



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

Michael F. Easley, Governor

William G. Ross, Jr., Secretary
B. Keith Overcash, P.E., Director

January 31, 2007

Mr. Stephen Townsend
General Manager Simple Cycle Fleet
Duke Energy Carolinas, LLC, LCTS
6769 Old Plank Road
Stanley, NC 28164

Dear Mr. Townsend:

SUBJECT: Air Quality Permit No. 07171T07
Facility ID: 3/55/00082
Duke Energy Carolinas, LLC
Lincoln Combustion Turbine Station
Stanley, North Carolina
Lincoln County
Fee Class: Title V

In accordance with your completed Air Quality Permit Application for a Minor Modification received on April 27, 2006, we are forwarding herewith Air Quality Permit No. 07171T07 to Duke Energy Carolinas, LLC, Lincoln Combustion Turbine, Stanley, Lincoln County, North Carolina 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 of Part I. **The current owner is responsible for submitting a compliance certification for the entire year regardless of who owned the facility during the year.**

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

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

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

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North Carolina
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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. Unless a request for a hearing is made pursuant to NCGS 150B-23, this Air Quality Permit shall be final and binding.

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.

In addition, specific changes and additions as summarized in the attachment below have been made to the permit (note: this list may not include all changes and additions).

This Air Quality Permit shall be effective from January 31, 2007 until July 31, 2007, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein. The Phase II Acid Rain permit requirements shall be effective from January 1, 1998 until December 31, 2002.

Should you have any questions concerning this matter, please contact Betty Gatano, P.E., at (919) 733-1478.

Sincerely,

Donald R. van der Vaart, PhD., P.E.
Chief

Enclosure

c: Gregg Worley, EPA Region 4
William Horton, Duke Energy Carolinas, LLC
Michael Landis, Supervisor, Mooresville Regional Office
Central Files

ATTACHMENT to cover letter to Air Quality Permit Number 07171T07

Table of Changes

Pages	Section	Description of Changes
--	Insignificant Activities	Added emission sources I-25, I-29, I-31, I-32, and I-Refueling to the list of insignificant activities for this facility. Modified insignificant source I-11 to indicate storage of gasoline not diesel.
3	Equipment List	Removed the NSPS requirements for storage tank ES-16 and ES-17. The NSPS revisions of 2003 exempted tanks greater than 151 m3 storing liquid with vapor pressure less than 3.5 kPa.
4	2.1.A	Clarified requirements for visible emissions. The EPA has approved the revised SIP 2D .0521 visible emissions rule, and the Federal-only and State-only opacity requirements are now consolidated. Added information to regulation table that indicated turbines are subject to 40 CFR 63 Suppart YYYY but they have no applicable requirements per 40 CFR 63.6090 (b)(4)
4	2.1.A.1.a	Updated visible emission condition to correspond with current permitting language.
4-5	2.1.A.1.c	Modified permit condition to require that the hours operated while burning No. 2 fuel oil under the alternative operating scenario shall count toward the 1100 hours requirement.
5	2.1.A.2 (former numbering)	Removed condition 2.1.A.2, "40 CFR 52 Subpart II: North Carolina Implementation Plan." The EPA has approved the revised SIP 2D .0521 visible emissions rule, and the Federal-only and State-only opacity requirements are being consolidated.
10-11	2.1.A.5.a	Modified emission allocation table to specify the current nitrogen oxide budget for North Carolina
11	2.1.A.5.c and d	Modified monitoring, recordkeeping, and reporting sections to reflect current permitting language.
11	2.1.A.6	Added permit condition for alternative operating scenario
12	2.1.B.1 (former numbering).	Removed the NSPS requirements for storage tank ES-16 and ES-17. The NSPS revisions of 2003 exempted tanks greater than 151 m3 storing liquid with vapor pressure less than 3.5 kPa.
14-21	3 General Conditions.	Updated the entire General Condition Section to reflect the current permit language.

