



NORTH CAROLINA  
*Environmental Quality*

ROY COOPER

*Governor*

ELIZABETH S. BISER

*Secretary*

MICHAEL ABRACZINSKAS

*Director*

DRAFT

Mr. Jeffrey Flanagan  
General Manager III  
Duke Energy Carolinas, LLC  
8320 East NC Highway 150  
Terrell, NC 28682

SUBJECT: Air Quality Permit No. 03757T50  
Facility ID: 3600039  
Duke Energy Carolinas, LLC - Allen Steam Station  
Belmont, Gaston County, North Carolina  
Fee Class: Title V  
PSD Class: Major

Dear Mr. Flanagan:

In accordance with your completed applications for renewal of a Title V and Title IV permit, we are forwarding herewith Air Quality Permit No. 03757T50 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.

Pursuant to 15A NCAC 02Q .0203(e), the Permittee shall be assessed annually in addition to any otherwise applicable fee a non-attainment RACT fee effective April 1, 2008.

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 source(s) and associated air pollution control device(s), or modifications to the emission source(s) and air pollution control device(s) described in this permit must be covered under an Air Quality Permit issued by the Division of Air Quality prior to construction unless the Permittee has fulfilled the requirements of NCGS 143-215.108A(b) and received written approval from the Director of the Division of Air Quality to commence construction. Failure to



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

receive an Air Quality Permit or written approval prior to commencing construction is a violation of NCGS 143-215.108A and may subject the Permittee to civil or criminal penalties as described in NCGS 143-215.114A and 143-215.114B.

Gaston County has triggered increment tracking under PSD for PM-10, SO<sub>2</sub> and NOx. However, this permit modification does not consume or expand increments for any pollutants.

This Air Quality Permit shall be effective from \_\_\_\_\_ until \_\_\_\_\_. This Air Quality Permit 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 Edward L. Martin at 919-707-8739 or ed.martin@ncdenr.gov.

Sincerely yours,

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

Enclosure

cc: Brad Akers, EPA Region 4 (Permit and Review)  
Connie Horne (cover letter only)  
Central Files

**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](mailto: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. 03757T49:\*

| Page No. | Section  | Description of Changes   |
|----------|--|--|
| Cover    | --   | Added new cover letter with new format. Amended permit numbers and dates.  |
| --       | TOC  | Revised Acid Rain Permit Application date.   |
| 4-8      | 1  | Removed page numbers as they are no longer needed.<br><br>Removed sources ES-2 Boiler, ES-3 Boiler, and ES-4 Boiler along with associated control devices.<br><br>Removed "CAM" identifier for ES-1 and ES-5.<br><br>Revised footnote 5 to account for removing Unit 2.<br><br>Removed "Case-by-Case MACT" identifier for source ES-6 (AuxB).<br><br>Reinstated applicability of footnote 6 to the U1Boiler SNCR and to the U5Boiler SNCR and sulfur trioxide injection ash conditioner, which had been missing from permit T49. |
| 9        | 2.1 A  | Removed Boiler ES-2, Boiler ES-3, and Boiler ES-4 along with associated control devices.   |
| 9-10     | 2.1 A, regulation table                          | Added 15A NCAC 02D .0503.<br><br>Added 15A NCAC 02D .1425.   |
| 13       | 2.1 A.4.a  | Removed Boilers ES-3 and ES-4.   |
| 15**     | 2.1 A.5**  | Removed these old intentionally left blank sections and adjusted remaining 2.1 A section numbers.  |
| 15**     | 2.1 A.6**  |  |
| 17**     | 2.1 A.9**  |  |
| 14       | 2.1 A.5.a<br>(was 2.1 A.7.a)                     | Corrected the Percent Monitor Downtime (%MD) Calculation for COMS to Percent Monitor Downtime (%MD) Calculation for CEMS.  |
| 14       | 2.1 A.6<br>(was 2.1 A.8)                         | Removed Boilers ES-3 and ES-4.   |
| 15       | 2.1 A.7<br>(was 2.1 A.10)                        | Removed Boiler ES-4.   |
| 22       | 2.1 A.9<br>(was 2.1 A.12)                        | Removed Boilers ES-2, ES-3, and ES-4.  |
| 22-23    | 2.1 A.10   | Added 15A NCAC 02D .0503.  |
| 23       | 2.1 A.11   | Added a recently adopted 02D .1425 NOx SIP Call Budget requirement to submit NOx emissions reports.  |
| 24       | 2.1 B, regulation table                          | Removed 15A NCAC 02D .1109.<br><br>Various format changes.   |
| 30-31**  | 2.1 B.5**  | Removed 02D .1109: (Case-by-Case MACT for Boilers and Process Heaters).  |
| 26       | 2.1 B.5.a<br>new condition<br>(was 2.1 B.6.a.ii) | Removed start date for complying with 02D .1111: (40 CFR Part 63, Subpart DDDDD) in old condition 2.1 B.6.a.ii.  |

|    |           |  |
|----|-----------|--|
| 26 | 2.1 B.5.e | Added note that the initial tune up has been completed.  |
| 27 | 2.1 B.5.j | Added note that the Notification of Compliance Status report has been submitted.   |
| 30 | 2.1 C.3   | Revised this condition for latest version (no new requirements).   |
| 49 | 2.4       | Effective dates are now aligned with the Title V effective dates.<br><br>Removed boilers ES-2, ES-3, and ES-4.<br><br>Revised Acid Rain Permit Renewal Application date. |
| 50 | 2.5       | Inserted footnote 1.   |
| 54 | 3         | Created this new section for insignificant activities.   |
| 58 | 4         | Created this new section and moved General Conditions to this section.<br><br>Updated General Conditions to version 6.0, dated 01/07/2022).                              |

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

\*\* Old page or old condition.



State of North Carolina  
Department of Environmental Quality  
Division of Air Quality

## AIR QUALITY PERMIT

| Permit No. | Replaces Permit No. | Effective Date | Expiration Date |
|------------|---------------------|----------------|-----------------|
| 03757T50   | 03757T49            |                |                 |

NOTE: Per General Condition K, a permit application for the renewal of this Title V permit shall be submitted no later than **date**.

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:** Duke Energy Carolinas, LLC - Allen Steam Station  
**Facility ID:** 3600039  
**Primary SIC Code:** 4911  
**NAICS Code:** 221112

**Facility Site Location:** 253 Plant Allen Road  
**City, County, State, Zip:** Belmont, Gaston County, NC 28012  
**Mailing Address:** 8320 East NC Highway 150  
**City, State, Zip:** Terrell, NC 28682

**Application Numbers:** 3600039.22A and 3600039.22B  
**Complete Application Date:** August 26, 2022

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

Permit issued this the \_\_\_\_ day of \_\_\_\_\_, 2023.

