



NORTH CAROLINA
Environmental Quality

ROY COOPER

Governor

ELIZABETH S. BISER

Secretary

MICHAEL ABRACZINSKAS

Director

MM DD, 2022

T.J. Higgins
Vice President, Asset Management
Kings Mountain Energy Center
801 Corporate Center, Suite 116
Raleigh NC 27607

Dear Mr. Higgins:

SUBJECT: Air Quality Permit No. 10400T04
Facility ID: 2300383
Kings Mountain Energy Center
Kings Mountain
Cleveland County
Fee Class: Title V
PSD Status: Major

In accordance with your completed Air Quality Permit Application for a 1st Time Title V permit received July 30, 2019 and a Title IV Acid Rain permit received on June 11, 2015 we are forwarding herewith Permit No. 10400T04 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 02Q .0503(8) have been identified as such in the permit. Please note the requirements for the annual compliance certification are contained in General Condition P in Section 4. 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 file a petition for contested case hearing in the North Carolina Office of Administrative Hearings. Information regarding the right, procedure, and time limit for permittees and other persons aggrieved to file such a petition is contained in the attached "Notice Regarding the Right to Contest A Division of Air Quality Permit Decision."

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



North Carolina Department of Environmental Quality | Division of Air Quality
217 West Jones Street | 1641 Mail Service Center | Raleigh, North Carolina 27699-1641
919.707.8400

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

Cleveland County has triggered increment tracking under PSD for PM₁₀, PM_{2.5}, SO₂ and NO_x. The issuance of this initial TV permit will not consume or expand any increments for any pollutants.

This Air Quality Permit shall be effective from MM DD, YYYY until MM DD YYYY, 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 Joseph Voelker, P.E. at 919-707-8730.

Sincerely yours,

Mark J. Cuilla, EIT, CPM, Chief, Permitting Section
Division of Air Quality, NCDEQ

c: Lynorae Benjamin, EPA Region 4 (Permit and Review)
Mooresville Regional Office
Central Files
Connie Horne (cover letter only)

**NOTICE REGARDING THE RIGHT TO CONTEST A DIVISION OF AIR QUALITY PERMIT
DECISION**

Right of the Permit Applicant or Permittee to File a Contested Case: Pursuant to NCGS 143-215.108(e), a permit applicant or permittee who is dissatisfied with the Division of Air Quality's decision on a permit application may commence a contested case by filing a petition under NCGS 150B-23 in the Office of Administrative Hearings within 30 days after the Division notifies the applicant or permittee of its decision. If the applicant or permittee does not file a petition within the required time, the Division's decision on the application is final and is not subject to review. The filing of a petition will stay the Division's decision until resolution of the contested case.

Right of Other Persons Aggrieved to File a Contested Case: Pursuant to NCGS 143-215.108(e1), a person other than an applicant or permittee who is a person aggrieved by the Division's decision on a permit application may commence a contested case by filing a petition under NCGS 150B-23 within 30 days after the Division provides notice of its decision on a permit application, as provided in NCGS 150B-23(f), or by posting the decision on a publicly available Web site. The filing of a petition under this subsection does not stay the Division's decision except as ordered by the administrative law judge under NCGS 150B-33(b).

General Filing Instructions: A petition for contested case hearing must be in the form of a written petition, conforming to NCGS 150B-23, and filed with the Office of Administrative Hearings, 1711 New Hope Church Road, Raleigh NC, 27609, along with a fee in an amount provided in NCGS 150B-23.2. A petition for contested case hearing form may be obtained upon request from the Office of Administrative Hearings or on its website at <https://www.oah.nc.gov/hearings-division/filing/hearing-forms>. Additional specific instructions for filing a petition are set forth at 26 NCAC Chapter 03.

Service Instructions: A party filing a contested case is required to serve a copy of the petition, by any means authorized under 26 NCAC 03 .0102, on the process agent for the Department of Environmental Quality:

William F. Lane, General Counsel
North Carolina Department of Environmental Quality
1601 Mail Service Center
Raleigh, North Carolina 27699-1601

If the party filing the petition is a person aggrieved other than the permittee or permit applicant, the party **must also** serve the permittee in accordance with NCGS 150B-23(a).

* * *

Additional information is available at <https://www.oah.nc.gov/hearings-division/hearing-process/filing-contested-case>. Please contact the OAH at 984-236-1850 or oah.postmaster@oah.nc.gov with all questions regarding the filing fee and/or the details of the filing process.

Summary of Changes to Permit

The following changes were made to Air Permit No. 10400T04:*

| Existing Condition No. | New Condition No. | Changes |
|------------------------|-------------------|--|
| Cover Letter | Cover Letter | <ul style="list-style-type: none"> Used current shell language, updated permit numbers, dates, etc. for permits issued pursuant to 02Q .0500 procedures. |
| Permit page one | Same | <ul style="list-style-type: none"> Revised dates, permit numbers, etc. using current shell standards for permits issued pursuant to 02Q .0500 procedures. |
| General | Same | <ul style="list-style-type: none"> <u>All</u> conditions have been revised to be consistent with current TV permitting policy. These changes include: <ul style="list-style-type: none"> language and formatting in general have been revised. the applicable regulatory citations have been revised to be consistent with a permit issued under 15A NCAC 02Q “.0500 Title V procedures”. In general, the applicable regulatory citations for the testing monitoring, recordkeeping and reporting requirements have been revised from 15A NCAC 02Q .0308(a) to 15A NCAC 02Q .0508(f). statements of non-compliance with the underlying standard have been added as necessary to be consistent with current NC Title V permitting procedures. Section (formerly “condition”) references were updated as necessary to accommodate revisions to the draft permit All changes substantive enough to result in a change in intent will be addressed individually elsewhere in this table |
| Section 1 | same | <ul style="list-style-type: none"> Revised descriptor for ID No. CD-1B from “CO Oxidation catalyst” to “Oxidation catalyst” Added NSPS TTTT indicator to ID No. ES-1 |
| 2.1 A. | Same | <ul style="list-style-type: none"> Revised descriptor for ID No. CD-1B from “CO Oxidation catalyst” to “Oxidation catalyst” |
| 2.1 A.3 | Same | 02D .0524 (NSPS Subpart KKKK) condition |
| a | Same | <ul style="list-style-type: none"> Revised paragraph to include full title of NSPS Subpart KKKK |
| b | Same | <ul style="list-style-type: none"> Revised the 96 ppm emission limit to include the operating scenario of operating at temperatures below 0°F to be consistent with the rule. |
| c. | Same | <ul style="list-style-type: none"> The SO₂ emission standard was reworded to mirror the 40 CFR 60.4330 more closely. |
| f and g | NA | <ul style="list-style-type: none"> The initial performance testing requirements have been removed as they have been met. |
| h and i | f.i and ii | <ul style="list-style-type: none"> Simple renumbering of the general monitoring and recordkeeping requirements. No changes in intent. |

| Existing Condition No. | New Condition No. | Changes |
|------------------------|-------------------|---|
| j, k and l | g.i, ii and iii | <ul style="list-style-type: none"> • Simple renumbering • Revised the hourly and 30-day calculation requirements to mirror 40 CFR 60.4350 more closely. No changes in intent were made. |
| m | h | <ul style="list-style-type: none"> • Simple renumbering |
| n | | <ul style="list-style-type: none"> • The notification requirements for date of construction, date of startup and date of performance test have been met. These requirements have been removed. |
| o | | <ul style="list-style-type: none"> • Simple renumbering • The layout of the reporting condition was revised to be more consistent with current TV permitting policy • The CEMS excess emissions and monitoring systems summary report was revised to indicate the performance results shall be calculated on a quarterly basis consistent with the DAQs Stationary Source Compliance Branch policy. The reporting frequency has remained unchanged. • A reporting requirement pursuant to 02Q .0508(f) was added for a summary of fuel sulfur records |
| NA | 2.1 A.4, 5 and 6 | <ul style="list-style-type: none"> • Three NSPS Subpart TTTT (02D .0524) conditions were added to the permit. One addresses notification requirements if switching between compliance requirements. The other two conditions contain stand-alone compliance requirements. |
| 2.1 A.4 | 2.1 A.7 | 02D .0530 (PSD Condition) |
| a | Same | <ul style="list-style-type: none"> • revised table number from 4.a to 2.1 A.7.a • for CO and VOC, the BACT control technology was corrected to read “ good combustion practices” |
| b | Same | <ul style="list-style-type: none"> • revised table number from 4.b to 2.1 A.7.b • removed reference to commissioning as it has already been completed |
| c | Same | <ul style="list-style-type: none"> • removed references to commissioning requirements as commissioning has already been completed |
| f | NA | <ul style="list-style-type: none"> • Removed initial testing requirements as they have been satisfied |
| g | f | <ul style="list-style-type: none"> • Removed “subsequent testing” heading as it is no longer necessary • Clarified that gross heat rate testing is required for GHG BACT limit testing. Gross heat rate testing is required whenever a stack test is required. |
| h through o | g through o | <ul style="list-style-type: none"> • Revised “subtitle” from monitoring to monitoring/recordkeeping |
| h | g | <ul style="list-style-type: none"> • Simple renumbering |
| i | h | <ul style="list-style-type: none"> • Simple renumbering |

| Existing Condition No. | New Condition No. | Changes |
|------------------------|-------------------|---|
| j | j | <ul style="list-style-type: none"> • Simplified CO CEMs operational requirements to the applicable state rule 02D .0611 and 02D .0613. No changes in intent were made • Clarified that CO data should be presented in hourly CO emission rates in units of parts per million dry basis (ppmvd) corrected to 15% O₂ on a 1-hour basis and in units of pounds per hour. No changes in intent were made. • Clarified the data is to be reduced to hourly averages pursuant to the procedures in 40 CFR 60.13(h)(2). • Added definition of excess emissions for CO • Consistent with DAQ monitoring policy, the annual CO calculation methodology was revised to be calculated as the rolling 12-month sum of monthly CO emissions • Added optional calculation requirements for compliance with the CO 3-hour contiguous rolling average during startup and shutdown • Added explicit recordkeeping requirements for CO emissions data |
| k | i | <ul style="list-style-type: none"> • Removed the following requirement as source test data is now available. <p style="margin-left: 40px;">If no source test data is available, the Permittee shall utilize the appropriate AP-42 emission factors, or other emission factors as approved by NC DAQ.</p> • Condition was renumbered to be consistent with current permitting policy |
| l | k | <ul style="list-style-type: none"> • Combined NO_x CEMS requirements into one condition. • Clarified that NO_x data should be presented in hourly NO_x emission rates in units of parts per million dry basis (ppmvd) corrected to 15% O₂ on a 1-hour basis and in units of pounds per hour. No changes in intent were made. • Added a definition for excess emissions for purposes of PSD NO_x emissions monitoring. • Consistent with DAQ monitoring policy, the annual NO_x calculation methodology was revised to be calculated as the rolling 12-month sum of monthly NO_x emissions • Added optional calculation requirements for compliance with the NO_x 3-hour contiguous rolling average during startup and shutdown |

| Existing Condition No. | New Condition No. | Changes |
|------------------------|-------------------|--|
| m | l | <ul style="list-style-type: none"> • Moved second NOx CEMS used for ammonia monitoring requirements to a separate condition to highlight that it is not used to comply with a BACT limit but rather to ensure proper operation of the SCR system. • Revised the monitoring and recordkeeping to reference the applicable state rules 02D .0611 and 02D .0613 to highlight that this CEMS is only subject to certain 40 CFR Part 60 requirements if explicitly called out in the permit or pursuant to 02D .0611 and 02D .0613 • Clarified the data is to be reduced to hourly averages pursuant to the procedures in 40 CFR 60.13(h)(2) • Added a definition of excess emissions for ammonia |
| n | m | <ul style="list-style-type: none"> • Removed the requirement to submit a monitoring plan with the Acid Rain permit application as this requirement has already been satisfied. • Removed reference to the installation of a CO2 CEMs as the Permittee is using 40 CFR Part 75 Appendix G to calculate hourly CO2 emissions. |
| o | n | <ul style="list-style-type: none"> • Simple renumbering |
| NA | o | <ul style="list-style-type: none"> • Added general recordkeeping requirement to make the secondary BACT limits in Section 2.1 A.5.b practically enforceable. |
| NA | p | <ul style="list-style-type: none"> • Added a TV non-compliance statement, consistent with current DAQ TV permitting policy, to cover all monitoring and recordkeeping requirements as indicated. |
| p and q | q | <ul style="list-style-type: none"> • Combined the NOx, ammonia and CO CEMS reporting requirements. • Clarified that each CEMS is to submit an excess emissions and summary report containing the information in 40 CFR 60.7(c) and(d). • Added the requirement for the semiannual CEMS excess emissions and monitoring system performance reports to submit the results calculated on a quarterly basis. |
| r | NA | <ul style="list-style-type: none"> • Removed language as it is no longer applicable. |
| s | r | <ul style="list-style-type: none"> • The general reporting requirement was revised to include the reporting of the 3-hour contiguous rolling averages of NOx and CO if the procedures at Sections at 2.1 A.7.j.viii or k.v are used. |
| 2.1 A.5 | NA | <ul style="list-style-type: none"> • The 02Q .0402 Acid Rain Permit (ARP) application submittal requirement was removed as it has already been satisfied. The ARP requirements are incorporated into the revised permit at Section 2.3 and Attachment 2. |
| NA | 2.1 A.10 | <ul style="list-style-type: none"> • Added a condition addressing 15A NCAC 02D .1418 NEW ELECTRIC GENERATING UNITS, BOILERS, COMBUSTION TURBINES, AND I/C ENGINES • |
| NA | 2.1 A.9 | <ul style="list-style-type: none"> • Added a state-enforceable only condition addressing the recently adopted rule 15A NCAC 02D .1425 NOx SIP CALL BUDGET |

