
North Carolina Electric Membership Corporation - Anson Plant
749 Blewett Falls Road
Lilesville, North Carolina 28091

Dear Mr. Ryan:

SUBJECT: Air Quality Permit No. 09492T05
Facility ID: 0400050
North Carolina Electric Membership Corporation - Anson Plant
Lilesville, North Carolina
Anson County
Fee Class: Title V

In accordance with your completed Air Quality Permit Application for a 1st Time Title V Permit pursuant to 15A NCAC 2Q .0501(c)(1), received January 11, 2008, we are forwarding herewith Air Quality Permit No. 09492T05 to the North Carolina Electric Membership Corporation - Anson Plant located at 749 Blewett Falls Road, Lilesville, North Carolina authorizing the construction and operation, of the emission sources and associated air pollution control devices specified herein. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant per 15A North Carolina Administrative Code 2Q .0503(8) have been listed for informational purposes as an "ATTACHMENT." Please note the requirements for the annual compliance certification are contained in General Condition P in Section 3. **The current owner is responsible for submitting a compliance certification for the entire year regardless of who owned the facility during the year.**

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

Permitting Section

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

One
North Carolina
Naturally

- Draft Permit-

Page 2

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 **February XX, 2010** until **January 31, 2015**, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein.

Should you have any questions concerning this matter, please contact Mr. Booker T. Pullen at (919) 715-6248.

Sincerely yours,

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

Enclosure

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

Attachments: A & B

- Draft Permit-**Attachment A:****Changes to existing Title V Permit No. 09431T01 per applications (0400050.09B and 0400050.08A)**

Old Page No.	New Page No.	Condition No.	Changes
Page 1	Page 1	Cover letter	Changed: Issue date of permit, 1 st sentence to describe the type of permit, revision date of permit,
Page 2	Page 2	Cover letter	Changed: Date in the heading, issue date of the permit, added EPA to copy list, Added Attachment A and B descriptions to bottom of page
Page 3	Page 3	Cover letter	Added insignificant activities list as an attachment, and revised the "Changes to the Permit" table to reflect this permit modification
Body of the Permit			
Page 4	Page 3	Insignificant Activities List	Removed No. 2 fuel oil from the description for IES-11
Body of the Permit			
Page 1	Page 1	Cover page of permit	Changed: Issue date, effective date, replaces permit No., Expiration date, permitted source layout, reformatted page
Pages 1-9	Pages 4-16	Specific Limitations and Conditions	Reformatted entire permit, added regulatory requirements for a Title V permit
Pages 9-11	Page 17-26	General Conditions	Added Title V General Conditions to permit

Attachment B:

Potential emissions do not exceed 5 tons per year of criteria pollutants and 1,000 pounds per year of any HAP

ID Nos.	Emission Source Description	Insignificant Regulation
IES-12	One 500,000 gallon, No. 2 fuel oil storage tank	15A NCAC 2Q .0503(8)
IES-13	One 500,000 gallon, No. 2 fuel oil storage tank	15A NCAC 2Q .0503(8)
IES-11	One natural gas-fired heater for warming up pipeline natural gas used in combustion turbines	15A NCAC 2Q .0503(8)

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



Division of Air Quality

AIR QUALITY PERMIT

Permit No.	Replaces Permit No.	Issue Date	Effective Date	Expiration Date
09492T05	09492T04	XXXXXX, 2010	XXXXXX, 2010	XXXX, 2015

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: North Carolina Electric Membership Corporation - Anson Plant
Facility ID: 0400050

Facility Site Location: 749 Blewett Falls Road
City, County, State, Zip: Lilesville, North Carolina 28091

Mailing Address: 749 Blewett Falls Road
City, State, Zip: Lilesville, North Carolina 28091

Application Number: 0400050.08A and 0400050.09B
Complete Application Date: January 11, 2008 and August 31, 2009

Primary SIC Code: 4911
Division of Air Quality, Fayetteville Regional Office
Regional Office Address: 225 Green St, Suite 714
Fayetteville, North Carolina 28301

Permit issued this the **XX** day of **XXXX, 2010**

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)