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

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Acid Rain Permit Application dated August 26, 2022

Phase II NO<sub>x</sub> Compliance Plan and NO<sub>x</sub> Averaging Plan, dated June 23, 2015

## List of Acronyms

|                         |   |
|-------------------------|---|
| <b>AOS</b>              | Alternative Operating Scenario  |
| <b>BACT</b>             | Best Available Control Technology   |
| <b>BAE</b>              | Baseline Actual Emissions   |
| <b>Btu</b>              | British thermal unit  |
| <b>CAA</b>              | Clean Air Act   |
| <b>CAM</b>              | Compliance Assurance Monitoring   |
| <b>CEMS</b>             | Continuous Emission Monitoring System   |
| <b>CEDRI</b>            | Compliance and Emissions Data Reporting Interface                               |
| <b>CFR</b>              | Code of Federal Regulations   |
| <b>CO</b>               | Carbon Monoxide   |
| <b>COMS</b>             | Continuous Opacity Monitoring System  |
| <b>CSAPR</b>            | Cross-State Air Pollution Rule  |
| <b>DAQ</b>              | Division of Air Quality   |
| <b>DEQ</b>              | Department of Environmental Quality   |
| <b>EMC</b>              | Environmental Management Commission   |
| <b>EPA</b>              | Environmental Protection Agency   |
| <b>FR</b>               | Federal Register  |
| <b>GACT</b>             | Generally Available Control Technology  |
| <b>GHGs</b>             | Greenhouse Gases  |
| <b>HAP</b>              | Hazardous Air Pollutant   |
| <b>LAER</b>             | Lowest Achievable Emission Rate   |
| <b>MACT</b>             | Maximum Achievable Control Technology   |
| <b>NAA</b>              | Non-Attainment Area   |
| <b>NAAQS</b>            | National Ambient Air Quality Standards  |
| <b>NAICS</b>            | North American Industry Classification System                                   |
| <b>NCAC</b>             | North Carolina Administrative Code  |
| <b>NCGS</b>             | North Carolina General Statutes   |
| <b>NESHAP</b>           | National Emission Standards for Hazardous Air Pollutants                        |
| <b>NO<sub>x</sub></b>   | Nitrogen Oxides   |
| <b>NSPS</b>             | New Source Performance Standard   |
| <b>NSR</b>              | New Source Review   |
| <b>OAH</b>              | Office of Administrative Hearings   |
| <b>PAE</b>              | Projected Actual Emissions  |
| <b>PAL</b>              | Plantwide Applicability Limitation  |
| <b>PM</b>               | Particulate Matter  |
| <b>PM<sub>2.5</sub></b> | Particulate Matter with Nominal Aerodynamic Diameter of 2.5 Micrometers or Less |
| <b>PM<sub>10</sub></b>  | Particulate Matter with Nominal Aerodynamic Diameter of 10 Micrometers or Less  |
| <b>POS</b>              | Primary Operating Scenario  |
| <b>PSD</b>              | Prevention of Significant Deterioration   |
| <b>PTE</b>              | Potential to Emit   |
| <b>RACT</b>             | Reasonably Available Control Technology   |
| <b>SIC</b>              | Standard Industrial Classification  |
| <b>SIP</b>              | State Implementation Plan   |
| <b>SO<sub>2</sub></b>   | Sulfur Dioxide  |
| <b>TAP</b>              | Toxic Air Pollutant   |
| <b>tpy</b>              | Tons Per Year   |
| <b>VOC</b>              | 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 <sup>1</sup><br>(U1Boiler)<br><br><b>MACT</b><br><b>UUUUU</b> | Coal <sup>2</sup> /No. 2 fuel oil-fired electric utility boiler (1,980 million Btu per hour heat input capacity) equipped with a modified fuel burner system (low NOx concentric firing system), separated overfire air, lowered-fire low NOx technologies, and alkaline-based fuel additive <sup>3</sup> (fuel additives at a nominal rate not to exceed 15 gallons per hour) <sup>4</sup> | CD-1b<br>(U1-SNCR)    | Selective non-catalytic reduction (SNCR) NOx control system <sup>6</sup>   |
|  |   | CD-2<br>(U1ESP)       | Cold-side electrostatic precipitator (280,477 square feet of plate area)   |
|  |   | CDU1/2/5<br>FGD       | Flue Gas Desulfurization spray tower scrubber (32 to 182 gallons per minute limestone slurry injection) <sup>5</sup>                               |
| ES-5 <sup>1</sup><br>(U5Boiler)<br><br><b>MACT</b><br><b>UUUUU</b> | Coal <sup>2</sup> /No. 2 fuel oil-fired electric utility boiler (3,390 million Btu per hour heat input capacity) equipped with a modified fuel burner system (low NOx concentric firing system), separated overfire air, lowered-fire low-NOx equipment, and alkaline-based fuel additive <sup>3</sup> (fuel additives at a nominal rate not to exceed 15 gallons per hour) <sup>4</sup>    | CD-10c<br>(U5SNCR)    | Selective non-catalytic reduction (SNCR) NOx control system <sup>6</sup>   |
|  |   | CD-11b<br>(U5FGT)     | Sulfur trioxide injection ash conditioner (190 pounds per hour maximum injection rate) <sup>6</sup>  |
|  |   | CD-U4/5ActC           | System for injecting powdered activated carbon   |
|  |   | CD-11<br>(U5ESP)      | Cold-side electrostatic precipitator (336,960 square feet of plate area)   |
|  |   | CDU1/2/5<br>FGD       | Flue Gas Desulfurization spray tower scrubber (32 to 182 gallons per minute limestone slurry injection) <sup>5</sup>                               |
| ES-8-1 (RUL)   | Railcar transfer to dual hopper   | CDRULBF               | Railcar unloading enclosure dust collection system with fabric filter; 48,000 acfm, collection area 9,600 to 12,000 square feet (to be determined) |
| ES-8-2A<br>(LUBF1)<br><br><b>NSPS OOO</b>                          | Dual hopper transfer to hopper conveyor No.1  |                       |  |
| ES-8-2B<br>(LUBF3)<br><br><b>NSPS OOO</b>                          | Dual hopper transfer to hopper conveyor No. 2   |                       |  |
| ES-8-3<br>(LUBF3)<br><br><b>NSPS OOO</b>                           | Hopper conveyors No.1 and No. 2 transfer to transfer tower stock pile conveyor  |                       |  |

| <b>Emission Source ID No.</b>     | <b>Emission Source Description</b>  | <b>Control Device ID No.</b> | <b>Control Device Description</b>  |
|-----------------------------------|---|------------------------------|--|
| ES-9 (LUCB)<br><b>NSPS OOO</b>    | Transfer tower stock pile conveyor transfer to stockpile stack out conveyor in transfer tower | N/A                          | N/A  |
| ES-10 (LSC)                       | Stock pile stack out conveyor to stock pile   | N/A                          | N/A  |
| ES-11A (LRGF)                     | Stock pile transfer to grate feed of stock pile reclaim conveyor                              | N/A                          | N/A  |
| ES-11B (LRCB)<br><b>NSPS OOO</b>  | Grate feeder transfer to stock pile reclaim conveyor  | N/A                          | N/A  |
| ES-12 (LFPCB)<br><b>NSPS OOO</b>  | Stock pile reclaim conveyor transfer to preparation plant feed conveyor in transfer tower     | N/A                          | N/A  |
| ES-13 (LSFCB)<br><b>NSPS OOO</b>  | Preparation plant feed conveyor with flop gate transfer to day bin No. 2 feed conveyor        | CDLSBF                       | Preparation building dust collection system with fabric filter; 14,800 acfm, collection area 2,960 to 3,700 square feet (to be determined) |
| ES-14 (LS1)<br><b>NSPS OOO</b>    | Preparation plant feed conveyor with flop gate transfer to day bin No. 1                      |                              |  |
| ES-15 (LS2)<br><b>NSPS OOO</b>    | Day bin No. 2 feed conveyor to day bin No. 2  |                              |  |
| ES-16 (LWFCB)<br><b>NSPS OOO</b>  | Day bin No. 1 transfer to wet ball mill No. 1 in preparation building                         | N/A                          | N/A  |
| ES-17 (LCWFCB)<br><b>NSPS OOO</b> | Day bin No. 2 transfer to wet ball mill No. 2 in preparation building                         | N/A                          | N/A  |
| 4ES-18A (WBM1)<br><b>NSPS OOO</b> | Wet ball mill No. 1 and product classifier in preparation building                            | N/A                          | N/A  |