| Existing Condition No. | New Condition No. | Changes |
|------------------------|-------------------|--|
| NA | 2.1 A.10 | <ul style="list-style-type: none"> A condition addressing the 40 CFR Part 97 Cross State Air Pollution Rules (CSAPR) requirements applicable to the CT was added. |
| 2.1 B.5 | Same | 02D .0530 condition for boiler (ID No. ES-2) |
| h | same | <ul style="list-style-type: none"> Restructured the inspection, maintenance, and associated recordkeeping condition to be consistent with current permitting shell standards. One additional recordkeeping requirement was added: “The logbook shall record any variance from manufacturer’s recommendations, if any, and corrections made.” |
| 2.1 C.2 | Same | <ul style="list-style-type: none"> The 02D .0524 (NSPS Subpart IIII) condition for the engine (ID No. ES-4) was revised to include the requirements for the fire pump engine (ID No. ES-5) |
| 2.1 C.3 | 2.1 C.2 | <ul style="list-style-type: none"> The 02D .0524 (NSPS Subpart IIII) condition for the fire pump engine (ID No. ES-5) was consolidated with the 02D .0524 (NSPS Subpart IIII) condition for the emergency engines (ID No. ES-4) |
| 2.1 C.4 and 5 | 2.1 C.3 | <ul style="list-style-type: none"> Simple renumbering |
| 2.1 C.5 | 2.1 C.4 | <ul style="list-style-type: none"> Simple renumbering Removed the initial commissioning operating restriction at paragraph e .iii. as it no longer applies. Removed reference to initial commissioning throughout the permit condition. Removed footnote to the table in Section 2.1 C.4.a. |
| 2.2 A.1 | Same | 02D.1100 condition (facility-wide toxics condition) |
| a | same | <ul style="list-style-type: none"> Revised language to be consistent with the current permit shell language |
| b. | NA | <ul style="list-style-type: none"> Removed natural gas-firing only restriction as it is redundant and unnecessary |
| NA | b | <ul style="list-style-type: none"> Added language that memorializes the dispersion modeling analyses that are the bases for the allowable emission rates in paragraph a. |
| 2.2 B | Same | <ul style="list-style-type: none"> Revised descriptor from Facility-wide Emission sources to Facility-wide Fugitive Emission Sources to be more specific. |
| 2.2 B.1.c | same | <ul style="list-style-type: none"> Revised reporting to standard TV semi-annual reporting requirement pursuant to 15 A NCAC 02Q . 0508(f) |
| 2.2 B.2.b | Same | <ul style="list-style-type: none"> Revised monitoring/recordkeeping requirement to include standard logbook maintenance language consistent with DAQ standard TV recordkeeping requirements pursuant to 15 A NCAC 02Q . 0508(f) |
| 2.2 B.3 | 3.K and 3.X | <ul style="list-style-type: none"> The Permit condition addressing PERMIT RENEWAL AND EMISSION INVENTORY REQUIREMENT was removed. These concepts are now addressed in Section 4 as General Condition K and X respectively. |

| Existing Condition No. | New Condition No. | Changes |
|------------------------|---|--|
| 2.2 B.4 | NA | <ul style="list-style-type: none"> The permit condition addressing TITLE PERMIT APPLICATION SUBMITTAL REQUIREMENT was removed as it has been satisfied. |
| 2.2 B.5 | 3.I | <ul style="list-style-type: none"> The permit condition addressing 02Q .0535 was removed as it is addressed in Section 4 as General Condition I. |
| NA | Section 3 - Insignificant activities List | <ul style="list-style-type: none"> Added three insignificant activities; I-1 and I-2 and I-3 |
| NA | 2.3 | <ul style="list-style-type: none"> Added a section to address the Phase II Acid Rain Permit Requirements |
| Section 3 | Section 4 | The GENERAL CONDITIONS were revised completely to reflect those applicable to sources permitted pursuant to 15A NCAC 02Q .0500 (version 6.0, 01/07/2022) |
| NA | Attachment 1 | <ul style="list-style-type: none"> Added a copy of the Phase II Acid Rain Permit Application |

* This list is not intended to be a detailed record of every change made to the permit but a summary of those changes.



AIR QUALITY PERMIT

| Permit No. | Replaces Permit No. | Effective Date | Expiration Date |
|------------|---------------------|----------------|-----------------|
| 10400T04 | 10400R03 | MM DD, 2022 | MM DD, 2026 |

NOTE: Per General Condition K, a permit application for the renewal of this Title V permit shall be submitted no later than **[enter date six months prior to expiration date-complete upon issuance]**.

Until such time as this permit expires or is modified or revoked, the below named Permittee is permitted to construct and operate the emission source(s) and associated air pollution control device(s) specified herein, in accordance with the terms, conditions, and limitations within this permit. This permit is issued under the provisions of Article 21B of Chapter 143, General Statutes of North Carolina as amended, and Title 15A North Carolina Administrative Codes (15A NCAC), Subchapters 02D and 02Q, and other applicable Laws.

Pursuant to Title 15A NCAC, Subchapter 02Q, the Permittee shall not construct, operate, or modify any emission source(s) or air pollution control device(s) without having first submitted a complete Air Quality Permit Application to the permitting authority and received an Air Quality Permit, except as provided in this permit.

Permittee: Kings Mountain Energy Center
Facility ID: 2300383
Primary SIC Code: 4911
NAICS Code: 221112

Facility Site Location: 181 Gage Road
City, County, State, Zip: Kings Mountain, Cleveland County, North Carolina, 28086
Mailing Address: 801 Corporate Center, Suite 116
City, State, Zip: Raleigh NC 27607

Application Number: 2300383.19B and 2300383.15A
Complete Application Date: September 09, 2019 and June 11, 2015

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

Permit issued this the Nth day of MM, 2022

Mark J. Cuilla, EIT, CPM, Chief, Air Permitting Section
By Authority of the Environmental Management Commission

Table Of Contents

LIST OF ACRONYMS

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

SECTION 2: SPECIFIC LIMITATIONS AND CONDITIONS

2.1 Emission Source(s) Specific Limitations and Conditions (Including specific requirements, testing, monitoring, recordkeeping, and reporting requirements)

2.2 Multiple Emission Source(s) Specific Limitations and Conditions (Including specific requirements, testing, monitoring, recordkeeping, and reporting requirements)

2.3 Phase II Acid Rain Permit Requirements

SECTION 3: INSIGNIFICANT ACTIVITIES PER 15A NCAC 02Q .0503(8)

SECTION 4: GENERAL PERMIT CONDITIONS

ATTACHMENT Acid Rain Permit Application (dated June 11, 2015)

List of Acronyms

| | |
|-------------------------|---|
| AOS | Alternative Operating Scenario |
| BACT | Best Available Control Technology |
| BAE | Baseline Actual Emissions |
| Btu | British thermal unit |
| CAA | Clean Air Act |
| CAM | Compliance Assurance Monitoring |
| CEMS | Continuous Emission Monitoring System |
| CFR | Code of Federal Regulations |
| CO | Carbon Monoxide |
| COMS | Continuous Opacity Monitoring System |
| CSAPR | Cross-State Air Pollution Rule |
| DAQ | Division of Air Quality |
| DEQ | Department of Environmental Quality |
| EMC | Environmental Management Commission |
| EPA | Environmental Protection Agency |
| FR | Federal Register |
| GACT | Generally Available Control Technology |
| GHGs | Greenhouse Gases |
| HAP | Hazardous Air Pollutant |
| LAER | Lowest Achievable Emission Rate |
| MACT | Maximum Achievable Control Technology |
| NAA | Non-Attainment Area |
| NAAQS | National Ambient Air Quality Standards |
| NAICS | North American Industry Classification System |
| NCAC | North Carolina Administrative Code |
| NCGS | North Carolina General Statutes |
| NESHAP | National Emission Standards for Hazardous Air Pollutants |
| NO_x | Nitrogen Oxides |
| NSPS | New Source Performance Standard |
| NSR | New Source Review |
| OAH | Office of Administrative Hearings |
| PAE | Projected Actual Emissions |
| PAL | Plantwide Applicability Limitation |
| PM | Particulate Matter |
| PM_{2.5} | Particulate Matter with Nominal Aerodynamic Diameter of 2.5 Micrometers or Less |
| PM₁₀ | Particulate Matter with Nominal Aerodynamic Diameter of 10 Micrometers or Less |
| POS | Primary Operating Scenario |
| PSD | Prevention of Significant Deterioration |
| PTE | Potential to Emit |
| RACT | Reasonably Available Control Technology |
| SIC | Standard Industrial Classification |
| SIP | State Implementation Plan |
| SO₂ | Sulfur Dioxide |
| TAP | Toxic Air Pollutant |
| tpy | Tons Per Year |
| VOC | Volatile Organic Compound |

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

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

| Emission Source ID No. | Emission Source Description | Control Device ID No. | Control Device Description |
|---|---|-----------------------|---|
| ES-1 NSPS KKKK, NSPS TTTT, PSD BACT | One nominal 475 Megawatt (MW) natural gas-fired combined-cycle combustion turbine (CT) with duct burner (DB) (maximum heat input = 2,945 million Btu per hour CT only and 3,603 million Btu per hour CT + DB). CT equipped with dry low-NO _x combustors. | CD-1A | Selective catalytic reduction (SCR) |
| | | CD-1B | Oxidation catalyst |
| ES-2 NSPS Dc, PSD BACT | One natural gas-fired auxiliary boiler with low NO _x burners (42.8 million Btu per hour maximum heat input) | NA | NA |
| ES-3 PSD BACT | One natural gas-fired fuel gas heater (9 million Btu per hour maximum heat input) | NA | NA |
| ES-4 NSPS IIII, MACT ZZZZ, PSD BACT | One diesel fuel-fired standby emergency generator (1,528 maximum brake horsepower) | NA | NA |
| ES-5 NSPS IIII, MACT ZZZZ, PSD BACT | One diesel fuel-fired emergency fire pump engine (260 maximum brake horsepower) | NA | NA |
| ES-6 PSD BACT | One multi-cell cooling tower (175,000 gallon per minute maximum recirculating flow rate) | CD-6 | Mist eliminator (0.0005 percent drift loss) |

SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS

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

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

- A. One nominal 475 MW natural gas-fired combined-cycle combustion turbine (CT) with duct burner (DB) (max. heat input = 2,945 million Btu per hour CT only and 3,603 million Btu per hour CT + DB). CT equipped with dry low-NOx combustors (ID No. ES-1) controlled by selective catalytic reduction (SCR) (ID No. CD-1A) and oxidation catalyst (ID No. CD-1B)**

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

| Pollutant | Limits/Standards | Applicable Regulation |
|--|--|--|
| PM | 0.20 pounds per million Btu heat input | 15A NCAC 02D .0503 |
| Visible Emissions | 20 percent opacity | 15A NCAC 02D .0521 |
| NO _x | i. 15 ppm at 15 percent O ₂ or, ii. 96 ppm at 15 percent O ₂ when operating at less than 75 percent of peak load | 15A NCAC 02D .0524 (40 CFR Part 60, Subpart KKKK) |
| SO ₂ | 0.06 lb/million Btu heat input | |
| GHGs | 1,000 lb CO ₂ /MWh of gross energy output as determined on a 12-operating month rolling average basis. See Sections 2.1 A.4, 5 and 6 | 15A NCAC 02D .0524 (40 CFR Part 60, Subpart TTTT) |
| PM ₁₀ , PM _{2.5} , NO _x , VOC, CO, Sulfuric Acid Mist (H ₂ SO ₄), GHGs | BACT limitations See Section 2.1 A.7 | 15A NCAC 02D .0530 |
| TAPs | State-enforceable only See Section 2.2 A.1 | 15A NCAC 02D .1100 |
| NO _x | Meet the BACT limitations during ozone season | 15A NCAC 02D .1418 |
| NO _x | State-enforceable only Ozone season annual reporting | 15A NCAC 02D .1425 |
| NO _x , SO ₂ | Cross State Air Pollution Rule Requirements See Section 2.1 A.10 | 40 CFR Part 97, Subparts AAAAA and CCCCC |
| NO _x , SO ₂ | Phase II Acid Rain Permit Requirements See Section 2.3 and Attachment 1 | 15A NCAC 2Q .0402 (40 CFR Part 72) |

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

- a. Emissions of particulate matter from the combustion of natural gas that are discharged from the combustion turbine (ID No. ES-1) into the atmosphere shall not exceed 0.20 pounds per million Btu heat input. This emission limitation only applies when the duct burner is in operation.

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

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503.

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

- c. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas in this source (ID No. ES-1).

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

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

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

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

- c. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of natural gas in this source (**ID No. ES-1**).

3. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS

- a. For the combustion turbine (**ID No. ES-1**), the Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards (NSPS)" as promulgated in 40 CFR Part 60, Subpart KKKK "Standards of Performance for Stationary Combustion Turbines," including Subpart A "General Provisions."