SECTION 3: GENERAL PERMIT CONDITIONS

ATTACHMENT
List of Acronyms

SECTION 1- PERMITTED EMISSION SOURCES AND ASSOCIATED AIR POLLUTION CONTROLS AND APPURTENANCES

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

Emission Source ID No.	Emissions Source Description	Control Device ID No.	Control Device Description
ES-1A NSPS	One Pratt & Whitney FT8 Swift-Pac simple-cycle gas turbine (300 million Btu per hour nominal heat input capacity when firing natural gas, and 281 million Btu per hour nominal heat input capacity when firing No. 2 fuel oil) and one generator per set of turbines	CD-1 CD-1A	Water injection system Oxidation catalyst system
ES-1B NSPS	One Pratt & Whitney FT8 Swift-Pac simple-cycle gas turbine (300 million Btu per hour nominal heat input capacity when firing natural gas, and 281 million Btu per hour nominal heat input capacity when firing No. 2 fuel oil) and one generator per set of turbines	CD-1 CD-1B	Water injection system Oxidation catalyst system
ES-2A NSPS	One Pratt & Whitney FT8 Swift-Pac simple-cycle gas turbine (300 million Btu per hour nominal heat input capacity when firing natural gas, and 281 million Btu per hour nominal heat input capacity when firing No. 2 fuel oil) and one generator per set of turbines	CD-1 CD-2A	Water injection system Oxidation catalyst system
ES-2B NSPS	One Pratt & Whitney FT8 Swift-Pac simple-cycle gas turbine (300 million Btu per hour nominal heat input capacity when firing natural gas, and 281 million Btu per hour nominal heat input capacity when firing No. 2 fuel oil) and one generator per set of turbines	CD-1 CD-2B	Water injection Oxidation catalyst system
ES-3A NSPS	One Pratt & Whitney FT8 Swift-Pac simple-cycle gas turbine (300 million Btu per hour nominal heat input capacity when firing natural gas, and 281 million Btu per hour nominal heat input capacity when firing No. 2 fuel oil) and one generator per set of turbines	CD-1 CD-3A	Water injection system Oxidation catalyst system
ES-3B NSPS	One Pratt & Whitney FT8 Swift-Pac simple-cycle gas turbine (300 million Btu per hour nominal heat input capacity when firing natural gas, and 281 million Btu per hour nominal heat input capacity when firing No. 2 fuel oil) and one generator per set of turbines	CD-1 CD-3B	Water injection system Oxidation catalyst system
ES-4A NSPS	One Pratt & Whitney FT8 Swift-Pac simple-cycle gas turbine (300 million Btu per hour nominal heat input capacity when firing natural gas, and 281 million Btu per hour nominal heat input capacity when firing No. 2 fuel oil) and one generator per set of turbines	CD-1 CD-4A	Water injection system Oxidation catalyst system
ES-4B NSPS	One Pratt & Whitney FT8 Swift-Pac simple-cycle gas turbine (300 million Btu per hour nominal heat input capacity when firing natural gas, and 281 million Btu per hour nominal heat input capacity when firing No. 2 fuel oil) and one generator per set of turbines	CD-1 CD-4B	Water injection system Oxidation catalyst system
ES-5A NSPS	One Pratt & Whitney FT8 Swift-Pac simple-cycle gas turbine (300 million Btu per hour nominal heat input capacity when firing natural gas, and 281 million Btu per hour nominal heat input capacity when firing No. 2 fuel oil) and one generator per set of turbines	CD-1 CD-5A	Water injection system Oxidation catalyst system
ES-5B NSPS	One Pratt & Whitney FT8 Swift-Pac simple-cycle gas turbine (300 million Btu per hour nominal heat input capacity when firing natural gas, and 281 million Btu per hour nominal heat input capacity when firing No. 2 fuel oil) and one generator per set of turbines	CD-1 CD-5B	Water injection system Oxidation catalyst system
ES-6A NSPS	One Pratt & Whitney FT8 Swift-Pac simple-cycle gas turbine (300 million Btu per hour nominal heat input capacity when firing natural gas, and 281 million Btu per hour nominal heat input capacity when firing No. 2 fuel oil) and one generator per set of turbines	CD-1 CD-6A	Water injection system Oxidation catalyst system
ES-6B NSPS	One Pratt & Whitney FT8 Swift-Pac simple-cycle gas turbine (300 million Btu per hour nominal heat input capacity when firing natural gas, and 281 million Btu per hour nominal heat input capacity when firing No. 2 fuel oil) and one generator per set of turbines	CD-1 CD-6B	Water injection system Oxidation catalyst system

SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS

2.1- Emission Sources and Control Devices 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. Twelve Pratt & Whitney FT8 Swift-Pac simple-cycle gas turbines (300 million Btu per hour nominal heat input capacity when firing natural gas, and 281 million Btu per hour nominal heat input capacity when firing No. 2 fuel oil each, NSPS) and one generator per set of turbines

- ES-1A and 1B with water injection (CD-1) and oxidation catalyst system (CD-1A and CD-1B)
- ES-2A and 2B with water injection (CD-1) and oxidation catalyst system (CD-2A and CD-2B)
- ES-3A and 3B with water injection (CD-1) and oxidation catalyst system (CD-3A and CD-3B)
- ES-4A and 4B with water injection (CD-1) and oxidation catalyst system (CD-4A and CD-4B)
- ES-5A and 5B with water injection (CD-1) and oxidation catalyst system (CD-5A and CD-5B)
- ES-6A and 6B with water injection (CD-1) and oxidation catalyst system (CD-6A and CD-6B)

The following table provides a summary of limits and standards for the emissions sources described above:

Regulated Pollutant	Limits/Standards	Applicable Regulations
Visible emissions	20 percent opacity	15A NCAC 2D .0521
Sulfur dioxide	Any fuel: Not to exceed total sulfur content of 0.05 wt % (500 ppmw) -or- Any fuel: Not to exceed total sulfur dioxide emissions of 0.06 lbs/mmBtu heat input -or- Exit gases: Not to discharge sulfur dioxide emissions in excess of 0.90 pounds per megawatt-hour gross output	15A NCAC 2D .0524 NSPS, Subpart KKKK
	Allowances under tables 2, 3, or 4 or 40 CFR Part 73	15A NCAC 2Q .0400 Acid Rain
Toxic air pollutants	Operational limits	15A NCAC 2D .1100
Nitrogen oxides	No. 2 fuel oil: 74 ppm at 15 percent O ₂ (4-hour rolling average)	15A NCAC 2D .0524 NSPS, Subpart KKKK
	Natural gas: 25 ppm at 15 percent O ₂ (4-hour rolling average)	
	0.15 lbs per million Btu heat input (natural gas) 0.18 lbs per million Btu heat input (No. 2 fuel oil)	15A NCAC 2D .1418 New Electric Generating Units
	Less than 245 tons per consecutive 12 months	15A NCAC 2Q .0317 of (2D .0530) PSD Avoidance
Carbon monoxide	Less than 245 tons per consecutive 12 months	15A NCAC 2Q .0317 of (2D .0530) PSD Avoidance

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

- a. Visible emissions from each of the twelve gas turbines (ID Nos. ES-1A & 1B, ES-2A & 2B, ES-3A & 3B, ES-4A & 4B, ES-5A & 5B, ES-6A & 6B) 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 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 A. 1. 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, or reporting is required for visible emissions from the firing of natural gas and/or No. 2 fuel oil in any turbine.

2. 15A NCAC 2D .0524: NSPS, 40 CFR PART 60, SUBPART KKKK – SULFUR DIOXIDE

- 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 KKK, including Subpart A "General Provisions." [15A NCAC 2D .0524]

Emission Limitations [15A NCAC 2D .0524, 40 CFR §60.4330(a)(1 and 2)]

- b. The Permittee shall not cause to be discharged into the atmosphere from any combustion turbine any gases which contain SO₂ in excess 0.90 lbs megawatt-hour (lbs/MWh) gross output, or
- c. The Permittee shall not burn in any of the combustion turbines, fuels that contain total potential sulfur dioxide emissions in excess of 0.06 lbs per million Btu heat input, or
- d. The Permittee shall not burn any fuel with a maximum sulfur content in excess of 0.05 wt % (500 ppmw).

Testing [15A NCAC 2D .0524]

- e. Initial performance testing has been completed at this facility. If additional emissions testing is required, the testing shall be performed utilizing EPA Reference Methods contained in 40 CFR Part 60 Appendix A or in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in Section 3 - General Condition JJ. If the results of this test are above the limit given in Section 2.1 A. 2. b., c., and d. above, the Permittee shall be deemed in noncompliance with 40 CFR Part 60, Subpart KKKK.