| <b>Emission Source ID No.</b>                                   | <b>Emission Source Description</b>   | <b>Control Device ID No.</b> | <b>Control Device Description</b>   |
|---|--|------------------------------|---|
| ES-18B<br>(WBM2)<br><br><b>NSPS OOO</b>                         | Wet ball mill No. 2 and product classifier in preparation building   | N/A                          | N/A   |
| ES-6 (AuxB)<br><br><b>NSPS Dc;<br/>RACT;<br/>MACT<br/>DDDDD</b> | No. 2 fuel oil fired auxiliary utility boiler (14.6 million Btu per hour heat input capacity)                    | N/A                          | N/A   |
| ES-7<br>(EmGen) <sup>1</sup><br><br><b>MACT<br/>ZZZZ</b>        | No. 2 fuel oil-fired emergency/blackout protection diesel generator (2,000 kW)                                   | N/A                          | N/A   |
| WWTBR   | Wastewater metals reduction bio-reactor  | N/A                          | N/A   |
| ES-FS1/2  | Flyash transfer filter separator<br><br>Units 1 and 2 (2,924.6 pounds per hour maximum process rate)             | CD-U1/2FS                    | Unit 1 and 2 filter separator (baghouse) (853 square feet of filter area)             |
| ES-FS1/2b   | Flyash transfer filter separator<br><br>Units 1 and 2 (redundant) (2,924.6 pounds per hour maximum process rate) | CD-U1/2FSa                   | Unit 1 and 2 filter separator (baghouse) (redundant) (853 square feet of filter area) |
| ES-FS3  | Flyash transfer filter separator<br><br>Unit 3 (2,924.6 pounds per hour maximum process rate)                    | CD-U3FS                      | Unit 3 filter separator (baghouse) (853 square feet of filter area)                   |
| ES-FS3b   | Flyash transfer filter separator<br><br>Unit 3 (redundant) (2,924.6 pounds per hour maximum process rate)        | CD-U3FSb                     | Unit 3 filter separator (baghouse) (redundant) (853 square feet of filter area)       |
| ES-FS4  | Flyash transfer filter separator<br><br>Unit 4 (2,924.6 pounds per hour maximum process rate)                    | CD-U4FS                      | Unit 4 filter separator (baghouse) (853 square feet of filter area)                   |

| <b>Emission Source ID No.</b> | <b>Emission Source Description</b>  | <b>Control Device ID No.</b> | <b>Control Device Description</b>  |
|-------------------------------|---|------------------------------|--|
| ES-FS4b                       | Flyash transfer filter separator<br>Unit 4 (redundant) (2,924.6 pounds per hour maximum process rate) | CD-U4FSb                     | Unit 4 filter separator (baghouse) (redundant) (853 square feet of filter area)          |
| ES-FS5                        | Flyash transfer filter separator<br>Unit 5 (2,924.6 pounds per hour maximum process rate)             | CD-U5FS                      | Unit 5 filter separator (baghouse) (853 square feet of filter area)                      |
| ES-FS5b                       | Flyash transfer filter separator<br>Unit 5 (redundant) (2,924.6 pounds per hour maximum process rate) | CD-U5FSb                     | Unit 5 filter separator (baghouse) (redundant) (853 square feet of filter area)          |
| ES-AS1                        | Ash silo #1 (92,743 cubic feet capacity)  | CD-S1Bf                      | Bin vent filter Ash silo #1 (8,398 square feet of filter area)                           |
| ES-FTLD1                      | Flyash truck loading equipment (dry) from silo #1 (102.7 tons per hour maximum process rate)          |                              |  |
| ES-AS2                        | Ash silo #2 (92,743 cubic feet capacity)  | CD-S2Bf                      | Bin vent filter Ash silo #2 (8,398 square feet of filter area)                           |
| ES-FTLD2                      | Flyash truck loading equipment (dry) from silo #2 (102.7 tons per hour maximum process rate)          |                              |  |
| ES-FTLW1                      | Flyash truck loading equipment (wet) from silo #1 (102.7 tons per hour maximum process rate)          | N/A                          | N/A  |
| ES-FTLW2                      | Flyash truck loading equipment (wet) from silo #2 (102.7 tons per hour maximum process rate)          | N/A                          | N/A  |
| Fugitive 1                    | Truck transport   | N/A                          | N/A  |
| Fugitive 2                    | Truck unloading   | N/A                          | N/A  |
| Fugitive 3                    | Dry ash landfill management   | N/A                          | N/A  |
| ES-U4/5ACISilo                | Units 4 and 5 DSI ACI storage silo (6,000 cubic feet capacity)  | CD-U4/5ACISiloBf             | Units 4 and 5 ACI storage silo bin vent filter baghouse (259 square feet of filter area) |
| LF <sup>7</sup>               | Ash Landfill  | N/A                          | N/A  |

| Emission Source ID No. | Emission Source Description | Control Device ID No. | Control Device Description |
|------------------------|-----------------------------|-----------------------|----------------------------|
| AD <sup>7</sup>        | Ash Deposition              | N/A                   | N/A                        |
| AE <sup>7</sup>        | Ash Excavation              | N/A                   | N/A                        |
| AAB <sup>7</sup>       | Active Ash Basin            | N/A                   | N/A                        |
| HAULRD <sup>7</sup>    | Ash Hauling                 | N/A                   | N/A                        |

- 1 These emissions sources are subject to VOC RACT as potential emissions were determined to exceed 100 tons per year. Application 3600039.08A and Permit 03757T34 addressed the applicability of RACT as per 02D .0951. This case-by-case demonstration concluded that these sources already employ control equivalent to or better than RACT.
- 2 Incidental spills of oil, antifreeze, etc. from mobile equipment that might get on the coal are allowed to be burned in these boilers.
- 3 Alkaline-based fuel additive may be used on an as-needed basis not to exceed 7 pounds per ton of coal burned. Fuel additives shall not contain any toxic air pollutants listed in 15A NCAC 02Q .0711. Fuel additive products not equivalent to those specified in Application 3600039.13B are not allowed without permit modification.
- 4 None of the mercury control devices or techniques shall use halogen-containing compounds (e.g. bromide).
- 5 Emissions will discharge from the common flue at the exit of the Flue Gas Desulfurization (FGD) system for Units 1, 2 (now removed), and 5 (CDU1/2/5FGD) during normal operation. Emissions will discharge from the bypass stack (formerly Unit 1 stack) during periods of startup on oil, periods of malfunction of the FGD system, or the boiler air and gas handling system.
- 6 The sulfur trioxide ash conditioning and NOx systems may be operated independently of each other or in combination. Each system may be operated intermittently as necessary, based on the boiler system requirements, to maintain compliance with the applicable emission standards.
- 7 The addition of these emission sources (LF, AD, AE, AAB and HAULRD) are listed as a 15A NCAC 02Q .0501(b)(2) modification. The Permittee shall file a Title V Air Quality Permit Application on or before 12 months after commencing operation in accordance with General Condition NN.1. The permit shield described in General Condition R does not apply and compliance certification as described in General Condition P is not required.