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

Emission Source I.D.	Emission Source Description	Insignificant Activity Regulation
I-1.	Welding shop	2Q .0503(8)
I-2.	Contained bead blast room	2Q .0503(8)
I-3.	Two portable gasoline fired welders, 22HP and 18 HP	2Q .0503(8)
I-4.	One portable gasoline-fired pump, 5 HP	2Q .0503(8)
I-5.	One portable gasoline-fired ditch witch trencher - non riding type - 14 HP	2Q .0503(8)
I-6.	150 gallon sodium hydroxide storage tank	2Q .0503(8)
I-7.	150 gallon sulfuric acid storage tank	2Q .0503(8)
I-8.	250 gallon sulfuric acid storage/measuring tank	2Q .0503(8)
I-9.	400 gallon sodium hydroxide storage/measuring tank	2Q .0503(8)
I-10.	500 gallon diesel fuel storage tank and associated dispensing area	2Q .0503(8)
I-11.	500 gallon gasoline fuel storage tank and associated dispensing area	2Q .0503(8)
I-12.	560 gallon fuel oil storage/day tank	2Q .0503(8)
I-13.	1,000 gallon used oil storage tank	2Q .0503(8)
I-14.	Sixteen 3,300 gallon turbine lubricating oil storage tanks for units 1 through 16	2Q .0503(8)
I-15.	4,000 gallon sulfuric acid bulk storage tank	2Q .0503(8)
I-16.	4,500 gallon sodium hydroxide bulk storage tank	2Q .0503(8)
I-17.	9,000 gallon turbine lubricating oil storage tank/holdup tank used for maintenance purposes only, normally empty	2Q .0503(8)
I-18.	370 HP fire protection system diesel engine	2Q .0503(8)
I-19.	Main transformers containing oil with 130,800 gallon total capacity	2Q .0503(8)
I-20.	CCV transformers containing oil with 400 gallon total capacity	2Q .0503(8)
I-21.	Two portable pressure washers, gasoline-fired, 16 HP and 14 HP	2Q .0503(8)
I-22.	Miscellaneous gas cylinders containing: acetylene, argon, chlorine, oxygen or sulfur dioxide for wastewater treatment dechlorination	2Q .0503(8)
I-23.	Miscellaneous CFC and HCFC refrigerant cylinders	2Q .0503(8)
I-24.	Miscellaneous non-CFC and non-HCFC refrigerant cylinders	2Q .0503(8)
I-25.	One portable diesel fired air compressor - 60HP	2Q .0503(8)
I-29.	One portable gas-fired cut off saw - 0.25 HP	2Q .0503(8)
I-31.	One portable gas-fired air compressor - 5.5HP	2Q .0503(8)
I-32.	One portable gas fired water craft motor - 8 HP	2Q .0503(8)
I –refueling	Gasoline Refueling Operations	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.(s)	Effective Date *	Expiration Date *
07171T07	07171T06	January 31, 2007	July 31, 2007

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: **Duke Energy Corporation Lincoln
Combustion Turbine**

Facility ID: **5500082**
Facility Site Location: **6769 Old Plank Road**
City, County, State, Zip: **Stanley, Lincoln County, NC 28164**

Mailing Address: **6769 Old Plank Road**
City, State, Zip: **Stanley, Lincoln County, NC 28164**

Application Number: **5500082.06A**
Complete Application Date: **April 28, 2006**
Primary SIC Code: **4911**
Division of Air Quality,
Regional Office Address: **Mooreville Regional Office**
919 North Main Street
Mooreville, NC 28115

Permit issued this the 31st day of January, 2007.

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

Table Of Contents

PART I

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

SECTION 2: SPECIFIC LIMITATIONS AND CONDITIONS

- 2.1- Emission Source(s) Specific Limitations and Conditions
(Including specific requirements, monitoring/testing, recordkeeping, and reporting requirements)
- 2.2- Phase II Acid Rain Permit Requirements

SECTION 3: GENERAL PERMIT CONDITIONS

PART II

This permit does not include a Part II.

ATTACHMENTS

- List of Acronyms
- Phase II Permit Application dated December 1, 1995

PART I

The Division of Air Quality (DAQ), the United States Environmental Protection Agency (EPA), and citizens as defined under the federal Clean Air Act have the authority to enforce the terms, conditions, and limitations contained in Part I of this permit unless otherwise specified. However, state-enforceable-only requirements are enforceable only by DAQ, and neither EPA nor citizens have authority to enforce state-enforceable-only requirements.

Under Title 15A NCAC 2Q, the operation of emission source(s) and associated air pollution control device(s) listed in Part I of this permit is based on plans, specifications, operating parameters, and other information as submitted in the air permit application.