- f. **Monitoring/Recordkeeping** [15A NCAC 2D .0524, 40 CFR §60 .4360, §60 .4365, and §60 .4370]

- i. The Permittee shall monitor the total sulfur content of the fuel being fired in the turbine, except as provided in §60.4365. The sulfur content of the fuel shall be determined using total sulfur methods described in §60.4415. Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than half the applicable limit, ASTM D4084, D4810, D5504, or D6228, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see §60.17), which measure the major sulfur compounds, may be used.
- ii. In accordance with §60.4365, the Permittee may elect not to monitor the total sulfur content of the fuel combusted in the turbine, if the fuel is demonstrated not to exceed potential sulfur emissions of 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input for units located in continental areas. The Permittee shall use one of the following sources of information to make the required demonstration:
- (A) 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 in continental areas is 0.05 weight percent (500 ppmw) or less. The total sulfur content for natural gas use in continental areas is 20 grains of sulfur or less per 100 standard cubic feet and has potential sulfur emissions of less than less than 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input for continental areas.

- (B) Representative fuel sampling data which show that the sulfur content of the fuel does not exceed 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input for continental areas. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of Appendix D to Part 75 of this chapter is required.
- iii. The frequency of determining the sulfur content of the fuel shall be follows:
 - (A) For *fuel oil*, use one of the total sulfur sampling options and the associated sampling frequency described in sections 2.2.3, 2.2.4.1, 2.2.4.2, and 2.2.4.3 of appendix D to Part 75 of this chapter (*i.e.* , flow proportional sampling, daily sampling, sampling from the unit's storage tank after each addition of fuel to the tank, or sampling each delivery prior to combining it with fuel oil already in the intended storage tank).
 - (B) *Gaseous fuel*. If the Permittee elects not to demonstrate sulfur content using options in §60.4365, and the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel shall be determined and recorded once per unit operating day.
 - (C) *Custom schedules*. Notwithstanding the requirements of §60 .4370(b), operators or fuel vendors may develop custom schedules for determination of the total sulfur content of gaseous fuels, based on the design and operation of the affected facility and the characteristics of the fuel supply. Except as provided in paragraphs §60 .4370(c)(1) and (c)(2), custom schedules shall be substantiated with data and shall be approved by the Division of Air Quality before they can be used to comply wit the standard in §60 .4330.

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

- g. The Permittee shall submit a summary report of the monitoring and recordkeeping results postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 2D .0524: NSPS, 40 CFR PART 60, SUBPART KKKK – NITROGEN DIOXIDE

- 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 KKK, including Subpart A "General Provisions." [15A NCAC 2D .0524]

Emission Limitations [15A NCAC 2D .0524, §60.4325]

- b. The Permittee shall not cause to be discharged into the atmosphere from any combustion turbine any gases which contain NO_x emissions in excess of 25 ppm at 15 percent O₂ (4-hour rolling average when firing natural gas) and/or
- c. The Permittee shall not cause to be discharged into the atmosphere from any combustion turbine any gases which contain NO_x emissions in excess of 74 ppm at 15 percent O₂ (4-hour rolling average) when firing No. 2 fuel oil.

- d. **Testing** [15A NCAC .2D .2601, 40 CFR §60.4400]

Initial performance testing has been completed at this facility. If additional performance 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. b. and c. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

- e. **Monitoring/Recordkeeping** [15A NCAC 2D .0524, 40 CFR §60. 4335, §60. 4340, §60. 4345, §60. 4350, and §60. 4355]
- i. If the Permittee chooses to use water or steam injection to control NO_x emissions, they shall install, calibrate, maintain and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water or steam to fuel being fired in the turbine when burning a fuel that requires water or steam injection for compliance.
 - ii. Alternatively, the Permittee may use continuous emission monitoring, as follows:
 - (A) Install, certify, maintain, and operate a continuous emission monitoring system (CEMS) consisting of a NO_x monitor and a diluent gas (oxygen (O₂) or carbon dioxide (CO₂)) monitor, to determine the hourly NO_x emission rate in parts per million (ppm) or pounds per million British thermal units (lb/MMBtu); and
 - (B) For units complying with the output-based standard, install, calibrate, maintain, and operate a fuel flow meter (or flow meters) to continuously measure the heat input to the affected unit; and
 - (C) For units complying with the output-based standard, install, calibrate, maintain, and operate a watt meter (or meters) to continuously measure the gross electrical output of the unit in megawatt-hours; and
 - (D) For combined heat and power units complying with the output-based standard, install, calibrate, maintain, and operate meters for useful recovered energy flow rate, temperature, and pressure, to continuously measure the total thermal energy output in British thermal units per hour (Btu/h).
 - iii. If the option to use a NO_x CEMS is chosen:
 - (A) Each NO_x diluent CEMS must be installed and certified according to Performance Specification 2 (PS 2) in appendix B to this part, except the 7-day calibration drift is based on unit operating days, not calendar days. With state approval, Procedure 1 in appendix F to this part is not required. Alternatively, a NO_x diluent CEMS that is installed and certified according to appendix A of part 75 of this chapter is acceptable for use under this subpart. The relative accuracy test audit (RATA) of the CEMS shall be performed on a lb/MMBtu basis.
 - (B) As specified in §60.13(e)(2), during each full unit operating hour, both the NO_x monitor and the diluent monitor must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour, to validate the hour. For partial unit operating hours, at least one valid data point must be obtained with each monitor for each quadrant of the hour in which the unit operates. For unit operating hours in which required quality assurance and maintenance activities are performed on the CEMS, a minimum of two valid data points (one in each of two quadrants) are required for each monitor to validate the NO_x emission rate for the hour.
 - (C) Each fuel flowmeter shall be installed, calibrated, maintained, and operated according to the manufacturer's instructions. Alternatively, with state approval, fuel flowmeters that meet the installation, certification, and quality assurance requirements of appendix D to part 75 of this chapter are acceptable for use under this Subpart.
 - (D) Each watt meter, steam flow meter, and each pressure or temperature measurement device shall be installed, calibrated, maintained, and operated according to manufacturer's instructions.
 - (E) The owner or operator shall develop and keep on-site a quality assurance (QA) plan for all of the continuous monitoring equipment described in paragraphs (a), (c), and (d) of this section. For the CEMS and fuel flow meters, the owner or operator may, with state approval, satisfy the requirements of this paragraph by implementing the QA program and plan described in section 1 of appendix B to Part 75 of this chapter.
 - iv. For purposes of identifying excess emissions when using NO_x CEMs:
 - (A) All CEMS data must be reduced to hourly averages as specified in §60.13(h).
 - (B) For each unit operating hour in which a valid hourly average, as described in §60.4345(b), is obtained for both NO_x and diluent monitors, the data acquisition and handling system must calculate and record the hourly NO_x emission rate in units of ppm or lb/MMBtu, using the appropriate equation from method 19 in Appendix A of this part. For any hour in which the hourly average O₂ concentration exceeds 19.0 percent O₂ (or the hourly average CO₂ concentration is less than 1.0 percent CO₂), a diluent cap value of 19.0 percent O₂ or 1.0 percent CO₂ (as applicable) may be used in the emission calculations.