## 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. Two Coal/No. 2 Fuel Oil-fired Electric Utility Boilers (ID Nos. ES-1 and ES-5):

- **Boiler ES-1 equipped with a low NOx concentric firing system, separated overfire air (SOFA), lowered-fire (LOFIR) low-NOx technology, and alkaline-based fuel additive, and exhausting to the following control devices, operating in series:**
  - selective non-catalytic NOx reduction system (ID No. CD 1b);
  - cold-side electrostatic precipitator (ID No. CD-2); and
  - flue gas desulfurization spray tower scrubber (ID No. CDU1/2/5FGD)
  
- **Boiler ES-5 equipped with a low NOx concentric firing system, separated overfire air (SOFA), lowered-fire (LOFIR) low-NOx technology, and alkaline-based fuel additive, and exhausting to the following control devices, operating in series:**
  - selective non-catalytic NOx reduction system (ID No. CD 10c);
  - flue gas conditioning system with sulfur trioxide injection (ID No. CD-11b);
  - powdered activated carbon system (ID No. CDU4/5/ActC)
  - cold-side electrostatic precipitator (ID No. CD-11); and
  - flue gas desulfurization spray tower scrubber (ID No. CDU1/2/5FGD)

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

| Pollutant      | Limits/Standards  | Applicable Regulation                               |
|----------------|---|---|
| Sulfur Dioxide | <b>Applies to Boilers ES-1 and ES-5 equipped with an FGD system and emitting through a common stack;</b><br><br>1.0 pounds per million Btu heat input | 15A NCAC 02D .0501(c)                               |
|                | Phase II Acid Rain Permit Requirements (see Section 2.4)  | 15A NCAC 02Q .0402 (40 CFR Part 72)                 |
|                | Cross State Air Pollution Rule  | 40 CFR Part 97, Subpart CCCCC                       |
|                | As defined in specific conditions (see Section 2.5)   | 15A NCAC 02Q .0508(i)(16) and (m)<br>Consent Decree |

| <b>Pollutant</b>   | <b>Limits/Standards</b>   | <b>Applicable Regulation</b>                             |
|--|---|--|
| Nitrogen Oxides  | <b>When burning only coal</b><br>1.8 pounds per million Btu heat input  | 15A NCAC 02D .0519                                       |
|  | <b>When burning only oil</b><br>0.8 pounds per million Btu heat input   |  |
|  | <b>When burning coal and oil</b><br>See Section 2.1 A.2.  |  |
|  | Phase II Acid Rain Permit Requirements (see Section 2.4)  | 15A NCAC 02Q .0402<br>(40 CFR Part 72)                   |
|  | Cross State Air Pollution Rule  | 40 CFR Part 97, Subpart<br>AAAAA                         |
|  | As defined in specific conditions (see Section 2.5)   | 15A NCAC 02Q .0508(i)(16)<br>and (m)<br>Consent Decree   |
| Visible Emissions  | Visible emissions shall not be more than 40 percent opacity when averaged over a six-minute period except that six-minute periods averaging not more than 90 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. | 15A NCAC 02D .0521                                       |
| Particulate Matter   | ES-5 Boiler   | 15A NCAC 02Q .0317 of<br>02D .0530<br>PSD avoidance      |
| Toxic Air Pollutants                                       | <b>State-enforceable only</b><br>As defined in specific conditions  | 15A NCAC 02D .1100                                       |
| Excess Emissions/Good Operations and Maintenance Practices | As defined in specific conditions   | 15A NCAC 02D .0606                                       |
| HAPs   | Varies - See Section 2.1 A.8  | 15A NCAC 02D .1111<br>(40 CFR Part 63,<br>Subpart UUUUU) |
| PM2.5  | See Section 2.1 A.7   | 15A NCAC 02Q .0317 of<br>02D .0530<br>[PSD AVOIDANCE]    |
| Particulate Matter   | 0.09 pound per million Btu heat input   | 15A NCAC 02D .0503                                       |
| Nitrogen Oxides  | <b>State-enforceable only</b><br>Ozone season annual reporting  | 15A NCAC 02D .1425                                       |

#### 1. 15A NCAC 02D .0501(c): COMPLIANCE WITH EMISSION CONTROL STANDARDS

- a. In addition to any control or manner of operation necessary to meet emission standards in 15A NCAC 02D .0500, 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 of 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 15A NCAC 02D .0500 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.
- b. Emissions of sulfur dioxide from the boilers (**ID Nos. ES-1/ES-5**) shall not exceed 1.0 pounds per million Btu heat input, upon operation, in accordance with the permit application and modeling analyses received April 12, 2006, to demonstrate compliance with the annual, 24-hour, and 3-hour sulfur dioxide ambient standards. 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)]

- c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.1.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0501(c).

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

- d. The Permittee shall ensure compliance with 15A NCAC 02D .0501(c) by determining sulfur dioxide emissions in pounds per million Btu using a continuous emissions monitoring (CEM) system meeting the requirements of 40 CFR Part 75 except that unbiased values may be used (missing data shall be filled in accordance with 40 CFR Part 75 whenever the unit combusts any fuel). Compliance with sulfur dioxide emission standards shall be determined by averaging hourly continuous emission monitoring system values over a 24-hour block period beginning at midnight. To compute the 24-hour block average, the average hourly values (missing data shall be filled in accordance with 40 CFR Part 75) shall be summed, and the sum shall be divided by 24. The minimum number of data points, equally spaced, required to determine a valid hour value shall be determined by 40 CFR Part 75. If any 24-hour block average exceeds 1.0 pounds per million Btu heat input or records are not maintained, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0501(c).

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

- e. The Permittee shall submit the continuous emissions monitoring data showing the 24-hour daily block values in pounds per million Btu for each 24-hour daily block averaging period during the reporting period 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 of each calendar year for the preceding three-month period between July and September. All instances of deviations from the requirements of this permit must be clearly identified.
- f. *CEMS Availability* - The Permittee shall submit sulfur dioxide CEM systems monitor downtime reports, including monitor availability values (as calculated for 40 CFR Part 75) for the last hour of the reporting period, 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 of each calendar year for the preceding three-month period between July and September.