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

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

Emission Source I.D. No.	Emission Source Description	Control Device I.D. No.	Control Device Description
ES-1 through ES-16 PSD NSPS Subpart GG MACT YYYY	sixteen natural gas/No. 2 fuel oil-fired simple-cycle internal combustion turbines (1,313 million Btu per hour heat input rate when firing natural gas, 1,247 million Btu per hour heat input rate when firing No. 2 fuel oil), each equipped with dual fuel multi-nozzle combustion burners with water injection capability for NO _x control and combustion air inlet humidification (cooling) system	N/A	No Controls
ES-17 and ES-18 PSD	two No. 2 fuel oil, fixed-roof storage tanks (5.5 million gallons capacity each) with atmospheric vents	N/A	No Controls

SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS

2.1- Emission Source(s) Specific Limitations and Conditions

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

A. Sixteen natural gas/No. 2 fuel oil-fired simple-cycle internal combustion turbines (1,313 million Btu per hour heat input rate when firing natural gas, 1,247 million Btu per hour heat input rate when firing No. 2 fuel oil), each equipped with dual fuel multi-nozzle combustion burners with water injection capability for NO_x control and combustion air inlet humidification (cooling) system

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 as defined in specific conditions	15A NCAC 2D .0524 (40 CFR Part 60 Subpart GG) 15A NCAC 2D .1417
various	as defined in specific conditions	15A NCAC 2D .0530
Hazardous Air Pollutants	No applicable requirements, including initial notification, per 40 CFR 63.6090 (b)(4),	15A NCAC 2D .1111 (40 CFR 63, Subpart YYYY)

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

- a. Visible emissions from these sources shall not be more than **20 percent opacity** when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

Testing [15A NCAC 2D .0501(c)(8)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(8) and General Condition JJ.

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

- c. To assure compliance, the Permittee shall perform a Method 9 test for 1 hour using a preapproved protocol to be submitted in accordance with 15A NCAC 2D .0501(c)(8) and General Condition JJ before the source operates more than 1100 hours using No. 2 fuel oil. This monitoring protocol shall be repeated before each subsequent 1100 hours of operation using No. 2 fuel oil from the last test. The hours operated while burning No. 2 fuel oil under the alternative operating scenario as specified in Section 2.1.A.6 below shall count toward the 1100 hours requirement. The hours of operation using natural gas do not count toward the 1100 hours requirement. No

opacity monitoring is required while the source is burning natural gas.

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

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

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

- e. The Permittee shall submit the results of the Method 9 test as a part of the quarterly report described in Section 2.1 A. 3. 1. below. 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. ES-1 through ES-16)	nitrogen oxides	$STD = 0.0075 \times [(14.4) / Y] + F$ <p>STD = allowable nitrogen oxides emissions in percent by volume at 15 percent O₂ on a dry basis.</p> <p>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.</p> <p>F = NO_x emission allowance for fuel bound nitrogen as defined in 40CFR60.332(a)(3).</p>
	sulfur dioxide	0.015 percent by volume – allowable sulfur dioxide emissions at 15 percent O ₂ on a dry basis. OR 0.8 percent weight sulfur in fuel

Testing [15A NCAC 2D .0501]

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

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

- d. In addition to any other monitoring requirements of the EPA, the Permittee is required to maintain records as follows:

- i. The nitrogen 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 nitrogen oxides standard as specified in 40 CFR 60.332, using the test methods and procedures in 40 CFR 60.335, except as follows:

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 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 or any other DAQ approved method.

Monitoring of fuel nitrogen shall not be required while pipeline natural gas is the only fuel being fired in the combustion turbines.

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.

- ii. 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:

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 or any other DAQ approved method.

When firing natural gas, the procedures from 40 CFR Part 75, Appendix D or any other DAQ approved method 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.

- iii. 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 device shall be installed, operated, calibrated, and maintained to monitor and record fuel consumption and the ratio of water-to-fuel being fired. This system shall be accurate to within ± 5.0 percent and must be approved by the DAQ prior to installation. The Permittee shall comply with the requirements of 40 CFR Part 60, Appendix B, Performance Specifications and Appendix F, Quality Assurance Procedures for continuous monitoring systems, installed on the turbines (ID Nos. ES-1 through ES-16).