- (C) Correction of measured NO_x concentrations to 15 percent O₂ is not allowed.
- (D) If you have installed and certified a NO_x diluent CEMS to meet the requirements of part 75 of this chapter, states can approve that only quality assured data from the CEMS shall be used to identify excess emissions under this subpart. Periods where the missing data substitution procedures in subpart D of part 75 are applied are to be reported as monitor downtime in the excess emissions and monitoring performance report required under §60.7(c).
- (E) All required fuel flow rate, steam flow rate, temperature, pressure, and megawatt data must be reduced to hourly averages.
- (F) Calculate the hourly average NO_x emission rates, in units of the emission standards under §60.4320, using either ppm for units complying with the concentration limit or the following equation for units complying with the output based standard:
 - (1) For simple-cycle operation:

$$E = \frac{(NO_x)_h * (HI)_h}{P} \quad (\text{Eq. 1})$$

Where:

E = hourly NO_x emission rate, in lb/MWh,

(NO_x)_h = hourly NO_x emission rate, in lb/MMBtu,

(HI)_h = hourly heat input rate to the unit, in MMBtu/h, measured using the fuel flowmeter(s), *e.g.*

,
calculated using Equation D–15a in appendix D to part 75 of this chapter, and

P = gross energy output of the combustion turbine in MW.

- (G) For simple cycle units without heat recovery, use the calculated hourly average emission rates from §60.4350(f) to assess excess emissions on a 4-hour rolling average basis, as described in §60.4380(b)(1).
- v. For affected units that are also subject to Part 75 of this chapter and that have state approval to use the low mass emissions methodology in §75.19 or the NO_x emission measurement methodology in appendix E to Part 75, the Permittee shall meet the requirements of this paragraph by developing and keeping on-site (or at a central location for unmanned facilities) a QA plan, as described in §75.19(e)(5) or in section 2.3 of appendix E to Part 75 of this chapter and Section 1.3.6 of Appendix B to Part 75 of this chapter.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if monitoring of sources and recordkeeping are not maintained.

f. **Reporting** [15A NCAC 2D .0524, 40 CFR §60.4375]

- i. For the purpose of reports required under §60.7(c), periods of excess emissions and monitor downtime that must be reported are defined as follows:

(A) For turbines using water or steam to fuel ratio monitoring:

- (1) An excess emission is any unit operating hour for which the 4-hour rolling average steam or 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 or steam injection for NO_x control will also be considered an excess emission.
- (2) 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.
- (3) Each report must include the average steam or water to fuel ratio, average fuel consumption, and the combustion turbine load during each excess emission.

- (B) For turbines using continuous emission monitoring, as described in §§60.4335(b) and 60.4345:
- (1) An excess emission is any unit operating period in which the 4-hour or 30-day rolling average NO_x emission rate exceeds the applicable emission limit in §60.4320. For the purposes of this subpart, a “4-hour rolling average NO_x emission rate” is the arithmetic average of the average NO_x emission rate in ppm or ng/J (lb/MWh) measured by the continuous emission monitoring equipment for a given hour and the three unit operating hour average NO_x emission rates immediately preceding that unit operating hour. Calculate the rolling average if a valid NO_x emission rate is obtained for at least 3 of the 4 hours. For the purposes of this subpart, a “30-day rolling average NO_x emission rate” is the arithmetic average of all hourly NO_x emission data in ppm or ng/J (lb/MWh) measured by the continuous emission monitoring equipment for a given day and the twenty-nine unit operating days immediately preceding that unit operating day. A new 30-day average is calculated each unit operating day as the average of all hourly NO_x emissions rates for the preceding 30 unit operating days if a valid NO_x emission rate is obtained for at least 75 percent of all operating hours.
 - (2) A period of monitor downtime is any unit operating hour in which the data for any of the following parameters are either missing or invalid: NO_x concentration, CO₂ or O₂ concentration, fuel flow rate, steam flow rate, steam temperature, steam pressure, or megawatts. The steam flow rate, steam temperature, and steam pressure are only required if you will use this information for compliance purposes.
 - (3) 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.
- (C) For turbines required to monitor combustion parameters or parameters that document proper operation of the NO_x emission controls:
- (1) An excess emission is 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 unit.
 - (2) A period of monitor downtime is a unit operating hour in which any of the required parametric data are either not recorded or are invalid.

4. 15A NCAC 2D .1418: NEW ELECTRIC GENERATING UNITS

- a. Emissions of nitrogen oxides from any fossil fuel-fired combustion turbines permitted after October 31, 2000, serving a generator with a nameplate capacity greater than 25 megawatts electrical and selling any amount of electricity shall not exceed 0.15 pounds per million Btu for gaseous and solid fuels and 0.18 pounds per million Btu for liquid fuels if it is not covered under Rule 15A NCAC 2D .0530 (prevention of significant deterioration) or 15A NCAC 2D .0531 (nonattainment area major new source review).

Monitoring

- b. Pursuant to 40 CFR 75.12(e), gas-fired or oil-fired peaking units may use procedures specified in Appendix E of the Part for estimating hourly NO_x emission rates in lieu of CEMs.

5. 15A NCAC 2Q .0400: ACID RAIN REQUIREMENTS

In accordance with the provisions of Article 21B of Chapter 143, General Statutes of North Carolina as amended and Title IV 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 other applicable Laws. The SO₂ Allowance Allocations and NO_x Requirements for each affected unit are shown in the table below.

Source		2007	2008	2009	2010	2011
ID No. ES-1A ID No. ES-1B ID No. ES-2A ID No. ES-2B ID No. ES-3A ID No. ES-3B ID No. ES-4A ID No. ES-4B	SO ₂ allowances, under Tables 2, 3, or 4 of 40 CFR part 73.	NA*	NA*	NA*	NA*	NA*
ID No. ES-5A ID No. ES-5B ID No. ES-6A ID No. ES-6B	NO _x limit	NA**				

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

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

The Acid Rain Permit Application, dated April 28, 2005, 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 acid rain sources must comply with the standard requirements and special provisions set forth in the attached application.