**2. 15A NCAC 02D .0519: CONTROL OF NITROGEN OXIDES EMISSIONS**

- a. Emissions of nitrogen oxides from these sources when burning coal and/or oil shall be calculated by the following equation:

$$E = \frac{(E_c)(Q_c) + (E_o)(Q_o)}{Q_t}$$

Where:

- E = the emission limit for combination in pounds per million Btu,
- E<sub>c</sub> = 1.8 pounds per million Btu heat input from coal,
- E<sub>o</sub> = 0.8 pounds per million Btu heat input from oil,
- Q<sub>c</sub> = coal heat input in Btu per hour,
- Q<sub>o</sub> = oil heat input in Btu per hour,
- Q<sub>t</sub> = Q<sub>c</sub> + Q<sub>o</sub> (and is the actual total heat input of the combination in BTU per hour)

**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 .0519.

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

- c. The Permittee shall ensure compliance with 15A NCAC 02D .0519 by determining nitrogen oxide emissions in pounds per million Btu using a continuous emissions monitoring system (CEMS) meeting the requirements of 40 CFR Part 75 except that unbiased values may be used (missing data shall be filled in accordance with 40 CFR Part 75 whenever the unit combusts any fuel). Compliance with this emission standard shall be determined by averaging hourly continuous emission monitoring system values over a 24-hour block period beginning at midnight. To compute the 24-hour block average, the average hourly values (missing data shall be filled in accordance with 40 CFR Part 75) shall be summed, and the sum shall be divided by 24. The minimum number of data points, equally spaced, required to determine a valid hour value shall be determined by 40 CFR Part 75. For monitoring purposes, the following emission limits will apply:
  - i. When only coal is burned, the emission limit shall be 1.8 pounds per million Btu heat input.
  - ii. When only oil is burned, the emission limit shall be 0.8 pounds per million Btu heat input.
  - iii. When oil is burned other than for startup, the emission limit shall be 1.1 pounds per million Btu heat input. At no time shall more than 70 percent of total heat result from the combustion of fuel oil.

If any 24-hour block average exceeds the emission limit, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0519.

- d. The Permittee shall maintain records of monthly coal and oil consumption (written or electronic form) and shall submit such records within 30 days of a request by DAQ. The Permittee shall be deemed in noncompliance with NCAC 02D .0519 if these records are not maintained.

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

- e. The Permittee shall submit the continuous emissions monitoring system data showing the 24-hour daily block values for periods of excess nitrogen oxide emissions 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 of each calendar year for the preceding three-month period between July and September. If no excess emissions were measured during a three-month period, the Permittee shall submit a summary report stating that there were no excess emissions for the period. All instances of deviations from the requirements of this permit must be clearly identified.
- f. *CEMS Monitor Availability*- The Permittee shall submit the nitrogen oxide CEM systems monitor downtime reports, including monitor availability values (as calculated for 40 CFR Part 75) for the last hour of the reporting period, 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 of each calendar year for the preceding three-month period between July and September.

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

- a. The Permittee shall install, maintain, and operate a particulate matter continuous emission monitoring system (PM CEMS).
- b. Visible emissions shall not be more than **40 percent opacity** when averaged over a six-minute period except that six-minute periods averaging not more than 90 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period.

**Testing** [15A NCAC 02D .2601]

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

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

- d. No opacity monitoring is required.

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

- e. No opacity reporting is required.

**4. 15A NCAC 02Q .0317: AVOIDANCE CONDITION  
for 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION**

- a. In order to avoid applicability of 15A NCAC 02D .0530(g), particulate emissions from utility boiler (**ID No. ES-5**) shall not exceed 0.20 pounds per million Btu heat input. [15A NCAC 02Q .0317]

**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 limits given in Section 2.1.A.4.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

- c. The monitoring and recordkeeping requirements in Sections 2.1 A.8.dd and ff below shall satisfy the requirements of this section. A measured exceedance of 0.030 pounds per million Btu heat input (30-boiler operating day rolling average) or 0.30 pounds per megawatt hour (30-boiler operating day rolling average) shall be a violation of the corresponding emission standards in Section 2.1 A.4.a.

If the Permittee does not comply with the monitoring and recordkeeping requirements in Section 2.1 A.8.dd and ff below, or if the results of the arithmetic 30-boiler operating day rolling average PM CEMS concentration exceeds 0.030 pounds per million Btu heat input (30-boiler operating day rolling average) or 0.30 pounds per megawatt hour (30-boiler operating day rolling average), the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

- d. The Permittee shall submit excess emissions and monitoring system performance reports 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 of each calendar year for the preceding three-month period between July and September. The compliance report shall include, at a minimum, the information required in 40 CFR 63.10 and contain the information specified in Section 2.1 A.8.tt, along with all 30-boiler operating day rolling average excess emissions (pounds per million Btu or pounds per megawatt hour) using the CEMS outlet data, including periods exempted during periods of startup and shutdown.
- e. All instances of excess emissions must be clearly identified.

**5. 15A NCAC 02D .0606: SOURCES COVERED BY APPENDIX P OF 40 CFR PART 51  
(CONTINUOUS OPACITY MONITORING, CONTINUOUS EMISSIONS MONITORING FOR SO<sub>2</sub>, AND  
EXCESS EMISSIONS)**

- a. The alternative monitoring and recordkeeping procedure in this section (Section 2.1 A.5.a) applies as allowed by Paragraph 3.9 of Appendix P of 40 CFR Part 51. The Permittee shall install, certify, operate, and maintain a PM CEMS to monitor and record PM emissions according to the applicable Maximum Achievable Control Technology (MACT) standards in §63.10010(i) of 40 CFR Part 63 Subpart UUUUU, as specified in Section 2.1 A.8.dd.

The quarterly excess emissions (EE) reports shall be used as an indication of good operation and maintenance of the electrostatic precipitators. The sources shall be deemed to be properly operated and maintained if the percentage of time the PM emissions, calculated on a one-hour average, greater than 0.030 pounds per million Btu heat input\* does not exceed 3.0 percent of the total operating time for any given calendar quarter, adjusted for monitor downtime (MD) as calculated below. In addition, these sources shall be deemed to be properly operated and maintained if the %MD does not exceed 2 percent for any given calendar quarter as calculated below.

\* The PM monitored value subject to the 0.030 pounds per million Btu limit may have a 5% CO<sub>2</sub> diluent cap, or a 14% O<sub>2</sub> diluent cap, substituted in the emission rate calculation for a startup or shutdown hour (as defined in §63.10042) in which the measured CO<sub>2</sub> concentration is below 5% or whenever the measured O<sub>2</sub> concentration is above 14%.

Calculations for %EE and %MD

Percent Excess Opacity Emission (%EE) Calculation:

$$\%EE = \frac{\text{Total Excess Emission Time}^*}{\text{Total Source Operating Time}^{***} - \text{Monitor Downtime}} \times 100$$

Percent Monitor Downtime (%MD) Calculation for CEMS:

$$\%MD = \frac{\text{Total Monitor Downtime}^{**}}{\text{Total Source Operating Time}^{***}} \times 100$$

\* Total Excess Emission Time contains all one-hour periods greater than 0.030 pounds per million Btu heat input including startup, shutdown, and malfunction.

\*\* Total Monitor Downtime includes Quality Assurance (QA) activities unless exempted by regulation or defined in an agency approved QA Manual. The amount of exempt QA Time will be reported in the quarterly report as such.