If the fuel consumption or the ratio of water-to-fuel being fired is not monitored and recorded continuously, for each combustion turbine, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

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

- e. In addition to any other reporting requirements to the EPA, the Permittee is required to REPORT the Regional Supervisor, DAQ, in WRITING, of the following:

- i. The reporting requirement for excess emissions for nitrogen oxides, as included in Section 2.1 A. 3. 1. iv., shall be sufficient for the purpose of reports required under 40 CFR 60.7(c).
- ii. The reporting requirement for excess emissions for sulfur dioxide, as included in Section 2.1 A. 3. 1. v., shall be sufficient for the purpose of reports required under 40 CFR 60.7(c).

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 turbine, equipped with duel fuel multi-nozzle combustion burners and water injection for NOx emission control, when firing No. 2 fuel oil, shall not exceed:

POLLUTANT	BACT EMISSION LIMITS			
	lb/hr	lb/mmBtu	other	BACT CONTROLS
opacity	---	---	20 %	combustion control
sulfur dioxide	240.70	0.193	---	0.2%w sulfur fuel oil
particulate/PM-10	34.00	0.027	---	combustion control
nitrogen dioxide	287.00	0.23	58 ppm	multi-nozzle combustor and maximum water injection
carbon monoxide	60.00	0.048	---	combustion control
volatile organic compounds	5.00	0.004	---	combustion control
arsenic	0.065	0.000052	---	combustion control
beryllium	0.003	0.0000024	---	combustion control
fluorides	1.47	0.0012	---	combustion control
sulfuric acid	25.10	0.02	---	0.2 %w sulfur fuel oil
lead	0.075	0.00006	---	combustion control

- ii. Short term maximum emission rates for each turbine, equipped with duel fuel multi-nozzle combustion burners and water injection for NOx emission control, when firing natural gas, shall not exceed:

POLLUTANT	BACT EMISSION LIMITS			
	lb/hr	lb/mmBtu	other	BACT CONTROLS
opacity	---	---	20 %	combustion control
sulfur dioxide	0.70	0.0005	---	combustion control
particulate/PM-10	5.00	0.004	---	combustion control
nitrogen dioxide	119.00	0.095	25 ppm	multi-nozzle combustor and maximum water injection
carbon monoxide	59.00	0.05	---	combustion control
volatile organic compounds	2.00	0.002	---	combustion control
Benzene	0.44	5.10 X 10 ⁻⁸	---	combustion control

- iii. Long term total maximum emission rates from all turbines when firing either No. 2 fuel oil or natural gas shall not exceed:

POLLUTANT	BACT EMISSION LIMIT (tons/year)
sulfur dioxide	1,212.00
particulate/PM-10	544.00
nitrogen dioxide	3,600.00
carbon monoxide	848.00
volatile organic compounds	72.00
Arsenic	0.066
Beryllium	0.04
Fluorides	18.60
sulfuric acid	128.00
Lead	0.94
Benzene	7.04

Testing [15A NCAC 2D .0501]

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

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

- c. The maximum annual hours of operation for each combustion turbine shall not exceed 2,500 hours per calendar year.
- d. Total combined hours of operation for all turbines shall not exceed a maximum of 32,000 hours per calendar year.
- e. The Permittee shall maintain records of the actual hours of operation for each combustion turbine. If the actual hours of operation for each combustion turbine are not maintained, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.
- f. The maximum sulfur content of the No. 2 fuel oil, used in each combustion turbine, shall not exceed 0.2 percent sulfur by weight.
- i. The Permittee shall determine the No. 2 fuel oil sulfur content in accordance with 40 CFR 60.334 at least quarterly or in accordance with written approval of any U.S. EPA approved custom fuel monitoring schedule, and
 - ii. The Permittee shall take representative No. 2 fuel oil samples from the fuel oil storage tank designated to supply fuel to the turbines, prior to combustion of the fuel.