6. 15A NCAC 2Q .0317 of 2D .0530: PSD AVOIDANCE – CO

a. To comply with this permit and to avoid applicability of 15A NCAC 2D .0530 "Prevention of Significant Deterioration," as requested by the Permittee, **carbon monoxide** emissions from the combustion turbines (ID Nos. ES-1A & 1B, ES-2A & 2B, ES-3A & 3B, ES-4A & 4B, ES-5A & 5B, ES-6A & 6B) shall be **less than 245 tons** total per consecutive 12-month period.

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

b. The initial performance testing has been completed. If additional performance testing is required, the testing shall be performed in accordance with General Condition JJ of the Title V permit. If the results of this test are above the limit given in Section 2.1 A. 6. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

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

- i. Turbine startup and shutdown shall be limited to an average of 2 hours per day per turbine. On a turbine-by-turbine basis, startup and shutdown is defined as operation from 0 to 50 percent electrical output during natural gas firing and/or fuel oil firing. The Permittee shall record the number of startup and shutdown hours for each turbine on a daily basis.
- ii. Carbon monoxide emissions shall be controlled by an oxidation catalyst. The oxidation catalyst shall be monitored by periodic sampling (coupon sampling) as recommended by the manufacturer and by gas temperature at the gas generator exhaust. The gas temperature at the exhaust exit of the gas generator shall be monitored and maintained between **840 to 1800** degrees Fahrenheit except during start-up and shutdowns. Measured temperature at the gas generator shall be correlated to measured temperature at the catalyst outlet during testing performed under permit condition A.3.c. Any values falling outside the above operating parameters shall be recorded and dated, along with actions taken to bring them back within normal operating ranges.

- iii. In order to ensure compliance with the above avoidance limit for carbon monoxide (CO), the Permittee shall maintain a gas generator exhaust temperature (3-hour block average) within the range as specified in A.6.c.iii. above for each oxidation catalyst (ID Nos. CD-1A, 1B, 2A, 2B, 3A, 3B, 4A, 4B, 5A, 5B, 6A, and 6B).
- (A) Each calendar month, the Permittee shall calculate the CO emissions of each turbine for the previous month and the previous 12-month period to ensure compliance with Condition 6. a. above.
- (1) Monthly CO emissions, in tons, shall be calculated as follows:

$$E_{CO} = \{[(A_g \times t_{catalyst}) + (B_g \times t_{nocon})] + [C_{g-startup} \times N] + [D_{g-shutdown} \times N] + [(E_{fo} \times t_{catalyst}) + (F_{fo} \times t_{nocon})] + [G_{fo-startup} \times N] + [H_{fo-shutdown} \times N]\} \times 1/2000$$

Where:

E_{CO} = number of tons of CO emissions per month

A_g = pounds of CO per hour after control when firing natural gas

B_g = pounds of CO per hour assuming no carbon monoxide control when firing natural gas

C_g = pounds of CO per startup event when firing natural gas

D_g = pounds of CO per shutdown event when firing natural gas

E_{fo} = pounds of CO per hour after control when firing No. 2 fuel oil

F_{fo} = pounds of CO per hour assuming no carbon monoxide control when firing fuel oil

G_{fo} = pounds of CO per startup event when firing No. 2 fuel oil

H_{fo} = pounds of CO per shutdown event when firing No. 2 fuel oil

$t_{catalyst}$ = hours per month when the gas generator exhaust temperature is inside the range specified in A.6.c.iii.

t_{nocon} = hours per month when gas generator exhaust temperature is outside the range specified in A.6.c.iii.

N = number of times started up or shutdown in the month

Until DAQ approval of performance test results and the administrative amendment of this permit to incorporate those results, the following values shall be used:

A_g = 7.8 lbs

B_g = 78.4 lbs

C_g = 25.93 lbs

D_g = 24.07 lbs

E_{fo} = 2.0 lbs

F_{fo} = 19.6 lbs

G_{fo} = 5.34 lbs

H_{fo} = 5.94 lbs

- v. Consecutive 12-month rolling CO emissions, in tons, shall be calculated by summing the monthly emissions, as determined above, for the previous 12-month period for the turbine units.

If the Permittee fails to complete the required monthly calculations, or if the CO emissions as calculated above exceed 245 tons per consecutive 12-month period, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

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

- vi. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. The report shall contain the following:

- (A) An exception report listing dates that any 3-hour block average that the gas generator exhaust temperature is outside the range specified in Condition A.6.c.iii. and the actions taken to correct.
- (B) The monthly CO emissions for the previous 17 months. The emissions must be calculated for each of the 12-month periods over the previous 17 months.
- (C) An exception report listing dates that startup and shutdown exceeded 2 hours for any turbine in a day.

7. 15A NCAC 2Q .0317 of 2D .0530: PSD AVOIDANCE – NO_x

- a. To comply with this permit and to avoid applicability of 15A NCAC 2D .0530 "Prevention of Significant Deterioration," as requested by the Permittee, **nitrogen dioxide** emissions from the combustion turbines (ID Nos. ES-1A, ES-1B, ES-2A, ES-2B, ES-3A, ES-3B, ES-4A, ES-4B, ES-5A, ES-5B, ES-6A, ES-6B) shall be **less than 245 tons** total per consecutive 12-month period.

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

The Permittee shall perform initial, periodic, and other quality assurance/quality control NO_x emission testing as per this Appendix E to Part 75. The Permittee shall conform to all details of the emissions testing and reporting requirements in Section 3 - General Condition JJ.

If the results of any tests for NO_x are above the limits given in Section 2.1 A.7.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

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

The Permittee shall monitor NO_x emissions from combustion turbines (ID Nos. ES1-A, ES1-B, ES2-A, ES2-B, ES3-A, ES3-B, ES4-A, ES4-B, ES5-A, ES5-B, ES6-A, ES6-B) as per Appendix E to Part 75.

In addition, nitrogen oxide emissions from turbine startup and shutdown, shall be calculated using the manufacturer's data assuming a loading/unloading rate of 5 MW per minute. Each startup and shutdown shall be recorded daily for each turbine. Total daily nitrogen oxide emissions shall equal startups plus shutdowns plus daily running load.