- b. The Permittee shall use a continuous emissions monitoring system (CEMS) to monitor and record sulfur dioxide emissions. Continuous emissions monitoring and recordkeeping of sulfur dioxide emissions shall be performed as described in Paragraphs 2 and 3.1.1 through 3.1.5 of Appendix P of 40 CFR Part 51. The monitoring systems shall meet the minimum specifications described in Paragraphs 3.3 through 3.8 of Appendix P of 40 CFR Part 51. The quarterly excess emissions (EE) reports required under Appendix P of 40 CFR Part 51 shall be used as an indication of good operation and maintenance of the flue gas desulfurization scrubbers. These sources shall be deemed to be properly operated and maintained if sulfur dioxide emissions do not exceed 1.0 pounds per million Btu calculated on a 24-hour basis. Compliance with the sulfur dioxide emission standard is determined by averaging hourly continuous emission monitoring system values over a 24-hour block period beginning at midnight. To compute the 24-hour block average, the average hourly values are summed, and the sum is divided by 24. A minimum of four data points, equally spaced, is required to determine a valid hour value unless the continuous emission monitoring system is installed to meet the provisions of 40 CFR Part 75. If a continuous emission monitoring system is installed to meet the provisions of 40 CFR Part 75, the minimum number of data points is determined by 40 CFR Part 75. In addition, the flue gas desulfurization scrubbers shall be deemed to be properly operated and maintained if the %MD does not exceed 2 percent for any given calendar quarter as calculated in Section 2.1 A.5.a above.

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

- c. The Permittee shall submit the excess emissions and monitor downtime reports as required under Appendix P of 40 CFR Part 51 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 of each calendar year for the preceding three-month period between July and September as shown below. Reporting shall be in accordance with Paragraphs 4 and 5.1 of Appendix P of 40 CFR Part 51.
- i. Excess PM emissions are defined as any one-hour average greater than 0.030 pounds per million Btu heat input. The quarterly report shall include the number of hours each day and the percent of operating hours during the quarter with average PM emissions recorded by the PM CEMS greater than 0.030 pounds per million Btu.
  - ii. Monitor downtime includes periods where there was no particulate monitoring during monitor bypass periods.
  - iii. For sulfur dioxide, excess emissions are defined as greater than 1.0 pounds per million Btu calculated on a 24-hour block average basis.
  - iv. All instances of deviations from the requirements of this permit must be clearly identified.

**State-enforceable only**

**6. 15A NCAC 02D .1100: TOXIC AIR POLLUTANT EMISSIONS LIMITATION AND REPORTING REQUIREMENTS**

- a. Pursuant to 15A NCAC 02D .1100 and in accordance with the approved application for an air toxic compliance demonstration (received May 1, 2006, approved with the T30 permit issued June 30, 2006), the following permit limits shall not be exceeded:

| Emission Sources               | Toxic Air Pollutants | Emission Limits                    |
|--------------------------------|----------------------|------------------------------------|
| Boiler Unit <b>ID No. ES-5</b> | Sulfuric Acid        | 418.8 lb/hr and<br>10,051.2 lb/day |
|                                | Ammonia              | 22.4 lb/hr                         |

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

- b. To ensure compliance with the above limits, the following restrictions shall apply:
  - i. Sulfur trioxide ash conditioning systems are limited to Unit **ID No. ES-5**.
  - ii. Operation of the sulfur trioxide injection ash conditioning systems shall be operated as follows:
    - (A) The maximum sulfur trioxide flue gas injection rate shall not exceed 190 pounds per hour for Unit **ID No. ES-5**.
    - (B) The sulfur trioxide injection ash conditioning systems may be operated intermittently based on boiler system requirements necessary to maintain compliance with applicable emissions regulatory requirements.

**Reporting** [15A NCAC 02D .0611]

- c. No reporting is required to demonstrate compliance with 15A NCAC 02D .1100 for this source (**ID No. ES-5**).

**7. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS for 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION**

- a. In order to avoid applicability of 15A NCAC 02D .0530(g), PM/PM10/PM2.5 emissions from the Unit 5 boiler (**ID No. ES-5**) shall be less than 10 tons per consecutive 12-month period attributable to injecting powdered activated carbon.

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

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.7.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

- c. The amount of injected powdered activated carbon in the Unit 5 boiler (**ID No. ES-5**) shall not exceed 12,000,000 pounds per year.
- d. The Permittee shall keep monthly records of the amount of powdered activated carbon injected. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the amount of powdered activated carbon injected in the Unit 5 boiler (**ID No. ES-5**) is not monitored or the amount of powdered activated carbon injected exceeds the limit above.

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

- e. The Permittee shall submit a semiannual summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the monthly amount of powdered activated carbon injected in the Unit 5 boiler for the previous 17 months. The emissions must be calculated for each of the 12-month periods over the previous 17 months. All instances of deviations from the requirements of this permit must be clearly identified.

**8. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (40 CFR PART 63 SUBPART UUUUU)**

- a. The Permittee shall comply with all applicable provisions, including the requirements for emission limitations, work practice standards, operating limits, testing and initial compliance, continuous compliance, monitoring, recordkeeping, notification, and reporting, contained in Environmental Management Commission Standard 15A NCAC 02D .1111 Maximum Achievable Control Technology (MACT) as promulgated in the most current version of 40 CFR Part 63 Subpart UUUUU, "National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units" and Subpart A "General Provisions".

**Emission Limitations and Work Practice Standards** [15A NCAC 02Q .0508(b)]

- b. The Permittee shall:
  - i. limit the emissions of filterable particulate matter (PM) to 3.0E-2 lb/MMBtu or 3.0E-1 lb/MWh; or limit the emissions of total non-Hg HAP metals to 5.0E-5 lb/MMBtu or 5.0E-1 lb/GWh; or limit the emissions of individual HAP metals to:

| Constituent    | Allowable Level                  |
|----------------|----------------------------------|
| Antimony (Sb)  | 8.0E-1 lb/TBtu* or 8.0E-3 lb/GWh |
| Arsenic (As)   | 1.1E+0 lb/TBtu or 2.0E-2 lb/GWh  |
| Beryllium (Be) | 2.0E-1 lb/TBtu or 2.0E-3 lb/GWh  |
| Cadmium (Cd)   | 3.0E-1 lb/TBtu or 3.0E-3 lb/GWh  |
| Chromium (Cr)  | 2.8E+0 lb/TBtu or 3.0E-2 lb/GWh  |
| Cobalt (Co)    | 8.0E-1 lb/TBtu or 8.0E-3 lb/GWh  |
| Lead (Pb)      | 1.2E+0 lb/TBtu or 2.0E-2 lb/GWh  |
| Manganese (Mn) | 4.0E+0 lb/TBtu or 5.0E-2 lb/GWh  |
| Nickel (Ni)    | 3.5E+0 lb/TBtu or 4.0E-2 lb/GWh  |
| Selenium (Se)  | 5.0E+0 lb/TBtu or 6.0E-2 lb/GWh  |

\* "lb/TBtu" means "pounds per trillion Btu"

- ii. limit the emissions of sulfur dioxide (SO<sub>2</sub>) to 2.0E-1 lb/MMBtu;
- iii. limit the emissions of mercury (Hg) to 1.2E0 lb/TBtu or 1.3E-2 lb/GWh. [§63.9991(a)(1) and Table 2 to Subpart UUUUU]
- c. i. As an alternative to meeting the requirements of §63.9991(a)(1) for filterable PM, SO<sub>2</sub>, hydrogen fluoride (HF), hydrogen chloride (HCl), non-Hg HAP metals, or Hg on an EGU-specific basis as described in Section 2.1 A.8.b above, the Permittee may choose to demonstrate compliance by using emissions averaging as described in §63.10009(a)(2) among existing EGUs in the same subcategory. If this option is selected for mercury, the Permittee shall limit the concentration of mercury to 1.0 lb/TBtu or 1.1E-2 lb/GWh. [§63.9991(a)(1), §63.10009 and §63.10022]
- ii. As an alternative to meeting the emission limit listed in Section 2.1 A.8.b.ii., the Permittee may comply with one of the emission limits in paragraphs 1 through 3, below, provided that the Permittee complies with the requirements of Section 2.1 A.8.c.iii.
  - 1. limit the emissions of HCl to 2.0E-3 lb/MMBtu; or
  - 2. limit the emissions of HCl to 2.0E-2 lb/MWh; or
  - 3. limit the emissions of SO<sub>2</sub> to 1.5E+0 lb/MWh
- iii. The Permittee may demonstrate compliance with the emission limits in Sections 2.1 A.8.b. and 2.1 A.8.c.ii., provided that:
  - 1. The Permittee shall submit a request that identifies for each EGU or EGU emissions averaging group involved in the proposed switch both the current and proposed emission limit;