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

- b. The following NO_x emission limitations for the combustion turbine (**ID No. ES-1**) shall not be exceeded, except during startup, shutdowns, and malfunction.
 - i. 15 ppm at 15 percent O₂ or,
 - ii. 96 ppm at 15 percent O₂ when operating at less than 75 percent of peak load or at temperatures less than 0°F. [40 CFR 60.4320, 60.8(c)]
- c. The Permittee shall not burn in the combustion turbine (**ID No. ES-1**) any fuel which contains potential SO₂ emissions in excess of 0.060 lb/million Btu heat input. [40 CFR 60.4330]

General Compliance Requirements [15A NCAC 02Q .0508(f)]

- d. The Permittee shall operate and maintain the combustion turbine, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown and malfunction [40 CFR 60.4333]. If these general compliance requirements are not met, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

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

- e. If 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 above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

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

- f. The following general monitoring and recordkeeping requirements apply:
 - i. The Permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. [40 CFR 60.7(b)]
 - ii. The Permittee shall maintain records of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this part recorded in a permanent form suitable for inspection. The records shall be retained for at least two years following the date of such measurements, maintenance, reports, and records, except as allowed pursuant to §60.7(f). [40 CFR 60.7(f)]

If these monitoring and recordkeeping requirements are not met, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

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

- g. The following NO_x monitoring and recordkeeping requirements apply:
 - i. The Permittee shall install, calibrate, maintain and operate a continuous emissions monitoring system (CEMS) consisting of NO_x and O₂ monitors, to determine the hourly NO_x emission rate in parts per million (ppm). [40 CFR 60.4340(b), 60.4335(b)]
 - ii. The CEMS shall meet the installation, certification and operating requirements of 40 CFR 60.4345.
 - iii. Hourly average NO_x emission rates shall be calculated pursuant to 40 CFR 60.4350(a) through (f). The hourly average NO_x emission rates shall be used to assess excess emissions on a 30-unit operating day rolling average basis, as described in 40 CFR 60.4380(b)(1). [40 CFR 60.4350].

If these NO_x monitoring and recordkeeping requirements are not met or show an exceedance of the emission limits in Section 2.1 A.3.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

SO₂ Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- h. The Permittee shall demonstrate compliance with the applicable SO₂ emission limit by making demonstrations that the fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel specifies that the total sulfur content for natural gas is 20 grains of sulfur or less per 100 standard cubic feet, and has potential sulfur dioxide emissions of less than 0.06 lb SO₂/MMBtu heat input [40 CFR 60.4365(a)]. The Permittee shall maintain records of the fuel contracts on site at the source for a period of two years pursuant to 40 CFR 60.7(f). If these SO₂ monitoring and recordkeeping requirements are not met or show an exceedance of Section 2.1 A.3.c above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

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

- i. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.1 A.1.f through h above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. The report shall include:
 - i. an excess emissions and monitoring systems performance report. The report shall contain the information required pursuant 40 CFR 60.7(c) and (d). The emissions and monitoring system performance results shall be calculated on a quarterly basis. [40 CFR 60.4395 and 60.7(c)] The format for the report will be provided by the DAQ. If this reporting requirement is not met, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.
 - ii. a summary report of the fuel purchase contracts, tariff sheets or transportation contracts indicated in Section 2.1.A.3.h above.

4. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS

- a. For the combustion turbine (**ID No. ES-1**), the Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 “New Source Performance Standards (NSPS)” as promulgated in 40 CFR Part 60 Subpart TTTT (NSPS TTTT) “Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units,” including Subpart A “General Provisions.”

Notification Requirements [40 CFR 60.10(b), 15A NCAC 02Q .0508(b), (j)]

- b. At the request of the Permittee, this permit includes two sets of requirements for the combustion turbine (**ID No ES-1**), at Sections 2.1 A.5 and A.6, which are applicable depending on the level of net electric sales as defined consistent with Table 2 to NSPS TTTT.
- c. The Permittee shall comply with the NSPS TTTT requirements for sources subject to the energy output-based standard as included at Section 2.1 A.5 upon issuance of Permit No. 10400T04.
- d. If the Permittee chooses to cease to comply with the NSPS TTTT requirements as included at Section 2.1 A.5 and chooses to comply with the NSPS TTTT requirements for sources that meet the applicability requirements for the heat input-based standards as incorporated at Section 2.1 A.6, the Permittee shall first submit an applicability determination request, consistent with 15A NCAC 02Q .0111, to the DAQ to demonstrate that the combustion turbine (**ID No ES-1**) meets the applicability requirements. The Permittee shall continue to comply with Section 2.1 A.5 until the determination request has been approved. The request, signed by the Responsible Official, shall include the following:
 - i. Calculations of the following quantities consistent with Section 2.1 A.5.b below and Table 2 of NSPS TTTT:

(A) Quantity A: the Design Efficiency or 50 percent, whichever is less, times the Potential Electric Output as Net-Electric Sales on a 12-operating month rolling average basis

(B) Quantity B: the Design Efficiency or 50 percent, whichever is less, times the Potential Electric Output as Net-Electric Sales on a 3-year rolling average basis

These quantities shall be used to in conjunction with Table 2 of NSPS TTTT to determine if the request to cease to comply with Section 2.1 A.5 and then comply with Section 2.1 A.6 can be approved.

- ii. The identification of the first operating month (as defined at 40 CFR 60.5580) to be subject to the NSPS TTTT requirements under Section 2.1 A.6.
- e. Upon receipt that the determination request has been approved, the Permittee shall comply with the requirements under Section 2.1 A.6 starting with the operating month identified in Section 2.1 A.4.d.ii above.
- f. If the Permittee subsequently chooses to cease to comply with the requirements at Section 2.1 A.6 and return to complying with the requirements at Section 2.1 A.5, the Permittee shall submit a notification to the DAQ, signed by the Responsible Official, including the following:
 - i. A request to cease complying with Section 2.1 A.6. and to comply with Section 2.1 A.5.
 - ii. The identification of the first operating month (as defined at 40 CFR 60.5580) to be subject to the NSPS TTTT requirements under Section 2.1 A.5.
- g. Upon acknowledgment that the DAQ has received the notification identified in Section 2.1 A.4.f above, the Permittee shall comply with the requirements under Section 2.1 A.5 starting with the operating month identified in Section 2.1 A.4.f.ii above.

5. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS

- a. For the combustion turbine (**ID No. ES-1**), the Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 “New Source Performance Standards (NSPS)” as promulgated in 40 CFR Part 60 Subpart TTTT (NSPS TTTT) “Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units,” including Subpart A “General Provisions.”
 - i. Upon issuance of Permit No. 10400T04, the Permittee shall comply with the NSPS TTTT requirements contained here at Section 2.1 A.5 until the requirements of Section 2.1 A.4.e have been satisfied. The Permittee shall then comply with the NSPS Subpart TTTT requirements at Section 2.1 A.6.
 - ii. Notwithstanding Section 2.1 A.5.a.i above, the Permittee shall comply with the NSPS TTTT requirements contained here at Section 2.1 A.5 after the requirements of Section 2.1 A.4.g have been satisfied.

Definitions and Nomenclature

- b. For the purposes of this permit condition, the definitions and nomenclature contained in 40 CFR 60.5580 shall apply.

General Provisions

- c. The Permittee shall comply with the General Provisions of 40 CFR 60 Subpart A as presented in Table 3 of 40 CFR 60 Subpart TTTT. [40 CFR 60.5570]

Emission Limitations [15A NCAC 02Q .0508(b)]

- d. The Permittee shall not discharge from the combustion turbine (**ID No. ES-1**) any gases that contain CO₂ in excess of 1,000 lb CO₂/MWh of gross energy output as determined on a 12-operating month rolling average basis. [40 CFR 60.5520, 60.5525]

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

- e. The following general requirements apply:
 - i. The Permittee shall be in compliance with the emission standard in Section 2.1 A.5.d all times. However, the Permittee shall determine compliance with the emission standard monthly by calculating the average CO₂ emission rate at the end of the initial and each subsequent 12-operating-month period. [60.5525(a)(1)]
 - ii. At all times the Permittee shall operate and maintain each affected EGU, including associated equipment and monitors, in a manner consistent with safety and good air pollution control practice. The Administrator will determine if the Permittee is using consistent operation and maintenance procedures based on information available to the Administrator that may include, but is not limited to, fuel use records, monitoring results, review of operation and maintenance procedures and records, review of reports required by this subpart, and inspection of the EGU. [60.5525(b)]

If these general requirements are not met, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

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

- f. The following compliance determination requirements apply:
- i. No more than 30 days after the first 12-operating-month compliance period, the Permittee shall make an initial compliance determination for the combustion turbine (**ID No. ES-1**) with respect to the applicable emissions standard in accordance with the requirements of NSPS TTTT. The first operating month included in the initial 12-operating-month compliance period is the first operating month after the calendar month in which emissions reporting is required to begin under Section 2.1 A.5.j.iii. [40 CFR 60.5525(c)]
 - ii. For the initial and each subsequent 12-operating-month rolling average compliance period, the Permittee shall follow the procedures in 40 CFR 60.5540(a)(1) through (7) to calculate the CO₂ mass emissions rate for the combustion turbine (**ID No. ES-1**) in units of lb/MWh of gross energy output. [40 CFR 60.5540(a), (b)]
- If these compliance determination requirements are not met, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

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

- g. The following monitoring requirements apply:
- i. The Permittee shall prepare a monitoring plan to quantify the hourly CO₂ mass emission rate (tons per hour), in accordance with the applicable provisions in 40 CFR 75.53(g) and (h). The electronic portion of the monitoring plan must be submitted using the Emissions Collection and Monitoring Plan System (ECMPS) Client Tool and must be in place prior to reporting emissions data and/or the results of monitoring system certification tests under 40 CFR Part 60. The monitoring plan must be updated as necessary. Monitoring plan submittals must be made by the Designated Representative (DR), the Alternate DR, or a delegated agent of the DR. [40 CFR 60.5535(a)]
 - ii. The Permittee shall determine the hourly CO₂ mass emissions from the combustion turbine (**ID No. ES-1**) according to 40 CFR 60.5535(c). [40 CFR 60.5535(c)]
 - iii. The Permittee shall install, calibrate, maintain, and operate a sufficient number of watt meters to continuously measure and record the hourly gross electric output from the combustion turbine (**ID No. ES-1**) meeting the requirements of 40 CFR 60.5535(d)(1). [40 CFR 60.5535(d)]
- If these monitoring requirements are not met, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

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

- h. The following recordkeeping requirements apply:
- i. The Permittee shall maintain records of the occurrence and duration of any malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. [40 CFR 60.5560(a), 60.7(b)]
 - ii. The Permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this part recorded in a permanent form suitable for inspection. The file shall be retained for at least two years on site following the date of such measurements, maintenance, reports, and records, except as allowed at 40 CFR 60.7(f). [40 CFR 60.5560(a), 60.7(f)]
 - iii. The Permittee shall follow the applicable recordkeeping requirements and maintain records as required under 40 CFR 75 Subpart F. [40 CFR 60.5560(b)(1)]
 - iv. The Permittee shall keep records:
 - (A) of the calculations performed to determine the hourly and total CO₂ mass emissions (tons) for each operating month and each compliance period, including each 12-operating-month compliance period.
 - (B) consistent with 40 CFR 60.5520, of the applicable data recorded and calculations performed that were used to determine the combustion turbine's (**ID No. ES-1**) gross energy output for each operating month.
 - (D) of the calculations performed to determine the percentage of valid CO₂ mass emission rates in each compliance period.
 - (E) of the calculations performed to assess compliance with the applicable CO₂ mass emissions standard.
 - (F) of the calculations performed to determine any site-specific carbon-based F-factors used in the emissions calculations (if applicable).

[40 CFR 60.5560(c)]
 - v. The Permittee shall maintain each record:
 - (A) in a form suitable and readily available for expeditious review.

- (B) for 3 years after the date of conclusion of each compliance period.
- (C) on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 60.7. Records that are accessible from a central location by a computer or other means that instantly provide access at the site meet this requirement. The Permittee may maintain the records off site for the remaining year.

[40 CFR 60.5565]

If these recordkeeping requirements are not met, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

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

- i. The Permittee shall submit the following notifications specified in 40 CFR 75.61 as applicable, which includes, but not limited to, notifications of the certification of monitoring systems, periodic testing and audits, certification deadline date and date of commencing commercial operation. [40 CFR 60.5550] If these notification requirements are not met, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

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

- j. The following reporting requirements apply:
 - i. On a quarterly basis, the Permittee shall submit electronic quarterly reports no later than 30 days after the end of that quarter as follows:
 - (A) after the first 12-operating months of the combustion turbine (**ID No. ES-1**), submit a report for the calendar quarter that includes the twelfth operating month no later than 30 days after the end of that quarter. Thereafter, the Permittee shall submit a report for each subsequent calendar quarter.
 - (B) submit each quarterly report including the information specified in 40 CFR 60.5555(a)(2).
 - (C) submit the final quarterly report of each calendar year also including the information specified in 40 CFR 60.5555(a)(3).
 - (D) submit all electronic reports using the ECMPS Client Tool provided by the Clean Air Markets Division in the Office of Atmospheric Programs of EPA.
[40 CFR 60.5555(a), (b)]
 - ii. The Permittee shall meet all applicable reporting requirements and submit reports as required under 40 CFR Part 75 Subpart G. [40 CFR 60.5555(c)(1)]
 - iii. The Permittee shall begin submitting the reports in Section 2.1 A.5.j.ii above in accordance with 40 CFR 75.64(a), beginning with data recorded on and after the earlier of:
 - (A) the date of provisional certification, as defined in 40 CFR 75.20(a)(3); or
 - (B) 180 days after the date on which the combustion turbine (**ID No ES-1**) commences commercial operation as defined in 40 CFR 72.2.
[40 CFR 60.5555(c)(3)(i)]
 - iv. The reports required under Sections 2.1 A.5.j.i and ii shall be submitted by:
 - (A) the person appointed as the Designated Representative (DR) pursuant to 40 CFR 72.20; or
 - (B) the person appointed as the Alternate Designated Representative (ADR) pursuant to 40 CFR 72.22; or
 - (C) a person (or persons) authorized by the DR or ADR pursuant to 40 CFR Part 72.26 to make the required submissions. [40 CFR 60.5555(d)]
- If these reporting requirements are not met, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.
- k. The Permittee shall also submit the reports required in Section 2.1 A.5.j above to the DAQ postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 for the calendar year for the preceding three-month period between July and September. All instances of deviations from the requirements of this permit must be clearly identified.

6. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS

- a. For the combustion turbine (**ID No. ES-1**), the Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 “New Source Performance Standards (NSPS)” as promulgated in 40 CFR Part 60, Subpart TTTT (NSPS TTTT) “Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units,” including Subpart A “General Provisions.”
 - i. The NSPS TTTT requirements contained here under Section 2.1 A.6 are applicable only when the requirements of Section 2.1 A.4.e have been satisfied.
 - ii. The NSPS TTTT requirements contained here under Section 2.1 A.6 are applicable until the requirements of Section 2.1 A.4.g have been satisfied.

Definitions and Nomenclature

- b. For the purposes of this permit condition, the definitions and nomenclature contained in 40 CFR 60.5580 shall apply.

General Provisions

- c. The Permittee shall comply with the General Provisions of 40 CFR 60 Subpart A as presented in Table 3 of NSPS TTTT. [40 CFR 60 .5570]

Emission Standards [15A NCAC 02Q .0508(b)]

- d. For the combustion turbine (**ID No. ES-1**) the Permittee shall not discharge any gases that contain CO₂ in excess of 120 lb CO₂/million Btu heat input basis. [40 CFR 60.5520(a) and Table 2 to NSPS TTTT]

Operating Restriction [15A NCAC 02Q .0508(b)]

- e. The combustion turbine (**ID No. ES-1**) shall not supply more than its design efficiency or 50 percent, whichever is less, times its potential electric output as net-electric sales on a 12-operating month and a 3-year rolling average basis. [40 CFR 60.5520(a) and Table 2 to NSPS TTTT]

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

- f. The Permittee shall submit notifications as specified in 40 CFR 75.61, as applicable. [40 CFR 60.5550(b)] If these notification requirements are not met, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

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

- g. No monitoring requirements pursuant to NSPS TTTT apply to the combustion turbine (**ID No ES-1**). [40 CFR 60.5520(d)(1)]

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

- h. The following recordkeeping requirements apply to the combustion turbine (**ID No. ES-1**):
 - i. The Permittee shall keep purchase records of natural gas. [40 CFR 60.5520(d)(1), 60.5535(a)]
 - ii. The Permittee shall keep sufficient records to show compliance with the operating restriction at Section 2.1 A.6.e above.
 - iii. The Permittee shall follow all applicable recordkeeping requirements and maintain records as required under Subpart F of 40 CFR Part 75. [40 CFR 60.5560(b)(1)]
 - iv. The Permittee shall:
 - (A) maintain records in a form suitable and readily available for expeditious review.
 - (B) maintain each record for 3 years after the date of conclusion of each compliance period.
 - (C) maintain each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 60.7. Records that are accessible from a central location by a computer or other means that instantly provide access at the site meet this requirement. The Permittee may maintain the records off site for the remaining year(s) as required by this Subpart.

[40 CFR 60.5565(a) through (c)]

If these recordkeeping requirements are not met, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

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

- i. The Permittee shall submit a summary report of recordkeeping activities given in Sections 2.1 A.6 g through h above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and

December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

7. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

BACT Limitation during 50 to 100% operating load [15A NCAC 02Q .0508(f)]

- a. The BACT permitted emission limits for the combustion turbine (**ID No. ES-1**), during normal operation (i.e., operating loads between 50 and 100% of full load), are as follows:

| Regulated NSR Pollutant | BACT | Control Method |
|--|---|--|
| PM ₁₀ / PM _{2.5} | 0.0041 lb/MMBtu, CT only 0.0059 lb/MMBtu, CT and DB | Exclusive natural gas-firing |
| NO _x | 2 ppmvd @ 15% O ₂ , 1-hr basis | Exclusive natural gas firing; Dry low NO _x combustors on CT; SCR on DB exhaust |
| CO | 2 ppmvd @ 15% O ₂ , 1-hr basis | Good combustion practices; oxidation catalysts |
| VOC | 1.0 ppmvd @ 15% O ₂ , 1-hr basis w/o duct firing 1.5 ppmvd @ 15% O ₂ , 1-hr basis with duct firing | Good combustion practices; Oxidation catalysts |
| Sulfuric Acid Mist (H ₂ SO ₄) | 0.7 grains S per 100 standard cubic feet of natural gas combusted | Exclusive natural gas-firing |
| GHGs | gross heat rate ≤ 6,942 Btu/kilowatt-hr, HHV (gross*) at ISO** conditions, initial test | Good combustion practices; Oxidation catalysts; Low-carbon fuel; Energy efficiency/combined-cycle power plant |
| | gross heat rate ≤ 7,335 Btu/kilowatt-hr, HHV (gross*) at ISO conditions, for the life of the facility | |

* gross heat rate is based on the full electric energy output of the generation equipment, without consideration of internal plant loads

** International Organization for Standardization – ISO 3977 “Gas Turbines - Procurement - Part 2: Standard Reference Conditions and Ratings”

Secondary BACT Limitations to include start up and shutdown, and tuning operations [15A NCAC 02Q .0508(f)]

- b. Emissions discharged from the combustion turbine (**ID No. ES-1**) into the atmosphere during start up, shutdown, tuning, and normal operations shall not exceed the following BACT emission limits:

| Regulated NSR Pollutant | BACT Limits, tons per 12 months, rolling basis |
|-------------------------------------|---|
| PM ₁₀ /PM _{2.5} | 65.4 |
| NO _x | 103.4 |
| CO | 243.2 |
| VOC | 86.9 |
| GHGs | 1,676,538 tpy of GHG on a CO ₂ e basis |

- c. The Permittee shall:
- i. limit operation during start up and shut down operations to 500 hours per year (rolling 12-month basis);
 - ii. limit tuning operations to 2 events per year (rolling 12-month basis). Each event shall not exceed 8 hours; and;
 - iii. minimize emissions to the maximum extent possible during startup, shutdown, and tuning operations.

- d. The following limits are required in order to demonstrate compliance with the National Ambient Air Quality Standards and the PSD increments [15A NCAC 02D .0530, 40 CFR 51.166(k)]:

| Regulated NSR Pollutant | Emission Rate (lb/hr) | | | |
|-------------------------|-----------------------|---------------------------------|--------------------|----------------|
| | 1-hr average | 3-hr contiguous rolling average | 24-hr average | Annual average |
| PM _{2.5} | NA | NA | 19.5 ** 18.2*** | * |
| NO ₂ | 28.4 ¹ ** | 46.8 ¹⁺⁺ | NA | * |
| CO | 17.1** | 1,486 ⁺⁺ | NA | NA |

*maximum project impacts were less than the respective SIL in the significant impact analysis

** applicable when operating for a full operating hour during 50 to 100% full load

*** all other operating scenarios, including startup and shutdown

++ applicable under all operating scenarios

¹ as NO_x

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

- e. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. .If the results of this test(s) are above the limit(s) given in Section 2.1 A.7.a or d above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.
- f. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limits for PM₁₀, PM_{2.5}, VOC and GHGs (i.e., gross heat rate) by conducting a performance test in all applicable operating scenarios indicated in Section 2.1 A.7.a above in accordance with a DAQ approved testing protocol on an annual basis. If the results of a test are less than 80 percent of the emission limit in Section 2.1 A.7.a, the Permittee shall be required to stack test once every five years following the last stack test. Gross heat rate shall be determined during the testing utilizing test methods consistent with ASME “Performance Test Code on Overall Plant Performance” (PTC 46), or as otherwise approved by NC DAQ, and will be corrected from testing conditions to ISO conditions. If the results of this test(s) are above the limit(s) given in Section 2.1 A.7.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

PM₁₀/PM_{2.5}

- g. No monitoring/recordkeeping/reporting is required for the firing of natural gas in the combustion turbine (**ID No. ES-1**).

H₂SO₄

- h. The Permittee shall meet the monitoring and recordkeeping requirements of Section 2.1 A.3.h. above, except that the total sulfur content for natural gas shall be 0.7 grains of sulfur or less per 100 standard cubic feet.

VOC

- i. The following monitoring requirements apply:
- i. The Permittee shall meet the monitoring requirements for VOC by meeting the monitoring requirements for CO under Section 2.1 A.7.j below.
 - ii. Monthly and annual emissions of VOC shall be based upon source test data for each operating scenario.

CO

- j. The Permittee shall monitor CO emissions and keep records as specified below.
- i. The Permittee shall install, calibrate, maintain and operate CO and O₂ continuous emissions monitoring systems (CEMS) to determine the hourly CO emission rate in units of parts per million dry basis (ppmvd) corrected to 15% O₂ one a 1-hour basis and in units of pounds per hour.
 - ii. The Permittee shall meet the requirements of 15A NCAC 02D .0611 and 15 A NCAC 02D .0613.
 - iii. The CO and O₂ CEMS data shall be reduced to one-hour averages as specified in 40 CFR 60.13(h)(2).

- iv. Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required, the CEMS shall be in continuous operation and shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.
- v. Excess emissions shall be defined as the hourly CO emission rates that exceed an emission in Section 2.1 A.7.a or d above.
- vi. Monthly CO emissions shall be determined by summing the hourly emissions (pounds per hour) for each calendar month.
- vii. Annual CO emissions shall be calculated as the rolling 12-month sum of monthly emissions.
- viii. For purposes of complying with the CO 3-hour contiguous rolling average limit in Section 2.1 A.7.d above during startups and shutdowns:
 - (A) At startup, the Permittee may use the CEM data to determine the pounds of CO emitted during the first three valid clock hours. The first 3-hour contiguous rolling average shall be calculated as the sum of the pounds of CO emitted during the first three valid clock hours divided by 3.
 - (B) At shutdown, the Permittee may use the CEM data to determine the pounds of CO emitted during the last three valid clock hours. The last 3-hour contiguous rolling average shall be calculated as the sum of the pounds of CO emitted during the last three valid clock hours divided by 3.
- ix. The Permittee shall maintain records of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices consistent with General Condition O in Section 4 below.

NO_x

- k. The Permittee shall monitor NO_x emissions and keep records as specified below:
 - i. The Permittee shall install, calibrate, maintain and operate NO_x and O₂ continuous emissions monitoring systems (CEMS) to determine the hourly NO emission rate in units of parts per million dry basis (ppmvd) corrected to 15% O₂ on a 1-hour basis and in units of pounds per hour.
 - ii. The Permittee shall meet the monitoring and recordkeeping requirements of Section 2.1 A.3.f and g above with the exception that excess emissions shall be defined as the hourly NO_x emission rates that exceed an emission limit in Section 2.1 A.7. a or d above.
 - iii. Monthly NO_x emissions shall be determined by summing the hourly emissions (pounds per hour) for each calendar month
 - iv. Annual NO_x emissions shall be calculated as the rolling 12-month sum of monthly emissions .
 - v. For purposes of complying with the NO₂ (as NO_x) 3-hour contiguous rolling average limit in Section 2.1 A.7.d above, the Permittee may use the following options at startups and shutdowns only:
 - (A) At startup, the Permittee may use the CEM data to determine the pounds of NO_x emitted during the first three valid clock hours. The first 3-hour contiguous rolling average shall be calculated as the sum of the pounds of NO_x emitted during the first three valid clock hours divided by 3.
 - (B) At shutdown, the Permittee may use the CEM data to determine the pounds of NO_x emitted during the last three valid clock hours. The last 3-hour contiguous rolling average shall be calculated as the sum of the pounds of NO_x emitted during the last three valid clock hours divided by 3.

Ammonia (NH₃)

- l. To ensure proper operation of the SCR system (**ID No. CD-1A**), the Permittee shall monitor ammonia emissions and keep records as specified below:
 - i. The Permittee shall install, certify, operate and maintain a second NO_x CEMS with an ammonia (NH₃)/ nitric acid (NO) converter to monitor the ammonia slip, which shall be limited to 10 ppmv @ 15% O₂, 1- hr basis.
 - ii. The Permittee shall meet the requirements of 15A NCAC 02D .0611 and 15 A NCAC 02D .0613.
 - iii. The CEMS data shall be reduced to one-hour averages as specified in 40 CFR 60.13(h)(2).
 - iv. Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required, the CEMS shall be in continuous operation and shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.
 - v. Excess emissions shall be defined as the hourly ammonia emissions that exceed that exceed 10 ppmv @ 15% O₂, 1- hr basis.
 - vi. The Permittee shall maintain records of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices consistent with General Condition O in Section 4 below.

GHGs - CO₂

- m. The Permittee shall determine its CO₂ emissions according to 40 CFR Part 75 Appendix G. CO₂ emissions shall be determined on an hourly basis.

GHGs – nitrous oxide (N₂O) and methane (CH₄)

- n. The Permittee shall determine N₂O and CH₄ emissions on a daily basis. The Permittee shall use the respective and current AP-42 emission factors, or other emission factors as approved by NC DAQ, to determine the emissions. The Permittee shall calculate heat input consistent with 40 CFR Part 75 Appendix F.