If the sulfur content of the No. 2 fuel oil not monitored or the results of the monitored No. 2 fuel oil is above the limit included in Section 2.1 A. 3. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

- g. The maximum fuel bound nitrogen (FBN) content of the No. 2 fuel oil, used in each combustion turbine, shall be less than 0.1 percent by weight (0.04 percent by volume),
- i. The Permittee shall determine the No. 2 fuel oil nitrogen content in accordance with NSPS requirements contained in 40 CFR 60.334 at least quarterly or in accordance with written approval of any U.S. EPA approved custom fuel monitoring schedule, and
 - ii. The Permittee shall take representative No. 2 fuel oil samples from the fuel oil storage tank designated to supply fuel to the turbines, prior to combustion of the fuel.

If the nitrogen content of the No. 2 fuel oil not monitored or the results of the monitored No. 2 fuel oil is above

the limit included in Section 2.1 A. 3. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

- h. The maximum No. 2 fuel oil heat input shall not exceed 1,247 million Btu per hour for each combustion turbine.
- i. The maximum natural gas heat input shall not exceed a maximum of 1,313 million Btu per hour for each combustion turbine.
- j. The combined emissions for all 16 combustion turbines shall not exceed a maximum sulfur dioxide emissions rate of 1,540 pounds per hour. To ensure this emission rate is not exceeded, the Permittee is limited to the following operational conditions and stipulations:
 - i. No. 2 fuel oil shall be supplied to the combustion turbines from only one of the two No. 2 fuel oil storage tanks at any one time,
 - ii. Once a tank begins supplying No. 2 fuel oil to the combustion turbines, no additional fuel shall be added to that particular storage tank,
 - iii. The sulfur content of the fuels shall be determined using American Society for Testing & Materials (ASTM) methods as follows:
 - A. ASTM method D 2880-71, D 1552-90, or another method upon receipt of U.S. EPA written approval, shall be used to determine the sulfur content of the No. 2 fuel oil in each storage tank prior to combustion of the fuel in the combustion turbines, and
 - B. ASTM D 1072-80, D 3031-81, D 4084-82, D 3246-81, ITT Barton M286, or another method upon receipt of U.S. EPA written approval shall be used to determine the sulfur content of the natural gas.
 - iv. The maximum averaged facility-wide sulfur dioxide emissions rate for any 60-minute period beginning on the hour shall be based on:
 - A. The actual recorded natural gas and No. 2 fuel oil consumption as determined by requirements of 40 CFR 60.334(a),
 - B. The sulfur content of the natural gas and No. 2 fuel oil as determined by requirements of 40 CFR 60.335(d),
 - C. No less than six computer-generated emission calculations per hour, and
 - D. The combined sulfur dioxide emissions rate for the natural gas and No. 2 fuel oil.
 - v. The Permittee shall determine and record the facility-wide sulfur dioxide emissions rate any time that five or more combustion turbines are being fired simultaneously.
If the records of the facility-wide sulfur dioxide emissions rate are not maintained, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

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

- k. Whenever five or more combustion turbines are in operation, the Permittee shall record and report to the Regional Supervisor the number of combustion turbines operated each hour and the pounds of sulfur dioxide emitted during each hour.
- l. 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. The sulfur and nitrogen content in percent by weight of the No. 2 fuel oil.
 - ii. The maximum number of hours of operation of each combustion turbine for the previous 12 months period, and
 - iii. The total combined hours of operation for all turbines for the previous 12 months period.
 - iv. The periods of excess emissions for nitrogen oxides 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. The excess emission report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, gas turbine load, nitrogen content of fuel during the period of excess emissions, and the graphs and figures developed during the initial performance test.
 - v. The periods of excess emissions for sulfur dioxide for any daily period during which the sulfur content of the fuel being fired exceeds 0.8 percent by weight.

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

- a. To comply with this permit and avoid the applicability of 15A NCAC 2D .0530 "Prevention of Significant Deterioration," as requested by the Permittee, nitrogen oxides (NOx) emissions from combustion turbines, while using combustion air inlet cooling humidification systems, shall be less than 384.2 tons from the first of May to the end of September of each year.

Testing [15A NCAC 2D .0501]

- 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 A.4. a. above, the Permittee shall be deemed in noncompliance with the limitation to avoid 15A NCAC 2D .0530.