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

- d. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. The report shall contain the following:
 - (A) An exception report listing dates that any 3-hour block average that the gas generator exhaust temperature is outside the range specified in Condition A.6.c.iii. and the actions taken to correct.
 - (B) The monthly NO_x emissions for the previous 17 months. The emissions must be calculated for each of the 12-month periods over the previous 17 months.

8. 15A NCAC 2D .1100: CONTROL OF TOXIC AIR POLLUTANTS

- a. As required by 15A NCAC 2D .1100 "Control of Toxic Air Pollutants," operation of the combustion turbines shall be limited while burning No. 2 fuel oil as follows:

Fuel Oil Sulfur Content	Maximum Turbine-Hours/Day (total 12 turbines)
0.050 % or less	132
0.045 or less	144
0.040 or less	168
0.030 or less	204
0.025 or less	unlimited

- Monitoring/Recordkeeping**
- b. The Permittee shall on a daily basis measure and record the operational turbine hours while burning No. 2 fuel oil and the fuel oil sulfur content (percent) corresponding to these turbine hours.

- Reporting Requirements**
- c. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this condition must be clearly identified.

SECTION 3 - GENERAL CONDITIONS (version 3.1)

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

- A. **General Provisions** [NCGS 143-215 and 15A NCAC 2Q .0508(i)(16)]
1. Terms not otherwise defined in this permit shall have the meaning assigned to such terms as defined in 15A NCAC 2D and 2Q.
 2. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are binding and enforceable pursuant to NCGS 143-215.114A and 143-215.114B, including assessment of civil and/or criminal penalties. Any unauthorized deviation from the conditions of this permit may constitute grounds for revocation and/or enforcement action by the DAQ.
 3. This permit is not a waiver of or approval of any other Department permits that may be required for other aspects of the facility which are not addressed in this permit.
 4. This permit does not relieve the Permittee from liability for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted facility, or from penalties therefore, nor does it allow the Permittee to cause pollution in contravention of state laws or rules, unless specifically authorized by an order from the North Carolina Environmental Management Commission.
 5. Except as identified as state-only requirements in this permit, all terms and conditions contained herein shall be enforceable by the DAQ, the EPA, and citizens of the United States as defined in the Federal Clean Air Act.
 6. Any stationary source of air pollution shall not be operated, maintained, or modified without the appropriate and valid permits issued by the DAQ, unless the source is exempted by rule. The DAQ may issue a permit only after it receives reasonable assurance that the installation will not cause air pollution in violation of any of the applicable requirements. A permitted installation may only be operated, maintained, constructed, expanded, or modified in a manner that is consistent with the terms of this permit.
- B. **Permit Availability** [15A NCAC 2Q .0507(k) and .0508(i)(9)(B)]
The Permittee shall have available at the facility a copy of this permit and shall retain for the duration of the permit term one complete copy of the application and any information submitted in support of the application package. The permit and application shall be made available to an authorized representative of Department of Environment and Natural Resources upon request.
- C. **Severability Clause** [15A NCAC 2Q .0508(i)(2)]
In the event of an administrative challenge to a final and binding permit in which a condition is held to be invalid, the provisions in this permit are severable so that all requirements contained in the permit, except those held to be invalid, shall remain valid and must be complied with.
- D. **Submissions** [15A NCAC 2Q .0507(e) and 2Q .0508(i)(16)]
Except as otherwise specified herein, two copies of all documents, reports, test data, monitoring data, notifications, request for renewal, and any other information required by this permit shall be submitted to the appropriate Regional Office. Refer to the Regional Office address on the cover page of this permit. For continuous emissions monitoring systems (CEMS) reports, continuous opacity monitoring systems (COMS) reports, quality assurance (QA)/quality control (QC) reports, acid rain CEM certification reports, and NOx budget CEM certification reports, one copy shall be sent to the appropriate Regional Office and one copy shall be sent to:

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

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

E. **Duty to Comply** [15A NCAC 2Q .0508(i)(2)]

The Permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Noncompliance with any permit condition except conditions identified as state-only requirements constitutes a violation of the Federal Clean Air Act. Noncompliance with any permit condition is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

F. **Circumvention** - STATE ENFORCEABLE ONLY

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

G. **Permit Modifications**

1. Administrative Permit Amendments [15A NCAC 2Q .0514]

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

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

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

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

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

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

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

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

The Permittee shall submit an application for reopening for cause in accordance with 15A NCAC 2Q .0517.

H. **Changes Not Requiring Permit Modifications**

1. Reporting Requirements

Any of the following that would result in new or increased emissions from the emission source(s) listed in Section 1 must be reported to the Regional Supervisor, DAQ:

- a. changes in the information submitted in the application;
- b. changes that modify equipment or processes; or
- c. changes in the quantity or quality of materials processed.

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

2. Section 502(b)(10) Changes [15A NCAC 2Q .0523(a)]

a. "Section 502(b)(10) changes" means changes that contravene an express permit term or condition. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.

b. The Permittee may make Section 502(b)(10) changes without having the permit revised if:

- i. the changes are not a modification under Title I of the Federal Clean Air Act;
- ii. the changes do not cause the allowable emissions under the permit to be exceeded;
- iii. the Permittee notifies the Director and EPA with written notification at least seven days before the change is made; and
- iv. the Permittee shall attach the notice to the relevant permit.

- c. The written notification shall include:
 - i. a description of the change;
 - ii. the date on which the change will occur;
 - iii. any change in emissions; and
 - iv. any permit term or condition that is no longer applicable as a result of the change.
 - d. Section 502(b)(10) changes shall be made in the permit the next time that the permit is revised or renewed, whichever comes first.
3. Off Permit Changes [15A NCAC 2Q .0523(b)]

The Permittee may make changes in the operation or emissions without revising the permit if:

 - a. the change affects only insignificant activities and the activities remain insignificant after the change; or
 - b. the change is not covered under any applicable requirement.
 4. Emissions Trading [15A NCAC 2Q .0523(c)]

To the extent that emissions trading is allowed under 15A NCAC 2D, including subsequently adopted maximum achievable control technology standards, emissions trading shall be allowed without permit revision pursuant to 15A NCAC 2Q .0523(c).