Other recordkeeping

- o. In addition to any recordkeeping requirements above for each pollutant listed in Section 2.1 A.7.b, the Permittee shall calculate the emissions on a monthly and rolling 12-month basis and record them in a logbook (written or electronic format) consistent with General Condition O in Section 4 below.
- p. If the monitoring and recordkeeping requirements in Section 2.1 A.7.g through o above are not met or indicate an exceedance of any emission or operating limitations in Section 2.1 A.7.a through d above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

CEMS

- q. On a semiannual basis, the Permittee shall submit excess emissions and monitoring systems performance report for each of the CEMS required in Sections 2.1 A.7.j, k, and l above. The reports shall contain the information required in 40 CFR 60.7(c) and (d). The emissions and monitoring system performance results shall be calculated on a quarterly basis. The format for the report will be provided by the DAQ. The semiannual reports, acceptable to the Regional Air Quality Supervisor, shall be 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.

Other reporting requirements

- r. The Permittee shall submit a summary report of monitoring and recordkeeping activities given in Sections 2.1 A.7.g through o above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. The report shall include:
- i. the monthly emissions for each pollutant listed in Section 2.1 A.7.b. above for the previous 17 months;
 - ii. the rolling 12-month totals for each pollutant listed in Section 2.1 A.7.b. above for the previous 6 months;
 - iii. the monthly hours of startup and shut down operations;
 - iv. the rolling 12-month totals hours of startup and shut down operations for the previous 6 months;
 - v. the number of tuning events for the previous 17 months;
 - vi. the duration of each tuning event;
 - vii. the rolling 12-month totals of tuning events for the previous 6 months;
 - viii. for each startup that utilizes the procedures in Section 2.1 A.7.j.viii.(A) or Section 2.1 A.7.k.v.(A) above, the first 3-hour contiguous rolling average of NO_x or CO as applicable; and
 - ix. for each shutdown that utilizes the procedures in Section 2.1 A.7.j.viii.(B) or Section 2.1 A.7.k.v.(B) above, the last 3-hour contiguous rolling average of NO_x or CO as applicable.

8. 15A NCAC 02D .1418: NEW ELECTRIC GENERATING UNITS, BOILERS, COMBUSTION TURBINES, AND I/C ENGINES

- a. The emissions from the combustion turbine (**ID No. ES-1**) shall not exceed the emission limits for NO_x in Section 2.1 A.7.a. [15A NCAC 02D .1418(a)(2)]

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

- b. The following monitoring and recordkeeping requirements apply:
- i. The Permittee shall show compliance with Section 2.1 A.8.a above by using a NO_x CEMs that meets the requirements of 15A NCAC 02D .0404(d). The NO_x CEMs shall be installed before the first ozone season (i.e., the period beginning May 1 and ending September 30), in which the source will operate and shall be operated each day during the ozone season that the source operates. [15A NCAC 02D .1418(d)]
 - ii. The Permittee shall install, operate, and maintain a NO_x CEMs according to 40 CFR Part 75 Subpart H, with such exceptions as may be allowed under 40 CFR Part 75 Subpart H or 40 CFR Part 96. [15A NCAC 02D .1404(d)]
 - iii. The requirements of (i) and (ii) above apply from May 1 to September 30 of each year. [15A NCAC 02D .1402(b)]
- The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1418 if these monitoring and recordkeeping requirements are not met or show an exceedance of the limits in Section 2.1 A.8.a.

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

- c. On a semiannual basis, the Permittee shall submit an excess emissions and monitoring systems performance report for the CEMS required in Section 2.1 A.8.b.ii above. The reports shall contain the information required in 40 CFR 60.7(c) and (d). The emissions and monitoring system performance results shall be calculated on a quarterly basis. The format for the report will be provided by the DAQ. The semiannual reports shall be 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.

State-enforceable only

9. 15A NCAC 02D .1425: NOX SIP CALL BUDGET

The Permittee shall submit a report to the DAQ no later than January 30 of the calendar year after the NO_x SIP Call control period (i.e., May 1 through September 30) listing the NO_x emissions from this source (**ID No. ES-1**) during the NO_x SIP Call control period. The NO_x emissions in this report shall be determined in accordance with 40 CFR Part 75 Subpart H.

10. CROSS STATE AIR POLLUTION RULES (CSAPR) REQUIREMENTS

For the emission source (**ID Nos. ES-1**), the Permittee shall comply with all applicable requirements of 40 CFR Part 97, Subpart AAAAA, "CSAPR NO_x Annual Trading Program" and Subpart CCCCC, "CSAPR SO₂ Group 1 Trading Program."

B. The following combustion sources:

- **One natural gas-fired auxiliary boiler with low NO_x burners (42.8 million Btu per hour maximum heat input) (ID No. ES-2)**
- **One natural gas-fired fuel gas heater (9 million Btu per hour maximum heat input) (ID No. ES-3)**

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

| Pollutant | Limits/Standards | Applicable Regulation |
|--|--|--|
| PM | 0.20 pounds per million Btu heat input | 15A NCAC 02D .0503 |
| SO ₂ | 2.3 pounds per million Btu heat input | 15A NCAC 02D .0516 |
| Visible Emissions | 20 percent opacity | 15A NCAC 02D .0521 |
| NA | ID No. ES-2 only fuel recordkeeping | 15A NCAC 02D .0524 (40 CFR Part 60, Subpart Dc) |
| PM ₁₀ , PM _{2.5} , NO _x , VOC, CO, H ₂ SO ₄ , GHG | BACT Limitations See Sections 2.1 B.5 and 6 | 15A NCAC 02D .0530 |
| TAPs | State-enforceable only See Section 2.2 A.1 | 15A NCAC 02D .1100 |

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

- a. Emissions of particulate matter from the combustion of natural gas that are discharged from these sources (**ID Nos. ES-2 and ES-3**) into the atmosphere shall not exceed 0.20 pounds per million Btu heat input.

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

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 B.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503.

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

- c. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas in these sources (**ID Nos. ES-2 and ES-3**).

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

- a. Emissions of sulfur dioxide from these sources (**ID Nos. ES-2 and ES-3**) shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

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

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 B.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

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

- c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of natural gas in these sources (**ID Nos. ES-2 and ES-3**).

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

- a. Visible emissions from these sources (**ID Nos. ES-2 and ES-3**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

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

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 B.3.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

- c. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of natural gas in these sources (**ID Nos. ES-2 and ES-3**).

4. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS

- a. For the auxiliary boiler (**ID No. ES-2**), the Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart, Dc "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units," including Subpart A "General Provisions."

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

- b. Pursuant to 40 CFR 60.48c(g)(2), the Permittee shall record and maintain records of the amount of fuel combusted in this source (**ID No. ES-2**) during each calendar month. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these records are not maintained.

5. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

- a. The BACT permitted emission limits for the boiler (**ID No. ES-2**) are as follows:

| Regulated NSR Pollutant | BACT* | Control Technology |
|--------------------------------------|--|-----------------------------------|
| PM ₁₀ , PM _{2.5} | 0.007 lb/MMBtu | Exclusive natural gas-firing |
| H ₂ SO ₄ | 0.7 grains S per 100 SCF natural gas combusted | Exclusive natural gas-firing |
| NO _x | 9 ppmvd @ 3% O ₂ (0.011 lb/MMBtu) | Ultra-low NO _x burners |
| CO | 50 ppmvd @ 3% O ₂ (0.037 lb/MMBtu) | Good combustion practices |
| VOC | 0.005 lb/MMBtu | Good combustion practices |
| GHGs | 10,218 tpy of CO ₂ e | Exclusive natural gas-firing |

*The above limits apply at all times except during startup and shutdown.

- b. The boiler shall be limited to 4,000 hours of operation per year (12-month rolling total basis).
- c. The following limits are required in order to demonstrate compliance with the National Ambient Air Quality Standards and the PSD increments as required by 15A NCAC 02D .0530; 40 CFR 51.166(k):

| Regulated NSR Pollutant | Emission Rate (lb/hr) | | |
|-------------------------|-----------------------|---------------|----------------|
| | 1-hr average | 24-hr average | Annual average |
| PM _{2.5} | NA | 0.966 | * |
| NO ₂ | 1.52 ¹ | NA | * |
| CO | 5.11 | NA | NA |

* maximum project impacts were less than the respective SIL in the significant impact analysis

¹ lb/hr of NO_x

Testing [15A NCAC02Q .0508(f)]

- d. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test(s) are above the limit given in Section 2.1 B.5.a and c above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

H₂SO₄

- e. The Permittee shall demonstrate compliance with the H₂SO₄ emission limit by making demonstrations that the fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel specifies that the total sulfur content for natural gas is 0.7 grains of sulfur or less per 100 standard cubic feet. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if these recordkeeping requirements are not met or show an exceedance of the fuel sulfur limit in Section 2.1 B.5.a.

GHGs

- f. Each calendar month, the Permittee shall use current AP-42 emission factors, or other emission factors as approved NC DAQ, and fuel use to determine GHG emissions (as CO₂e) on a monthly and 12-month rolling basis. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if these recordkeeping requirements are not met or show an exceedance of the GHG limit in Section 2.1 B.5.a.

Other pollutants

- g. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate the boiler including associated in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if these operating practices are not met.
- h. To ensure compliance:
 - i. the Permittee shall perform inspections and maintenance as recommended by the manufacturer. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the boiler (**ID No. ES-2**) is not inspected and maintained.
 - ii. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - (A) the date and time of each recorded action;
 - (B) the results of each inspection;
 - (C) the results of any maintenance performed on the boiler (**ID No. ES-2**); and
 - (D) any variance from manufacturer's recommendations, if any, and corrections made.The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if these recordkeeping requirements are not met.

Operating Records

- i. The Permittee shall maintain records of the hours of operation of the boiler (**ID No. ES-2**). The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if this recordkeeping requirement is not met or shows an exceedance of the operating limit in Section 2.1 B.5.b.

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

All pollutants

- j. The Permittee shall submit a summary report of monitoring and recordkeeping activities given in Sections 2.1 B.5 e through i above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. The report shall include:
 - i. the monthly GHG emissions (CO₂e basis) for the previous 17 months;
 - ii. the rolling 12-month totals GHG emissions (CO₂e basis) for the previous 6 months;
 - iii. the monthly hours of operation of the boiler (**ID No. ES-2**) for the previous 17 months; and
 - iv. the rolling 12-month totals of hours of operation of boiler (**ID No. ES-2**) for the previous 6 months.

6. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. The BACT permitted emission limits for the fuel gas heater (**ID No. ES-3**) are as follows:

| Regulated NSR Pollutant | BACT | Control Technology |
|--------------------------------------|--|-----------------------------------|
| PM ₁₀ , PM _{2.5} | 0.007 lb/MMBtu | Exclusive natural gas-firing |
| H ₂ SO ₄ | 0.7 grains S per 100 SCF natural gas combusted | Exclusive natural gas-firing |
| NO _x | 9 ppmvd @ 3% O ₂ (0.011 lb/MMBtu) | Ultra-low NO _x burners |
| CO | 0.08 lb/MMBtu | Good combustion practices |
| VOC | 0.005 lb/MMBtu | Good combustion practices |
| GHGs | 4,705 tpy of CO ₂ e | Exclusive natural gas-firing |

b. The following limits are required in order to demonstrate compliance with the National Ambient Air Quality Standards and the PSD increments as required by 15A NCAC 02D .0530; 40 CFR 51.166(k):

| Pollutant | Emission Rate (lb/hr) | | |
|-------------------|-----------------------|---------------|----------------|
| | 1-hr average | 24-hr average | Annual average |
| PM _{2.5} | NA | 0.063 | * |
| NO ₂ | 0.099 | NA | * |
| CO | 0.72 | NA | NA |

* maximum project impacts were less than the respective SIL in the significant impact analysis

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

c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test(s) are above the limit given in Section 2.1 B.6.a and b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

H₂SO₄

d. The Permittee shall demonstrate compliance with the H₂SO₄ emission limit by making demonstrations that the fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel specifies that the total sulfur content for natural gas is 0.7 grains of sulfur or less per 100 standard cubic feet. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if these recordkeeping requirements are not met or show an exceedance of the fuel sulfur limit in Section 2.1 B.6.a.

GHGs

e. Each calendar month, the Permittee shall use current AP-42 emission factors, or other emission factors as approved NC DAQ, and fuel use to determine GHG emissions (as CO₂e) on a monthly and 12-month rolling basis. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if these recordkeeping requirements are not met or show an exceedance of the GHG limit in Section 2.1 B.6.a.

Other pollutants

f. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate the boiler including associated in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if these operating practices are not met.

- g. To ensure compliance:
 - i. the Permittee shall perform inspections and maintenance as recommended by the manufacturer. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the fuel gas heater (**ID No. ES-3**) is not inspected and maintained.
 - ii. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - (A) the date and time of each recorded action;
 - (B) the results of each inspection;
 - (C) the results of any maintenance performed on the fuel gas heater (**ID No. ES-3**); and
 - (D) any variance from manufacturer's recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if these recordkeeping requirements are not met.