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

- c. Combustion air inlet cooling humidification systems may only be used from the first of May to the end of September of each year (i.e., the restricted period).
- d. The Permittee shall maintain records of NOx emissions from combustion turbines while using combustion air inlet humidification systems for each month during the restricted period. These records shall be derived from the Acid Rain monitoring data required by the Acid Rain Permit. The Permittee shall keep these records on file (electronic format acceptable) and make them available to DAQ personnel upon request. If the records of the NOx emissions are not maintained, the Permittee shall be deemed in noncompliance with the limitation to avoid 15A NCAC 2D .0530.

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

- e. Within 30 days after September 30 of each calendar year, the following shall be reported to the Regional Supervisor, DAQ:
 - i. The monthly nitrogen oxides emissions from combustion turbines during combustion air humidification system use for each month of the restricted period,
 - ii. The cumulative total of nitrogen oxides emissions from combustion turbines during combustion air humidification system use for each of the five months during the restricted period.

5. 15A NCAC 2D .1417: EMISSION ALLOCATIONS FOR LARGE COMBUSTION SOURCES

- a. Individual sources at these facilities named in the table below shall not exceed during the ozone season the nitrogen oxide emission allocations in the table. [15A NCAC 2D .1417(b)(2)(A)]:

SOURCE	NO _x EMISSION ALLOCATIONS (TONS/SEASON) 2006 AND LATER
Simple-cycle Combustion Turbine (ID No. ES-1)	26
Simple-cycle Combustion Turbine (ID No. ES-2)	26
Simple-cycle Combustion Turbine (ID No. ES-3)	26
Simple-cycle Combustion Turbine (ID No. ES-4)	26
Simple-cycle Combustion Turbine (ID No. ES-5)	26
Simple-cycle Combustion Turbine (ID No. ES-6)	26
Simple-cycle Combustion Turbine (ID No. ES-7)	26
Simple-cycle Combustion Turbine (ID No. ES-8)	26

SOURCE	NO _x EMISSION ALLOCATIONS (TONS/SEASON) 2006 AND LATER
Simple-cycle Combustion Turbine (ID No. ES-9)	26
Simple-cycle Combustion Turbine (ID No. ES-10)	26
Simple-cycle Combustion Turbine (ID No. ES-11)	26
Simple-cycle Combustion Turbine (ID No. ES-12)	26
Simple-cycle Combustion Turbine (ID No. ES-13)	26
Simple-cycle Combustion Turbine (ID No. ES-14)	26
Simple-cycle Combustion Turbine (ID No. ES-15)	26
Simple-cycle Combustion Turbine (ID No. ES-16)	27

- b. Sources (ID Nos. ES-1 through ES-16) shall comply with the requirements of 15A NCAC 2D .1417 using the nitrogen oxide budget trading program set out in 15A NCAC 2D .1419.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f), 15A NCAC 2D .1417(e), and 15A NCAC 2D .1404(d) and (h)]

- c. The Permittee shall assure compliance with 15A NCAC 2D .1417 by determining nitrogen oxide emissions in tons per ozone season using a continuous emissions monitoring (CEM) system that meets the requirements of 40 CFR Part 75 Subpart H, with such exceptions as allowed under 40 CFR Part 75, Subpart H or 40 CFR 96. The Permittee shall comply with the recordkeeping requirements of 40 CFR 96, Budget Trading Program for State Implementation Plans. All instances of deviations from the requirements of this permit must be clearly identified. If nitrogen oxide emissions for any ozone season exceed the allowances held in the Compliance Account as of November 30 of each year or the recordkeeping requirements are not complied with, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1417.

Reporting [15A NCAC 2Q .0508(f), and 15A NCAC 2D .1404(g) and (h)]

- d. The Permittee shall comply with the reporting requirements of 40 CFR 96, Budget Trading Program for State Implementation Plans. The Permittee shall report no later than October 30 the tons of nitrogen oxides emitted during the previous ozone season. One copy of this report shall be sent to the appropriate Regional Office and one copy shall be sent to the Stationary Source Compliance Supervisor at the address shown in General Condition D. All instances of deviations from the requirements of this permit must be clearly identified.

6 ALTERNATIVE OPERATING SCENARIO

- a. Under the alternative operating scenario (AOS), the Permittee shall be allowed to operate the following units at low load operation (1-27 MW) without the use of water injection control for intermittent periods of time over a 24-hour period.
- i. Up to four (4) combustion turbine units if fired on natural gas, OR
 - ii. Up to four (4) combustion turbine units if fired on No. 2 fuel oil with a sulfur content $\leq 0.05\%$ (by weight) verified by an analysis using ASTM methods, OR
 - iii. One combustion turbine unit (except ES-1, ES-2, ES-9 and ES-10) if fired with sulfur content $\leq 0.2\%$ (by weight) verified by an analysis using ASTM methods.