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

[15A NCAC 2D .0535(f) and 2Q .0508(f)(2)]

“Excess Emissions” - means an emission rate that exceeds any applicable emission limitation or standard allowed by any rule in Sections .0500, .0900, .1200, or .1400 of Subchapter 2D; or by a permit condition; or that exceeds an emission limit established in a permit issued under 15A NCAC 2Q .0700. (*Note: Definitions of excess emissions under 2D .1110 and 2D .1111 shall apply where defined by rule.*)

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

Excess Emissions

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

Permit Deviations

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

I.B. Other Requirements under 15A NCAC 2D .0535

The Permittee shall comply with all other applicable requirements contained in 15A NCAC 2D .0535, including 15A NCAC 2D .0535(c) as follows:

1. Any excess emissions that do not occur during start-up and shut-down shall be considered a violation of the appropriate rule unless the owner or operator of the sources demonstrates to the Director, that the excess emissions are a result of a malfunction. The Director shall consider, along with any other pertinent information, the criteria contained in 15A NCAC 2D .0535(c)(1) through (7).
2. 15A NCAC 2D .0535(g). Excess emissions during start-up and shut-down shall be considered a violation of the appropriate rule if the owner or operator cannot demonstrate that excess emissions are unavoidable.

J. Emergency Provisions [40 CFR 70.6(g)]

The Permittee shall be subject to the following provisions with respect to emergencies:

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

K. Permit Renewal [15A NCAC 2Q .0508(e) and 2Q .0513(b)]

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

L. Need to Halt or Reduce Activity Not a Defense [15A NCAC 2Q .0508(i)(4)]

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

M. Duty to Provide Information (submittal of information) [15A NCAC 2Q .0508(i)(9)]

1. The Permittee shall furnish to the DAQ, in a timely manner, any reasonable information that the Director may request in **writing** to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit.
2. The Permittee shall furnish the DAQ copies of records required to be kept by the permit when such copies are requested by the Director. For information claimed to be confidential, the Permittee may furnish such records directly to the EPA upon request along with a claim of confidentiality.

N. **Duty to Supplement** [15A NCAC 2Q .0507(f)]

The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the DAQ. The Permittee shall also provide additional information as necessary to address any requirement that becomes applicable to the facility after the date a complete permit application was submitted but prior to the release of the draft permit.

O. **Retention of Records** [15A NCAC 2Q .0508(f) and 2Q .0508 (l)]

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

P. **Compliance Certification** [15A NCAC 2Q .0508(n)]

The Permittee shall submit to the DAQ and the EPA (Air and EPCRA Enforcement Branch, EPA, Region 4, 61 Forsyth Street, Atlanta, GA 30303) postmarked on or before March 1 a compliance certification (for the preceding calendar year) by a responsible official with all federally-enforceable terms and conditions in the permit, including emissions limitations, standards, or work practices. It shall be the responsibility of the current owner to submit a compliance certification for the entire year regardless of who owned the facility during the year. The compliance certification shall comply with additional requirements as may be specified under Sections 114(a)(3) or 504(b) of the Federal Clean Air Act. The compliance certification shall specify:

1. the identification of each term or condition of the permit that is the basis of the certification;
2. the compliance status (with the terms and conditions of the permit for the period covered by the certification);
3. whether compliance was continuous or intermittent; and
4. the method(s) used for determining the compliance status of the source during the certification period.

Q. **Certification by Responsible Official** [15A NCAC 2Q .0520]

A responsible official shall certify the truth, accuracy, and completeness of any application form, report, or compliance certification required by this permit. All certifications shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

R. **Permit Shield for Applicable Requirements** [15A NCAC 2Q .0512]

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

S. **Termination, Modification, and Revocation of the Permit** [15A NCAC 2Q .0519]

The Director may terminate, modify, or revoke and reissue this permit if:

1. the information contained in the application or presented in support thereof is determined to be incorrect;
2. the conditions under which the permit or permit renewal was granted have changed;
3. violations of conditions contained in the permit have occurred;
4. the EPA requests that the permit be revoked under 40 CFR 70.7(g) or 70.8(d); or
5. the Director finds that termination, modification, or revocation and reissuance of the permit is necessary to carry out the purpose of NCGS Chapter 143, Article 21B.

T. **Insignificant Activities** [15A NCAC 2Q .0503]

Because an emission source or activity is insignificant does not mean that the emission source or activity is exempted from any applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement. The Permittee shall have available at the facility at all times and made available to an authorized representative upon request, documentation, including calculations, if necessary, to demonstrate that an emission source or activity is insignificant.

U. **Property Rights** [15A NCAC 2Q .0508(i)(8)]

This permit does not convey any property rights in either real or personal property or any exclusive privileges.

V. **Inspection and Entry** [15A NCAC 2Q .0508(l) and NCGS 143-215.3(a)(2)]

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

Nothing in this condition shall limit the ability of the EPA to inspect or enter the premises of the Permittee under Section 114 or other provisions of the Federal Clean Air Act.

2. No person shall refuse entry or access to any authorized representative of the DAQ who requests entry for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or interfere with any such authorized representative while in the process of carrying out his official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

W. **Annual Fee Payment** [15A NCAC 2Q .0508(i)(10)]

1. The Permittee shall pay all fees in accordance with 15A NCAC 2Q .0200.
2. Payment of fees may be by check or money order made payable to the N.C. Department of Environment and Natural Resources. Annual permit fee payments shall refer to the permit number.
3. If, within 30 days after being billed, the Permittee fails to pay an annual fee, the Director may initiate action to terminate the permit under 15A NCAC 2Q .0519.

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

The Permittee shall report by **June 30 of each year** the actual emissions of each air pollutant listed in 15A NCAC 2Q .0207(a) from each emission source within the facility during the previous calendar year. The report shall be in or on such form as may be established by the Director. The accuracy of the report shall be certified by a responsible official of the facility.

Y. **Confidential Information** [15A NCAC 2Q .0107 and 2Q. 0508(i)(9)]

Whenever the Permittee submits information under a claim of confidentiality pursuant to 15A NCAC 2Q .0107, the Permittee may also submit a copy of all such information and claim directly to the EPA upon request. All requests for confidentiality must be in accordance with 15A NCAC 2Q .0107.

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

A construction and operating permit shall be obtained by the Permittee for any proposed new or modified facility or emission source which is not exempted from having a permit prior to the beginning of construction or modification, in accordance with all applicable provisions of 15A NCAC 2Q .0100 and .0300.

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

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

BB. **Financial Responsibility and Compliance History** [15A NCAC 2Q .0507(d)(4)]

The DAQ may require an applicant to submit a statement of financial qualifications and/or a statement of substantial compliance history.