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

- h. The Permittee shall submit a summary report of monitoring and recordkeeping activities given in Sections 2.1 B.6.d through g above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. The report shall include:
 - i. the monthly GHG emissions (CO₂e basis) for the previous 17 months;
 - ii. the rolling 12-month totals GHG emissions (CO₂e basis) for the previous 6 months;

C. The following engines:

- **One diesel fuel-fired standby emergency generator (1,528 maximum brake horsepower) (ID No. ES-4)**
- **One diesel fuel-fired emergency fire pump engine (260 maximum brake horsepower) (ID No. ES-5)**

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

| Pollutant | Limits/Standards | Applicable Regulation |
|--|---|---|
| Visible Emissions | 20 percent opacity | 15A NCAC 02D .0521 |
| Non-Methane hydrocarbons (NMHC) and NO _x , CO, PM, | Comply with the NSPS IIII emission standards by purchasing an engine certified to the applicable emission standards. The engine shall be installed and configured according to the manufacturer's emission-related specifications | 15A NCAC 02D .0524 (40 CFR Part 60, Subpart IIII) |
| PM ₁₀ , PM _{2.5} , NO _x , VOC, CO, H ₂ SO ₄ , GHG | BACT Limitations See Section 2.1 C.4 | 15A NCAC 02D .0530 |
| HAPs | Comply with the requirements of 15A NCAC 02D .0524 (40 CFR Part 60, Subpart IIII) | 15A NCAC 02D .1111 (40 CFR Part 63, Subpart ZZZZ) |

1. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources (**ID Nos. ES-4 and ES-5**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521 (d)]

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

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 C.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

- c. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of diesel fuel in these sources (**ID Nos. ES-4 and ES-5**).

2. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS

- a. For the emergency generator (**ID No. ES-4**) and fire pump engine (**ID No. ES-5**), the Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards (NSPS)" as promulgated in 40 CFR Part 60, Subpart IIII "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines," including Subpart A "General Provisions."

Definitions and Nomenclature

- b. For the purposes of this permit condition, the definitions and nomenclature contained in 40 CFR 60.4219 shall apply.

General Provisions

- c. The Permittee shall comply with the General Provisions of 40 CFR 60 Subpart A as presented in Table 8 of 40 CFR Part 60, Subpart IIII. [40 CFR 60.4218]

Emission Standards [15A NCAC 2Q .0508(b)]

- d. The following emission standards apply:
- i. For the engine (**ID No. ES-4**), the Permittee shall comply with the emission standards 40 CFR 60.4202 for all

- pollutants, for the same model year and maximum engine power for this engine. [40 CFR 60.4205(b)]
- ii. For the engine (**ID No. ES-5**), the Permittee shall comply with the emission standards in Table 4 of 40 CFR Part 60, Subpart IIII for all pollutants, for the same model year and maximum engine power for this engine. [40 CFR 60.4205(c)]

Fuel Requirements [15A NCAC 2Q .0508(b)]

- e. The Permittee shall use diesel fuel in the engines that meets the requirements of 40 CFR 1090.305 including:
 - i. a maximum sulfur content of 15 ppm; and
 - ii. a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.[40 CFR 60.4207(b)]

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

- f. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limits given in Section 2.1 C.2.d and e above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

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

- g. The engines (**ID Nos. ES-4 and ES-5**) shall be equipped with a non-resettable hour meter prior to startup. [40 CFR 60.4209(a)] The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if this monitoring requirement is not met.

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

- h. The Permittee shall:
 - i. operate and maintain the engines (**ID Nos. ES-4 and ES-5**) according to the manufacturer's emission related-written instructions over the entire life of the engine;
 - ii. change only those emission-related settings that are permitted by the manufacturer; and
 - iii. meet the requirements of 40 CFR 89, 94 and/or 1068 as applicable.[40 CFR 60.4206 and 60.4211(a)]
- i. The Permittee shall comply with the emission standards in Section 2.1 C.2.d by purchasing an engine certified to the emission standards in Section 2.1 C.2.d for the same model year and maximum engine power. The engine shall be installed and configured according to the manufacturer's emission-related specifications. [40 CFR 60.4211(c)]
- j. In order for the engine to be considered an emergency stationary ICE as defined in Section 2.1 C.2.b, any operation other than emergency operation, maintenance and testing and operation in non-emergency situations for 50 hours per year, as described below, is prohibited.
 - i. There is no time limit on the use of emergency stationary ICE in emergency situations.
 - ii. The Permittee may operate the emergency stationary ICE for any combination of the purposes specified in paragraph (A) below for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (iii) below counts as part of the 100 hours per calendar year allowed by this paragraph (ii).
 - (A) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.
 - iii. Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph (ii) above. Except as provided in paragraph (A) below, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.
 - (A) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:
 - (1) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;

- (2) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.
- (3) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.
- (4) The power is provided only to the facility itself or to support the local transmission and distribution system.
- (5) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[40 CFR 60.4211(f)]

- k. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the compliance requirements in Section 2.1 C.3.h through j are not met.

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

- l. The following records shall be maintained:
 - i. The results of inspection and maintenance made pursuant to Section 2.1 C.2.h 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:
 - (A) the date and time of each recorded action;
 - (B) the results of each inspection;
 - (C) the results of any maintenance performed on the engine;
 - (D) any variance from manufacturer's recommendations, if any, and corrections made;
 - (E) the hours of operation of the engine in emergency and non-emergency service [40 CFR 60.4214(b)]; and
 - (F) if a PM filter is used, records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached [40 CFR 60.4214(c)];
 - ii. documentation from the manufacturer that the engine is certified to meet the emission standards in Section 2.1 C.2.d; and
 - iii. records showing the fuel combusted meets the requirements in Section 2.1 C.2.e.The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these recordkeeping requirements are not met.

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

- m. The Permittee shall meet the following reporting requirements:
 - i. The Permittee shall submit a summary report of monitoring and recordkeeping activities given in Section 2.1 C.2.1 above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of noncompliance with the requirements of this permit shall be clearly identified.
 - ii. If the Permittee owns or operates an emergency stationary CI ICE with a maximum engine power more than 100 horsepower that operates for the purposes specified in Section 2.1 C.2.j.iii(A), the Permittee shall submit an annual report according to the requirements at 40 CFR 60.4214(d). This report must be submitted to the Regional Supervisor and the EPA. [40 CFR 60.4214(d)] The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if this reporting requirement is not met.

3. 15A NCAC 02D .1111 MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

- a. For the engines (**ID Nos. ES-4 and ES-5**) the Permittee shall comply with all applicable provisions, including the notification, testing, monitoring, recordkeeping, and reporting requirements contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR Part 63, Subpart ZZZZ "National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines" and Subpart A "General Provisions."

Stationary RICE subject to Regulations under 40 CFR Part 60 [15A NCAC 2Q. 0508(f)]

- b. Pursuant to 40 CFR 63.6590(c)(1), these sources must meet the requirements of 40 CFR Part 63, Subpart ZZZZ and Subpart A by meeting the requirements of 40 CFR Part 60, Subpart IIII as specified in Section 2.1.C.2 above. No further requirements apply for these engines under 40 CFR Part 63, Subpart ZZZZ and Subpart A. If these requirements are not met, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111.

4. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. The BACT permitted emission limits for the emergency generator (**ID No. ES-4**) are as follows:

| Regulated NSR Pollutant | BACT | Control Method |
|--------------------------------------|------------------------------------|--|
| PM ₁₀ , PM _{2.5} | 0.2 g/kW-hr | Good combustion practices |
| H ₂ SO ₄ | 15 ppm maximum fuel sulfur content | Exclusive ultra-low sulfur fuel-firing |
| NO _x VOC | 6.4 g/kW-hr, NO _x +NMHC | Good combustion practices |
| CO | 3.5 g/kW-hr | Good combustion practices |
| GHGs | 449 tpy of CO _{2e} | Good combustion practices |

b. The BACT permitted emission limits for the fire pump engine (**ID No. ES-5**) are as follows:

| Regulated NSR Pollutant | BACT | Control Method |
|--------------------------------------|------------------------------------|--|
| PM ₁₀ / PM _{2.5} | 0.2 g/kW-hr | Good combustion practices |
| H ₂ SO ₄ | 15 ppm maximum fuel sulfur content | Exclusive ultra-low sulfur fuel-firing |
| NO _x VOC | 4.0 g/kW-hr, NO _x +NMHC | Good combustion practices |
| CO | Good combustion practices | Good combustion practices |
| GHGs | 75 tpy of CO _{2e} | Good combustion practices |

c. The following limits are required in order to demonstrate compliance with the National Ambient Air Quality Standards and the PSD increments for the emergency generator (**ID No. ES-4**) as required by 15A NCAC 02D .0530; 40 CFR 51.166(k):

| Regulated NSR Pollutant | Emission Rate (lb/hr) | | |
|--------------------------------------|-----------------------|---------------|----------------|
| | 1-hr average | 24-hr average | Annual average |
| PM ₁₀ / PM _{2.5} | NA | 4.25E-03 | * |
| NO ₂ | 10.3 | NA | * |
| CO | 1.33 | NA | NA |

* maximum project impacts were less than the respective SIL in the significant impact analysis

d. The following limits are required in order to demonstrate compliance with the National Ambient Air Quality Standards and the PSD increments for the fire pump engine (**ID No. ES-5**) as required by 15A NCAC 02D .0530; 40 CFR 51.166(k):

| Regulated NSR Pollutant | Emission Rate (lb/hr) | | |
|--------------------------------------|-----------------------|---------------|----------------|
| | 1-hr average | 24-hr average | Annual average |
| PM ₁₀ / PM _{2.5} | NA | 1.78E-03 | * |
| NO ₂ | 0.855 | NA | * |
| CO | 0.34 | NA | NA |

* maximum project impacts were less than the respective SIL in the significant impact analysis

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

e. The Permittee shall limit the operation of these engines (**ID Nos. ES-4 and ES -5**) as follows:

- i. Operation of each engine shall be limited to 30 minutes per hour of non-emergency operation; and
- ii. The engines shall not operate simultaneously during non-emergency operation.

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

- f. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limits given in Section 2.1 C.4.a through d above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

- g. The following recordkeeping requirements apply:
 - i. The Permittee shall meet the monitoring, recordkeeping and reporting requirements of NSPS IIII for each engine (**ID Nos. ES-4 and ES -5**), as required in Section 2.1.C.2 above.
 - ii. The Permittee shall maintain records of the date, time and duration of the non-emergency operation of each engine (**ID Nos. ES-4 and ES -5**). The records shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request.

If these recordkeeping requirements are not met, or show an exceedance of the emission limits or operating restrictions in Section 2.1 C.4.a through e above , the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

- h. The Permittee shall submit a summary report of monitoring and recordkeeping activities given in Section 2.1 C.4.g above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of noncompliance with the requirements of this permit shall be clearly identified. The report shall also include the date, time and duration of the non-emergency operation of each engine (**ID Nos. ES-4 and ES -5**).

D. One multi-cell cooling tower (175,000 gallon per minute maximum recirculating flow rate) (ID No. ES-6) controlled by a mist eliminator (0.0005 percent drift loss) (ID No. CD-6)

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

| Pollutant | Limits/Standards | Applicable Regulation |
|--------------------------------------|--|-----------------------|
| Visible emissions | 20 percent opacity | 15A NCAC 02D .0521 |
| PM ₁₀ , PM _{2.5} | BACT Limitations See Sections 2.1 D.2 | 15A NCAC 02D .0530 |

1. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

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

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

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 D.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

- c. No monitoring/recordkeeping/reporting is required for visible emissions from this source (ID No. ES-6).

2. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

- a. According to BACT for the cooling tower (ID Nos. ES-6), the Permittee shall not operate the cooling tower without the concurrent operation of the associated mist eliminator (ID No. CD-6) with a 0.0005 percent drift loss.
- b. The following limits are required in order to demonstrate compliance with the National Ambient Air Quality Standards and the PSD increments as required by 15A NCAC 02D .0530; 40 CFR 51.166(k):

| Regulated NSR Pollutant | Emission Rate (lb/hr) | | |
|----------------------------|-----------------------|---------------|----------------|
| | 1-hr average | 24-hr average | Annual average |
| PM _{2.5} | NA | 1.87E-03 | * |
| PM ₁₀ | NA | * | * |

* maximum project impacts were less than the respective SIL in the significant impact analysis

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

- c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 D.2.a or b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

- d. To ensure compliance, the Permittee shall perform inspections and maintenance on the mist eliminator (ID No. CD-6) as recommended by the manufacturer. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the mist eliminator is not inspected and maintained.
- e. The results of inspections and maintenance mist on the mist eliminator (ID No. CD-6) shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each inspection;
 - iii. the results of any maintenance performed on the mist eliminator; and
 - iv. any variance from manufacturer’s recommendations, if any, and corrections made.
 The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if these records are not maintained.

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

- f. The Permittee shall submit the results of any maintenance performed on the mist eliminator (**ID No. CD-6**) within 30 days of a written request by the DAQ.