The AOS is necessitated in support of the Duke Power System Blackout Recovery Plan and shall be allowed only in the event of a catastrophic loss of all or a major part of the transmission grid, i.e., system blackout.

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

- b. The sulfur content of the fuels shall be determined using American Society for Testing & Materials (ASTM) methods as follows:
 - i. ASTM method D 2880-71, D 1552-90, or another method upon receipt of U.S. EPA written approval, shall be used to determine the sulfur content of the No. 2 fuel oil in each storage tank prior to combustion of the fuel in the combustion turbines.
- c. The hours of operation for each turbine operated under the AOS shall be applied against the turbine's maximum annual hours of operation of 2,500 hours per calendar year.
- d. The combined hours of operation under the AOS shall be applied against the total combined hours of operation of 32,000 hours per calendar year for all turbines.
- e. The NO_x emitted during the ozone season while operating under the AOS shall be applied against nitrogen oxide emission allocations as specified in 2.1.A.5

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

- f. The Permittee shall notify the Regional Supervisor by 9:00 a.m. Eastern Time of the Division's next business when initiating and terminating the AOS.
- g. The Permittee shall submit in writing the following reports by January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June:
 - i. The maximum number of hours of operation of each combustion turbine operated under the AOS for the previous 12 months period, and
 - ii. The total combined hours of operation for all turbines operated under the AOS for the previous 12 months period.

B. Two No. 2 fuel oil, fixed-roof storage tanks with atmospheric vents (5,500,000 gallons capacity each, ID Nos. 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
volatile organic compounds	as defined in specific conditions	15A NCAC 2Q .0530

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

- a. The following Best Available Control Technology (BACT) limit shall not be exceeded:
 - i. Long term maximum emission rates for both storage tanks shall not exceed:

POLLUTANT	BACT EMISSION LIMIT (tons/year)
volatile organic compounds	13.30 total

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

- b. The requirements of Section 2.1 A. 3. d. and h. shall be sufficient to assure compliance with the emission limit indicated in Section 2.1 B. 2. a. i. above. No monitoring/recordkeeping/reporting is required for emissions of volatile organic compounds from this source.

2.2- Phase II Acid Rain Permit Requirements

ORIS code: 7277

Effective: January 1, 1998 through December 31, 2002

1. Statement of Basis

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

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

		2000	2001	2002	2003	2004
ES-1 through ES-16	SO ₂ allowances, under Tables 2, 3, or 4 of 40 CFR part 73.	NA*	NA*	NA*	NA*	NA*
	NO _x limit	NA**				

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

** Does not apply for combustion turbine units.

3. Comments, Notes and Justifications

None.

4. Phase II Permit Application (attached)

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

SECTION 3 - GENERAL CONDITIONS

This section describes terms and conditions applicable to this Title V facility. All references to the “permit” in this section apply only to Part I of the permit.

- 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
- 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. 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.
2. 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.
3. 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(i)(16) and 2Q .0517(f)]

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)(3)]

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

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

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, the Permittee shall perform such testing in accordance with the appropriate EPA reference method(s) as approved by the DAQ and follow the procedures outlined below. The Permittee must request **in writing** and receive approval from the DAQ for an alternate test method or procedure.

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 certification of the test results by sampling team leader and facility representative;
 - b. 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);
 - c. 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;
 - d. all field, analytical, and calibration data necessary to verify that the testing was performed as specified in the applicable test methods;
 - e. example calculations for at least one test run using equations in the applicable test methods and all test results including intermediate parameter calculations; and
 - f. 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. The use of the test results beyond the stated objectives remains subject to the approval of 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.

ATTACHMENT

List of Acronyms

AOS	Alternate Operating Scenario
BACT	Best Available Control Technology
Btu	British thermal unit
CEM	Continuous Emission Monitor
CFR	Code of Federal Regulations
CAA	Clean Air Act
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
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
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO₂	Sulfur Dioxide
tpy	Tons Per Year
VOC	Volatile Organic Compound