CC. **Refrigerant Requirements (Stratospheric Ozone and Climate Protection)** [15A NCAC 2Q .0501(e)]

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

DD. **Prevention of Accidental Releases - Section 112(r)** [15A NCAC 2Q .0508(h)]

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

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

FEDERALLY-ENFORCEABLE ONLY

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

FF. **Title IV Allowances** [15A NCAC 2Q .0508(i)(1)]

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

GG. **Air Pollution Emergency Episode** [15A NCAC 2D .0300]

Should the Director of the DAQ declare an Air Pollution Emergency Episode, the Permittee will be required to operate in accordance with the Permittee's previously approved Emission Reduction Plan or, in the absence of an approved plan, with the appropriate requirements specified in 15A NCAC 2D .0300.

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

The Director of the DAQ may require the Permittee to register a source of air pollution. If the Permittee is required to register a source of air pollution, this registration and required information will be in accordance with 15A NCAC 2D .0202(b).

II. **Ambient Air Quality Standards** [15A NCAC 2D .0501(c)]

In addition to any control or manner of operation necessary to meet emission standards specified in this permit, any source of air pollution shall be operated with such control or in such manner that the source shall not cause the ambient air quality standards in 15A NCAC 2D .0400 to be exceeded at any point beyond the premises on which the source is located. When controls more stringent than named in the applicable emission standards in this permit are required to prevent violation of the ambient air quality standards or are required to create an offset, the permit shall contain a condition requiring these controls.

JJ. **General Emissions Testing and Reporting Requirements** [15A NCAC 2Q .0508(i)(16)]

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

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

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

1. A permit shall be reopened and revised under the following circumstances:
 - a. additional applicable requirements become applicable to a facility with remaining permit term of three or more years;
 - b. additional requirements (including excess emission requirements) become applicable to a source covered by Title IV;
 - c. the Director or EPA finds that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or
 - d. the Director or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
2. Any permit reopening shall be completed or a revised permit issued within 18 months after the applicable requirement is promulgated. No reopening is required if the effective date of the requirement is after the expiration of the permit term unless the term of the permit was extended pursuant to 15A NCAC 2Q .0513(c).

3. Except for the state-enforceable only portion of the permit, the procedures set out in 15A NCAC 2Q .0507, .0521, or .0522 shall be followed to reissue the permit. If the State-enforceable only portion of the permit is reopened, the procedures in 15A NCAC 2Q .0300 shall be followed. The proceedings shall affect only those parts of the permit for which cause to reopen exists.
4. The Director shall notify the Permittee at least 60 days in advance of the date that the permit is to be reopened, except in cases of imminent threat to public health or safety the notification period may be less than 60 days.
5. Within 90 days, or 180 days if the EPA extends the response period, after receiving notification from the EPA that a permit needs to be terminated, modified, or revoked and reissued, the Director shall send to the EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate.

LL. **Reporting Requirements for Non-Operating Equipment** [15A NCAC 2Q .0508(i)(16)]

The Permittee shall maintain a record of operation for permitted equipment noting whenever the equipment is taken from and placed into operation. During operation the monitoring recordkeeping and reporting requirements as prescribed by the permit shall be implemented within the monitoring period.

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

As required by 15A NCAC 2D .0540 "Particulates from Fugitive Dust Emission Sources," the Permittee shall not cause or allow fugitive dust emissions to cause or contribute to substantive complaints or excess visible emissions beyond the property boundary. If substantive complaints or excessive fugitive dust emissions from the facility are observed beyond the property boundaries for six minutes in any one hour (using Reference Method 22 in 40 CFR, Appendix A), the owner or operator may be required to submit a fugitive dust plan as described in 2D .0540(f). "Fugitive dust emissions" means particulate matter from process operations that does not pass through a process stack or vent and that is generated within plant property boundaries from activities such as: unloading and loading areas, process areas stockpiles, stock pile working, plant parking lots, and plant roads (including access roads and haul roads).

NN. **Specific Permit Modifications** [15A NCAC 2Q.0501 and .0523]

1. For modifications made pursuant to 15A NCAC 2Q .0501(c)(2), the Permittee shall file a Title V Air Quality Permit Application for the air emission source(s) and associated air pollution control device(s) on or before 12 months after commencing operation.
2. For modifications made pursuant to 15A NCAC 2Q .0501(d)(2), the Permittee shall not begin operation of the air emission source(s) and associated air pollution control device(s) until a Title V Air Quality Permit Application is filed and a construction and operation permit following the procedures of Section .0500 (except for Rule .0504 of this Section) is obtained.
3. For modifications made pursuant to 502(b)(10), in accordance with 15A NCAC 2Q .0523(a)(1)(C), the Permittee shall notify the Director and EPA (EPA - Air Planning Branch, 61 Forsyth St., Atlanta, GA 30303) in writing at least seven days before the change is made. The written notification shall include:
 - a. a description of the change at the facility;
 - b. the date on which the change will occur;
 - c. any change in emissions; and
 - d. any permit term or condition that is no longer applicable as a result of the change.

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

OO. **Mandatory Greenhouse Gas Reporting Requirements** [15A NCAC 2Q .0508]
FEDERAL-ENFORCEABLE ONLY

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

ATTACHMENT

List of Acronyms

AOS	Alternate Operating Scenario
BACT	Best Available Control Technology
Btu	British thermal unit
CAA	Clean Air Act
CAIR	Clean Air Interstate Rule
CEM	Continuous Emission Monitor
CFR	Code of Federal Regulations
CAA	Clean Air Act
DAQ	Division of Air Quality
DENR	Department of Environment and Natural Resources
EMC	Environmental Management Commission
EPA	Environmental Protection Agency
FR	Federal Register
GACT	Generally Available Control Technology
HAP	Hazardous Air Pollutant
MACT	Maximum Achievable Control Technology
NAA	Non-Attainment Area
NCAC	North Carolina Administrative Code
NCGS	North Carolina General Statutes
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NO_x	Nitrogen Oxides
NSPS	New Source Performance Standard
OAH	Office of Administrative Hearings
PM	Particulate Matter
PM₁₀	Particulate Matter with Nominal Aerodynamic Diameter of 10 Micrometers or Less
POS	Primary Operating Scenario
PSD	Prevention of Significant Deterioration
RACT	Reasonably Available Control Technology
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO₂	Sulfur Dioxide
tpy	Tons Per Year
VOC	Volatile Organic Compound