DRAFT

2.2 Multiple Emission Source(s) Specific Limitations and Conditions

A. Multiple Emission Sources

State Enforceable Only

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

a. Pursuant to 15A NCAC 02D .1100 the following emission limits shall not be exceeded:

| Emission Source | Allowable Emission Rates | | | | | |
|--|--------------------------|------------|------------|--------------|---------------|-------------|
| | Arsenic | Benzene | Cadmium | Formaldehyde | Sulfuric Acid | Ammonia* |
| Natural gas-fired combined-cycle combustion turbine with duct burner (ID No. ES-1) | 12 lb/yr | 630 lb/yr | 61 lb/yr | 1.17 lb/hr | 5.52 lb/hr | 2,400 lb/hr |
| Natural Gas-fired Auxiliary Boiler (ID No. ES-2) | 0.22 lb/yr | 2.28 lb/yr | 1.18 lb/yr | 0.02 lb/hr | 0.06 lb/hr | NA |
| Natural Gas-fired Fuel Gas Heater (ID No. ES-3) | 0.03 lb/yr | 0.32 lb/yr | 0.17 lb/yr | 0.003 lb/hr | 0.004 lb/hr | NA |

* ammonia limit revised pursuant to application no. 2300383.19A

b. The Permittee has submitted toxic air pollutant dispersion modeling analyses dated October 22, 2014 and February 20, 2015 for the facility’s toxic air pollutant emissions as listed in the above table. The modeling analyses were reviewed and approved by the AQAB on February 13, 2015 and February 24, 2015, respectively. Placement of the emission sources, configuration of the emission points, and operation of the sources shall be in accordance with the submitted dispersion modeling analyses and should reflect any changes from the original analyses submittal as outlined in the AQAB review memos.

Monitoring/Recordkeeping/Reporting [15A NCAC 02D .0308(a)]

c. No monitoring, recordkeeping or reporting is required.

B. Facility-wide Fugitive Emission Sources

1. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

- a. According to BACT for the GHG (i.e., CH₄) emissions associated with fugitive emissions of natural gas, the Permittee shall conduct daily audio/visual/olfactory (AVO) walk-through inspections. If the fugitive emissions of natural gas are observed, the Permittee shall take appropriate action as soon as practicable, considering appropriate and reasonable health and safety precautions, and record the action taken as provided in the recordkeeping requirements below.

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

- b. The results of walk-through inspections shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date of each walk-through inspection; and,
 - ii. the observations of each walk-through inspection.The Permittee shall also record corrective actions taken for any observed fugitive emissions of natural gas. If these monitoring and recordkeeping requirements are not met or do not show compliance with the requirements in Section 2.2 B.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

- c. The Permittee shall submit a summary report of monitoring and recordkeeping activities given in Section 2.2 B.1.b above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

- a. According to BACT for the GHG emissions associated with fugitive sulfur hexafluoride emissions (SF₆), the Permittee will use enclosed circuit breakers with leak detection that meet ANSI standard C37.013; and the enclosures shall be equipped with low pressure alarms and low-pressure lockout mechanisms.

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

- b. The Permittee shall calculate, for each month of facility operation, the SF₆ emissions according to procedures of 40 CFR 98 Subpart DD. The results of the calculations of the SF₆ emissions, including on a CO₂e basis, shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. If these monitoring and recordkeeping requirements are not met, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

- c. The Permittee shall submit a summary report of monitoring and recordkeeping activities given in Section 2.2. B.2.b above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. The report shall include:
 - i. the monthly GHG emissions (CO₂e basis) for the previous 17 months; and
 - ii. the rolling 12-month totals GHG emissions (CO₂e basis) for the previous 6 months.

2.3- Phase II Acid Rain Permit Requirements

ORIS code: 59325

Effective: MM DD, YYYY until MM DD, YYYY+5 (*align dates with page 1 of draft permit*)

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 Division of Air Quality issues this permit pursuant to Title 15A North Carolina Administrative Codes, Subchapter 02Q .0400 and 02Q .0500, and other applicable Laws.

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

| | | |
|------------------|--|--|
| Unit ID No. ES-1 | SO ₂ allowances, under Tables 2, 3, or 4 of 40 CFR part 73. | SO ₂ allowances are not allocated by U.S. EPA for new units under 40 CFR Part 72. |
| | NO _x limit | Does not apply to gas or oil-fired units. |

3. Comments, Notes and Justifications

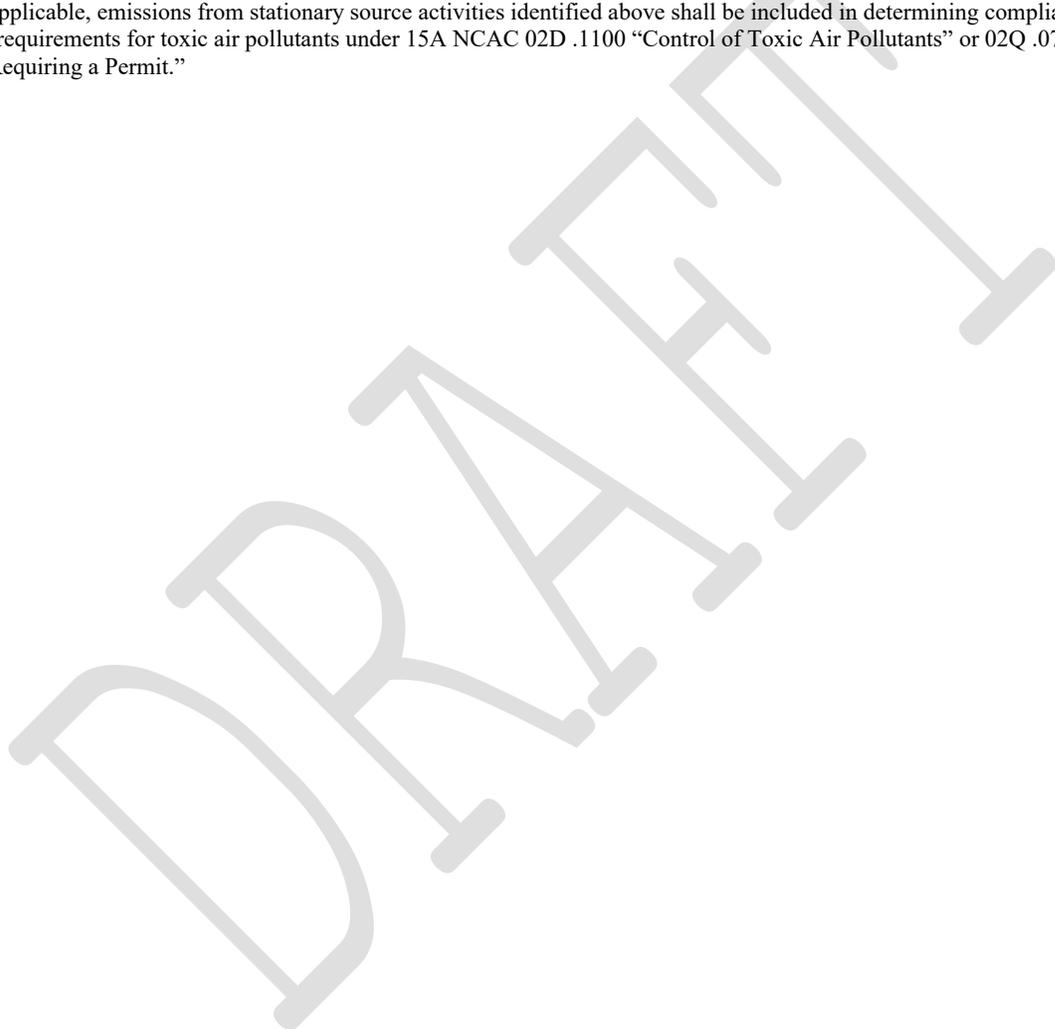
Acid Rain Permit application dated June 11, 2015 is included as an Attachment to this permit.

SECTION 3 - INSIGNIFICANT ACTIVITIES PER 15A NCAC 02Q .0503(8)

| Emission Source ID No. | Emission Source Description ^{1,2} |
|------------------------|---|
| I-1 | Lube Oil Storage System (15,000 gallon capacity) |
| I-2 | Diesel Fuel Storage Tank (5,000 gallon capacity) |
| I-3 | Fire Pump Engine Diesel Fuel Day Use Tank (300 gallon capacity) |

¹ Because an activity is insignificant does not mean that the activity is exempted from an applicable requirement (Federal or State) or that the Permittee is exempted from demonstrating compliance with any applicable requirement.

² When applicable, emissions from stationary source activities identified above shall be included in determining compliance with the permit requirements for toxic air pollutants under 15A NCAC 02D .1100 "Control of Toxic Air Pollutants" or 02Q .0711 "Emission Rates Requiring a Permit."



SECTION 4 - GENERAL CONDITIONS (version 6.0, 01/07/2022)

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

- A. **General Provisions** [NCGS 143-215 and 15A NCAC 02Q .0508(i)(16)]
1. Terms not otherwise defined in this permit shall have the meaning assigned to such terms as defined in 15A NCAC 02D and 02Q.
 2. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are binding and enforceable pursuant to NCGS 143-215.114A and 143-215.114B, including assessment of civil and/or criminal penalties. Any unauthorized deviation from the conditions of this permit may constitute grounds for revocation and/or enforcement action by the DAQ.
 3. This permit is not a waiver of or approval of any other Department permits that may be required for other aspects of the facility which are not addressed in this permit.
 4. This permit does not relieve the Permittee from liability for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted facility, or from penalties therefore, nor does it allow the Permittee to cause pollution in contravention of state laws or rules, unless specifically authorized by an order from the North Carolina Environmental Management Commission.
 5. Except as identified as state-only requirements in this permit, all terms and conditions contained herein shall be enforceable by the DAQ, the EPA, and citizens of the United States as defined in the Federal Clean Air Act.
 6. Any stationary source of air pollution shall not be operated, maintained, or modified without the appropriate and valid permits issued by the DAQ, unless the source is exempted by rule. The DAQ may issue a permit only after it receives reasonable assurance that the installation will not cause air pollution in violation of any of the applicable requirements. A permitted installation may only be operated, maintained, constructed, expanded, or modified in a manner that is consistent with the terms of this permit.
- B. **Permit Availability** [15A NCAC 02Q .0507(k) and .0508(i)(9)(B)]
The Permittee shall have available at the facility a copy of this permit and shall retain for the duration of the permit term one complete copy of the application(s) and any information submitted in support of the application package. The permit and application shall be made available to an authorized representative of Department of Environmental Quality upon request.
- C. **Severability Clause** [15A NCAC 02Q .0508(i)(2)]
In the event of an administrative challenge to a final and binding permit in which a condition is held to be invalid, the provisions in this permit are severable so that all requirements contained in the permit, except those held to be invalid, shall remain valid and must be complied with.
- D. **Submissions** [15A NCAC 02Q .0507(e) and 02Q .0508(i)(16)]
Except as otherwise specified herein, two copies of all documents, reports, test data, monitoring data, notifications, request for renewal, and any other information required by this permit shall be submitted to the appropriate Regional Office. Refer to the Regional Office address on the cover page of this permit. For continuous emissions monitoring systems (CEMS) reports, continuous opacity monitoring systems (COMS) reports, quality assurance (QA)/quality control (QC) reports, acid rain CEM certification reports, and NOx budget CEM certification reports, one copy shall be sent to the appropriate Regional Office and one copy shall be sent to:
- Supervisor, Stationary Source Compliance
North Carolina Division of Air Quality
1641 Mail Service Center
Raleigh, NC 27699-1641
- All submittals shall include the facility name and Facility ID number (refer to the cover page of this permit).
- E. **Duty to Comply** [15A NCAC 02Q .0508(i)(3)]
The Permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Noncompliance with any permit condition except conditions identified as state-only requirements constitutes a violation of the Federal Clean Air Act. Noncompliance with any permit condition is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

F. **Circumvention** - STATE ENFORCEABLE ONLY

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

G. **Title V Permit Modifications**

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

H. **Changes Not Requiring Permit Modifications**

1. Reporting Requirements [15A NCAC 02Q .0508(f)]
Any of the following that would result in new or increased emissions from the emission source(s) listed in Section 1 must be reported to the Regional Supervisor, DAQ:
 - a. changes in the information submitted in the application;
 - b. changes that modify equipment or processes; or
 - c. changes in the quantity or quality of materials processed.If appropriate, modifications to the permit may then be made by the DAQ to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause a violation of the emission limitations specified herein.
2. Section 502(b)(10) Changes [15A NCAC 02Q .0523(a)]
 - a. "Section 502(b)(10) changes" means changes that contravene an express permit term or condition. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
 - b. The Permittee may make Section 502(b)(10) changes without having the permit revised if:
 - i. the changes are not a modification under Title I of the Federal Clean Air Act;
 - ii. the changes do not cause the allowable emissions under the permit to be exceeded;
 - iii. the Permittee notifies the Director and EPA with written notification at least seven days before the change is made; and
 - iv. the Permittee shall attach the notice to the relevant permit.
 - c. The written notification shall include:
 - i. a description of the change;
 - ii. the date on which the change will occur;
 - iii. any change in emissions; and
 - iv. any permit term or condition that is no longer applicable as a result of the change.
 - d. Section 502(b)(10) changes shall be made in the permit the next time that the permit is revised or renewed, whichever comes first.
3. Off Permit Changes [15A NCAC 02Q .0523(b)]
The Permittee may make changes in the operation or emissions without revising the permit if:
 - a. the change affects only insignificant activities and the activities remain insignificant after the change; or
 - b. the change is not covered under any applicable requirement.
4. Emissions Trading [15A NCAC 02Q .0523(c)]
To the extent that emissions trading is allowed under 15A NCAC 02D, including subsequently adopted maximum achievable control technology standards, emissions trading shall be allowed without permit revision pursuant to 15A NCAC 02Q .0523(c).