2. The above request arrives to the Administrator at least 30 calendar days prior to the date that the switch is proposed to occur;
  3. The request demonstrates through performance stack test results completed within 30 days prior to your submission, compliance for each EGU or EGU emissions averaging group with both the mass per heat input and mass per gross output limits;
  4. The Permittee revises and submits all other applicable plans, e.g., monitoring and emissions averaging, with the request; and
  5. The Permittee maintains records of all information regarding the choice of emission limits.
- [§63.10030(e)(7)(iii)]

d. During periods of startup of an EGU:

- i. The Permittee has chosen to comply using the following work practice standards, by choosing to comply using paragraph (1) of the definition of “startup” in §63.10042, defined as follows.

*"Startup means either the first-ever firing of fuel in a boiler for the purpose of producing electricity, or the firing of fuel in a boiler after a shutdown event for any purpose. Startup ends when any of the steam from the boiler is used to generate electricity for sale over the grid or for any other purpose (including on site use). Any fraction of an hour in which startup occurs constitutes a full hour of startup."*

The Permittee shall operate all CMS during startup, except during periods of bypass of the main stack as provided in §63.10010(a)(4). For startup of a unit, clean fuels must be used as defined in §63.10042 for ignition. Once the unit converts to firing coal, the Permittee shall engage all of the applicable control technologies except the SCR. The Permittee shall start the SCR system appropriately to comply with relevant standards applicable during normal operation. The Permittee shall comply with all applicable emissions limits at all times except for periods that meet the applicable definitions of startup and shutdown in Subpart UUUUU. The Permittee shall keep records during startup periods.

- ii. If the Permittee chooses to use just one set of sorbent traps to demonstrate compliance with the applicable Hg emission limit, the Permittee shall comply with the limit at all times; otherwise, the Permittee shall comply with the applicable emission limit at all times except for startup and shutdown periods.
- iii. The Permittee shall collect monitoring data during startup periods, as specified in §63.10020(a) and (e). The Permittee shall keep records during startup periods, as provided in §§63.10032 and 63.10021(h). The Permittee shall provide reports concerning activities and startup periods, as specified in §63.10011(g) and §63.10021(h) and (i). All periods of bypass of the main stack shall be reported as deviations as provided in §63.10010(a)(4)(ii).

[§63.9991(a)(1) and Table 3 to Subpart UUUUU]

e. During periods of shutdown of an EGU:

*"Shutdown means the period in which cessation of operation of an EGU is initiated for any purpose. Shutdown begins when the EGU no longer generates electricity or makes useful thermal energy (such as heat or steam) for industrial, commercial, heating, or cooling purposes or when no coal, liquid oil, syngas, or solid oil-derived fuel is being fired in the EGU, whichever is earlier. Shutdown ends when the EGU no longer generates electricity or makes useful thermal energy (such as steam or heat) for industrial, commercial, heating, or cooling purposes, and no fuel is being fired in the EGU. Any fraction of an hour in which shutdown occurs constitutes a full hour of shutdown."*

- i. The Permittee shall operate all CMS during shutdown, except during periods of bypass of the main stack as provided in §63.10010(a)(4). The Permittee shall also collect appropriate data, and shall calculate the pollutant emission rate for each hour of shutdown for those pollutants for which a CMS is used. While firing coal during shutdown, the Permittee shall vent emissions to the main stack(s) and operate all applicable control devices and continue to operate those control devices after the cessation of coal being fed into the EGU and for as long as possible thereafter considering operational and safety concerns as provided for bypass of the main stack in §63.10010(a)(4). In any case, the permittee shall operate the controls when necessary to comply with other standards made applicable to the EGU by a permit limit or a rule other than Subpart UUUUU and that require operation of the control devices. All periods of bypass of the main stack shall be reported as deviations as provided in §63.10010(a)(4)(ii).
- ii. If, in addition to the fuel used prior to initiation of shutdown, another fuel must be used to support the shutdown process, that additional fuel shall be one or a combination of the clean fuels defined in §63.10042 and shall be

used to the maximum extent possible taking into account considerations such as not compromising boiler or control device integrity.

- iii. The Permittee shall comply with all applicable emission limits at all times except during startup periods and shutdown periods at which time the Permittee shall meet the work practice standards. The Permittee shall collect monitoring data during shutdown periods, as provided in §63.10020(a). The Permittee shall keep records during shutdown periods, as provided in §§63.10032 and 63.10021(h). The Permittee shall provide reports concerning activities and shutdown periods, as specified in §§63.10011(g), 63.10021(i), and 63.10031. [§63.9991(a)(1), §63.10042, and Table 3 to Subpart UUUUU]

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

- f. The Permittee shall comply with the General Provisions as applicable pursuant to Table 9 to Subpart UUUUU. [§63.10040]
- g. The Permittee shall be in compliance with the emission limits and operating limits in Subpart UUUUU. These limits shall apply at all times except during periods of startup and shutdown; however, for coal-fired EGUs, the Permittee shall be required to meet the work practice requirements in Table 3 to Subpart UUUUU during periods of startup or shutdown. [§63.10000(a)]
- h. At all times, the Permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the EPA Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [§63.10000(b)]
- i. For coal-fired units, initial performance testing is required for all pollutants for the affected EGUs to demonstrate compliance with the applicable emission limits. [§63.10000(c)(1)]
- j. The Permittee shall demonstrate compliance with the filterable particulate matter (PM) emission limit through an initial performance test and shall monitor continuous performance through use of a PM continuous emissions monitoring system (PM CEMS). [§63.10000(c)(1)(iv)]
- k. The Permittee may demonstrate initial and continuous compliance by installing and operating a sulfur dioxide (SO<sub>2</sub>) CEMS installed and operated in accordance with 40 CFR Part 75 to demonstrate compliance with the applicable SO<sub>2</sub> emissions limit. [§63.10000(c)(1)(v)]
- l. The Permittee shall demonstrate initial and continuous compliance through use of a Hg CEMS or a sorbent trap monitoring system in accordance with Appendix A to the Subpart. [§63.10000(c)(1)(vi)]
- m. As part of demonstration of continuous compliance, the Permittee shall perform periodic tune-ups of the affected EGUs, according to §63.10021(e). [§63.10000(e)]
- n. On or before the date an EGU is subject to Subpart UUUUU, the Permittee shall install, certify, operate, maintain, and quality-assure each monitoring system necessary for demonstrating compliance with the work practice standards for PM during startup periods and shutdown periods. The Permittee shall collect, record, report, and maintain data obtained from these monitoring systems during startup periods and shutdown periods. [§63.10000(l)]  
The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the general compliance requirements in Sections 2.1 A.8.f through n above are not met.