I.A. Reporting Requirements for Excess Emissions [15A NCAC 02D .0535(f) and 02Q .0508(f)(2)]

1. **"Excess Emissions"** - means an emission rate that exceeds any applicable emission limitation or standard allowed by any rule in Sections .0500, .0900, .1200, or .1400 of Subchapter 02D; or by a permit condition; or that exceeds an emission limit established in a permit issued under 15A NCAC 02Q .0700. *(Note: Definitions of excess emissions under 02D .1110 and 02D .1111 shall apply where defined by rule.)*
2. If a source is required to report excess emissions under NSPS (15A NCAC 02D .0524), NESHAPS (15A NCAC 02D .1110 or .1111), or the operating permit provides for periodic (e.g., quarterly) reporting of excess emissions, reporting shall be performed as prescribed therein.
3. If the source is not subject to NSPS (15A NCAC 02D .0524), NESHAPS (15A NCAC 02D .1110 or .1111), or these rules do NOT define "excess emissions," the Permittee shall report excess emissions in accordance with 15A NCAC 02D .0535 as follows:
 - a. Pursuant to 15A NCAC 02D .0535, if excess emissions last for more than four hours resulting from a malfunction, a breakdown of process or control equipment, or any other abnormal condition, the owner or operator shall:
 - i. notify the Regional Supervisor or Director of any such occurrence by 9:00 a.m. Eastern Time of the Division's next business day of becoming aware of the occurrence and provide:
 - name and location of the facility;
 - nature and cause of the malfunction or breakdown;
 - time when the malfunction or breakdown is first observed;
 - expected duration; and
 - estimated rate of emissions;
 - ii. notify the Regional Supervisor or Director immediately when corrective measures have been accomplished; and
 - iii. submit to the Regional Supervisor or Director within 15 days a written report as described in 15A NCAC 02D .0535(f)(3).

I.B. Reporting Requirements for Permit Deviations [15A NCAC 02D .0535(f) and 02Q .0508(f)(2)]

1. **"Permit 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.
2. Pursuant to 15A NCAC 02Q .0508(f)(2), the Permittee shall report deviations from permit requirements (terms and conditions) quarterly by notifying the Regional Supervisor or Director of all other deviations from permit requirements not covered under 15A NCAC 02D .0535. 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.C. Other Requirements under 15A NCAC 02D .0535

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

1. Any excess emissions that do not occur during start-up and shut-down shall be considered a violation of the appropriate rule unless the owner or operator of the sources demonstrates to the Director that the excess emissions are a result of a malfunction. The Director shall consider, along with any other pertinent information, the criteria contained in 15A NCAC 02D .0535(c)(1) through (7).
2. 15A NCAC 02D .0535(g). Excess emissions during start-up and shut-down shall be considered a violation of the appropriate rule if the owner or operator cannot demonstrate that excess emissions are unavoidable.

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

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

1. An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the facility, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the facility to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.
2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions specified in 3. below are met.
3. The affirmative defense of emergency shall be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that include information as follows:
 - a. an emergency occurred and the Permittee can identify the cause(s) of the emergency;
 - b. the permitted facility was at the time being properly operated;

- c. during the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the standards or other requirements in the permit; and
 - d. the Permittee submitted notice of the emergency to the DAQ within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
 5. This provision is in addition to any emergency or upset provision contained in any applicable requirement specified elsewhere herein.

K. **Permit Renewal** [15A NCAC 02Q .0508(e) and 02Q .0513(b)]

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

L. **Need to Halt or Reduce Activity Not a Defense** [15A NCAC 02Q .0508(i)(4)]

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

M. **Duty to Provide Information (submittal of information)** [15A NCAC 02Q .0508(i)(9)]

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

N. **Duty to Supplement** [15A NCAC 02Q .0507(f)]

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

O. **Retention of Records** [15A NCAC 02Q .0508(f) and 02Q .0508(l)]

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

P. **Compliance Certification** [15A NCAC 02Q .0508(n)]

The Permittee shall submit to the DAQ and the EPA (Air Enforcement Branch, EPA, Region 4, 61 Forsyth Street SW, Atlanta, GA 30303 or through the EPA CEDRI) postmarked on or before March 1 a compliance certification (for the preceding calendar year) by a responsible official with all terms and conditions in the permit (including emissions limitations, standards, or work practices), except for conditions identified as being State-enforceable Only. 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;
4. the method(s) used for determining the compliance status of the source during the certification period;

5. each deviation and take it into account in the compliance certification; and
6. as possible exceptions to compliance, any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 (CAM) occurred.

Q. **Certification by Responsible Official** [15A NCAC 02Q .0520]

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

R. **Permit Shield for Applicable Requirements** [15A NCAC 02Q .0512]

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

S. **Termination, Modification, and Revocation of the Permit** [15A NCAC 02Q .0519]

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

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

T. **Insignificant Activities** [15A NCAC 02Q .0503]

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

U. **Property Rights** [15A NCAC 02Q .0508(i)(8)]

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

V. **Inspection and Entry** [15A NCAC 02Q .0508(l) and NCGS 143-215.3(a)(2)]

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

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

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

W. **Annual Fee Payment** [15A NCAC 02Q .0508(i)(10)]

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

X. **Annual Emission Inventory Requirements** [15A NCAC 02Q .0207]

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

Y. **Confidential Information** [15A NCAC 02Q .0107 and 02Q .0508(i)(9)]

Whenever the Permittee submits information under a claim of confidentiality pursuant to 15A NCAC 02Q .0107, the Permittee may also submit a copy of all such information and claim directly to the EPA upon request. All requests for confidentiality must be in accordance with 15A NCAC 02Q .0107.

Z. **Construction and Operation Permits** [15A NCAC 02Q .0100 and .0300]

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

AA. **Standard Application Form and Required Information** [15A NCAC 02Q .0505 and .0507]

The Permittee shall submit applications and required information in accordance with the provisions of 15A NCAC 02Q .0505 and .0507.

BB. **Financial Responsibility and Compliance History** [15A NCAC 02Q .0507(d)(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 02Q .0501(d)]

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

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

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

EE. **National Emission Standards Asbestos – 40 CFR Part 61, Subpart M** [15A NCAC 02D .1110]

The Permittee shall comply with all applicable standards for demolition and renovation activities pursuant to the requirements of 40 CFR Part 61, Subpart M. The permittee shall not be required to obtain a modification of this permit in order to perform the referenced activities.

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

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

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

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

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

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

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

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

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

Emission compliance testing shall be by the procedures of Section .2600, except as may be otherwise required in Rules .0524, .1110, or .1111 of Subchapter 02D. If emissions testing is required by this permit or the DAQ or if the Permittee submits emissions testing to the DAQ to demonstrate compliance for emission sources subject to Rules .0524, .1110, or .1111, the Permittee shall provide and submit all notifications, conduct all testing, and submit all test reports in accordance with the requirements of 15A NCAC 02D .0524, .1110, or .1111, as applicable. Otherwise, if emissions testing is required by this permit or the DAQ or if the Permittee submits emissions testing to the DAQ to demonstrate compliance, the Permittee shall perform such testing in accordance with 15A NCAC 02D .2600 and follow the procedures outlined below:

1. The owner or operator of the source shall arrange for air emission testing protocols to be provided to the Director prior to air pollution testing. Testing protocols are not required to be pre-approved by the Director prior to air pollution testing. The Director shall review air emission testing protocols for pre-approval prior to testing if requested by the owner or operator at least **45 days** before conducting the test.
2. Any person proposing to conduct an emissions test to demonstrate compliance with an applicable standard shall notify the Director at least **15 days** before beginning the test so that the Director may at his option observe the test.
3. The owner or operator of the source shall arrange for controlling and measuring the production rates during the period of air testing. The owner or operator of the source shall ensure that the equipment or process being tested is operated at the production rate that best fulfills the purpose of the test. The individual conducting the emission test shall describe the procedures used to obtain accurate process data and include in the test report the average production rates determined during each testing period.
4. Two copies of the final air emission test report shall be submitted to the Director not later than **30 days** after sample collection unless otherwise specified in the specific conditions. The owner or operator may request an extension to submit the final test report. The Director shall approve an extension request if he finds that the extension request is a result of actions beyond the control of the owner or operator.
 - a. The Director shall make the final determination regarding any testing procedure deviation and the validity of the compliance test. The Director may:
 - i. Allow deviations from a method specified under a rule in this Section if the owner or operator of the source being tested demonstrates to the satisfaction of the Director that the specified method is inappropriate for the source being tested.
 - ii. Prescribe alternate test procedures on an individual basis when he finds that the alternative method is necessary to secure more reliable test data.
 - iii. Prescribe or approve methods on an individual basis for sources or pollutants for which no test method is specified in 15A NCAC 02D .2600 if the methods can be demonstrated to determine compliance of permitted emission sources or pollutants.
 - b. The Director may authorize the DAQ to conduct independent tests of any source subject to a rule in 15A NCAC 02D to determine the compliance status of that source or to verify any test data submitted relating to that source.

Any test conducted by the Division of Air Quality using the appropriate testing procedures described in 15A NCAC 02D .2600 has precedence over all other tests.

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

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

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

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

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

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

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

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

1. For modifications made pursuant to 15A NCAC 02Q .0501(b)(2), the Permittee shall file a Title V Air Quality Permit Application for the air emission source(s) and associated air pollution control device(s) on or before 12 months after commencing operation.
2. For modifications made pursuant to 15A NCAC 02Q .0501(c)(2), the Permittee shall not begin operation of the air emission source(s) and associated air pollution control device(s) until a Title V Air Quality Permit Application is filed and a construction and operation permit following the procedures of Section .0500 (except for Rule .0504 of this Section) is obtained.
3. For modifications made pursuant to 502(b)(10), in accordance with 15A NCAC 02Q .0523(a)(1)(C), the Permittee shall notify the Director and EPA (Air Permitting Branch, EPA, Region 4, 61 Forsyth Street SW, Atlanta, GA 30303 or through the EPA CEDRI) in writing at least seven days before the change is made.
 - a. The written notification shall include:
 - i. a description of the change at the facility;
 - 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.

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

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

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

DRAFT

ATTACHMENT

Phase II Acid Rain Permit Application (attached)

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

DRAFT

Permit Requirements

STEP 3

Read the standard requirements.

(1) The designated representative of each affected source and each affected unit at the source shall:

(i) Submit a complete Acid Rain permit application (including a compliance plan) under 40 CFR part 72 in accordance with the deadlines specified in 40 CFR 72.30; and

(ii) Submit in a timely manner any supplemental information that the permitting authority determines is necessary in order to review an Acid Rain permit application and issue or deny an Acid Rain permit;

(2) The owners and operators of each affected source and each affected unit at the source shall:

(i) Operate the unit in compliance with a complete Acid Rain permit application or a superseding Acid Rain permit issued by the permitting authority; and

(ii) Have an Acid Rain Permit.

Monitoring Requirements

(1) The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75.

(2) The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the source or unit, as appropriate, with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.

(3) The requirements of 40 CFR part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

Sulfur Dioxide Requirements

(1) The owners and operators of each source and each affected unit at the source shall:

(i) Hold allowances, as of the allowance transfer deadline, in the source's compliance account (after deductions under 40 CFR 73.34(c)), not less than the total annual emissions of sulfur dioxide for the previous calendar year from the affected units at the source; and

(ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.

(2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.

(3) An affected unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:

(i) Starting January 1, 2000, an affected unit under 40 CFR 72.6(a)(2); or

(ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3).

Sulfur Dioxide Requirements, Cont'd.

STEP 3, Cont'd.

(4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.

(5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.

(6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.

(7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

Nitrogen Oxides Requirements

The owners and operators of the source and each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

Excess Emissions Requirements

(1) The designated representative of an affected source that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77.

(2) The owners and operators of an affected source that has excess emissions in any calendar year shall:

(i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and

(ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77.

Recordkeeping and Reporting Requirements

(1) Unless otherwise provided, the owners and operators of the source and each affected unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator or permitting authority:

(i) The certificate of representation for the designated representative for the source and each affected unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission

of a new certificate of representation changing the designated representative;

STEP 3, Cont'd. Recordkeeping and Reporting Requirements, Cont'd.

- (ii) All emissions monitoring information, in accordance with 40 CFR part 75, provided that to the extent that 40 CFR part 75 provides for a 3-year period for recordkeeping, the 3-year period shall apply.
 - (iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,
 - (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.
- (2) The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR part 72 subpart I and 40 CFR part 75.

Liability

- (1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.
- (2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.
- (3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
- (4) Each affected source and each affected unit shall meet the requirements of the Acid Rain Program.
- (5) Any provision of the Acid Rain Program that applies to an affected source (including a provision applicable to the designated representative of an affected source) shall also apply to the owners and operators of such source and of the affected units at the source.
- (6) Any provision of the Acid Rain Program that applies to an affected unit (including a provision applicable to the designated representative of an affected unit) shall also apply to the owners and operators of such unit.
- (7) Each violation of a provision of 40 CFR parts 72, 73, 74, 75, 76, 77, and 78 by an affected source or affected unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

Effect on Other Authorities

No provision of the Acid Rain Program, an Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 shall be construed as:

- (1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an affected source or affected unit from compliance with

Kings Mountain Energy Center
Facility (Source) Name (from STEP 1)

any other provision of the Act, including the provisions of title I of the Act relating

STEP 3, Cont'd.

Effect on Other Authorities, Cont'd.

- to applicable National Ambient Air Quality Standards or State Implementation Plans;
- (2) Limiting the number of allowances a source can hold; *provided*, that the number of allowances held by the source shall not affect the source's obligation to comply with any other provisions of the Act;
- (3) Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;
- (4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,
- (5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

STEP 4
Read the certification statement, sign, and date.

Certification

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

| | |
|---|-------------|
| Name Mark Mirabito | |
| Signature  | Date 6/5/15 |