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

- o. The Permittee shall monitor and collect data according to §63.10020. [§63.10020(a)]
- p. The Permittee shall operate the monitoring system and collect data at all required intervals at all times that the affected EGU is operating, except for periods of monitoring system malfunctions or out-of-control periods (see §63.8(c)(7)), and required monitoring system quality assurance or quality control activities, including, as applicable, calibration checks and required zero and span adjustments. The Permittee is required to affect monitoring system repairs in response to monitoring system malfunctions and to return the monitoring system to operation as expeditiously as practicable. [§63.10020(b)]
- q. Except for periods of monitoring system malfunctions or monitoring system out-of-control periods, repairs associated with monitoring system malfunctions or monitoring system out-of-control periods, and required monitoring system quality assurance or quality control activities including, as applicable, calibration checks and required zero and span adjustments, failure to collect required data is a deviation from the monitoring requirements. [§63.10020(d)]
- r. The Permittee shall demonstrate continuous compliance with each emissions limit, operating limit, and work practice standard in Tables 2 and 3 to Subpart UUUUU that applies to the affected EGU, according to the monitoring specified in Table 7 to Subpart UUUUU and paragraphs (b) through (g) of §63.10021(a). [§63.10021(a)]

- s. Except as otherwise provided in §63.10020(c), if the Permittee uses a CEMS to measure SO<sub>2</sub>, PM, HCl, HF, or Hg emissions, or uses a sorbent trap monitoring system to measure Hg emissions, the Permittee shall demonstrate continuous compliance by using all quality-assured hourly data recorded by the CEMS (or sorbent trap monitoring system) and the other required monitoring systems (e.g., flow rate, CO<sub>2</sub>, O<sub>2</sub>, or moisture systems) to calculate the arithmetic average emissions rate in units of the standard on a continuous 30-boiler operating day (or, if alternate emissions averaging is used for Hg, 90-boiler operating day) rolling average basis, updated at the end of each new boiler operating day. The Permittee shall use Equation 8 to Subpart UUUUU to determine the 30- (or, if applicable, 90-) boiler operating day rolling average.

$$\text{Boiler operating day average} = \frac{\sum_{i=1}^n Her_i}{n} \quad (\text{Eq. 8})$$

Where Her<sub>i</sub> is the hourly emissions rate for hour *i* and *n* is the number of hourly emissions rate values collected over 30- (or, if applicable, 90-) boiler operating days.

[§63.10021(b)]

- t. Conduct periodic performance tune-ups of the EGUs, as specified in paragraphs (e)(1) through (9) of §63.10021. For the first tune-up, the Permittee may perform the burner inspection any time prior to the tune-up or delay the first burner inspection until the next scheduled EGU outage provided the requirements of §63.10005 are met. Subsequently, the Permittee shall perform an inspection of the burner at least once every 36 calendar months unless the EGU employs neural network combustion optimization during normal operations in which case an inspection of the burner and combustion controls shall be performed at least once every 48 calendar months. If the EGU is offline when a deadline to perform the tune-up passes, the tune-up work practice requirements shall be performed within 30 days after the re-start of the affected unit. [§63.10021(e)]
- u. The Permittee shall follow the startup or shutdown requirements as given in Table 3 to the Subpart for each coal-fired EGU and comply with all applicable requirements in §63.10011(g). [§§63.10005(j), 63.10011(g) and §63.10021(h)]
- v. If the Permittee elects to average emissions consistent with §63.10009 for any constituent, following the compliance date, the Permittee must demonstrate compliance on a continuous basis by meeting the requirements of paragraphs (a)(1) through (4) of §63.10022. Any instance where the Permittee fails to comply with the continuous monitoring requirements in paragraphs (a)(1) through (3) of §63.10022 is a deviation. [§63.10022]
- w. The Permittee shall determine the fuel whose combustion produces the least uncontrolled emissions, taking safety considerations into account, *i.e.*, the cleanest fuel, either natural gas or distillate oil, that is available on site or accessible nearby for use during periods of startup or shutdown. The cleanest fuel, either natural gas or distillate oil, for use during periods of startup or shutdown determination may take safety considerations into account. [§§63.10011(f)(1) and (2)]  
The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the continuous compliance requirements in Sections 2.1 A.8.o through w above are not met.

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

- x. For an affected unit that exhausts to the atmosphere through a single, dedicated stack, the Permittee shall either install the required CEMS and sorbent trap monitoring systems in the stack or at a location in the ductwork downstream of all emissions control devices, where the pollutant and diluents concentrations are representative of the emissions that exit to the atmosphere. [§63.10010(a)(1)]
- y. If the Permittee uses an oxygen (O<sub>2</sub>) or carbon dioxide (CO<sub>2</sub>) CEMS to convert measured pollutant concentrations to the units of the applicable emissions limit, the O<sub>2</sub> or CO<sub>2</sub> concentrations shall be monitored at a location that represents emissions to the atmosphere, *i.e.*, at the outlet of the EGU, downstream of all emission control devices. The Permittee shall install, certify, maintain, and operate the CEMS according to 40 CFR Part 75. Use only quality-assured O<sub>2</sub> or CO<sub>2</sub> data in the emissions calculations; do not use Part 75 substitute data values. [§63.10010(b)]
- z. If the Permittee is required to use a stack gas flow rate monitor, either for routine operation of a sorbent trap monitoring system or to convert pollutant concentrations to units of an electrical output-based emission standard in Table 2 to Subpart UUUUU, the Permittee shall install, certify, operate, and maintain the monitoring system and conduct on-going quality-assurance testing of the system according to 40 CFR Part 75. Use only unadjusted, quality-assured flow rate data in the emissions calculations. Do not apply bias adjustment factors to the flow rate data and do not use substitute flow rate data in the calculations. [§63.10010(c)]
- aa. If the Permittee is required to make corrections for stack gas moisture content when converting pollutant concentrations to the units of an emission standard in Table 2 to Subpart UUUUU, the Permittee shall install, certify, operate, and maintain a moisture monitoring system in accordance with 40 CFR Part 75. Alternatively, for coal-fired units, the Permittee may use appropriate fuel-specific default moisture values from §75.11(b) to estimate the

moisture content of the stack gas. If the Permittee installs and operates a moisture monitoring system, the Permittee shall not use substitute moisture data in the emissions calculations. [§63.10010(d)]

- bb. The Permittee shall use an SO<sub>2</sub> CEMS and must install the monitor at the outlet of the EGU, downstream of all emission control devices, and must certify, operate, and maintain the CEMS according to 40 CFR Part 75 as specified in paragraphs (f)(1) through (4) of §63.10010. [§63.10010(f)]
- cc. The Permittee shall use a Hg CEMS or a sorbent trap monitoring system, the Permittee shall install, certify, operate, maintain and quality-assure the data from the monitoring system in accordance with Appendix A to Subpart UUUUU and as specified in §63.10010(g). [§63.10010(g)]
- dd. The Permittee shall install, certify, operate, and maintain a PM CEMS and record the output of the PM CEMS as specified in paragraphs (i)(1) through (5) of §63.10010 (shown below). The compliance limit shall be expressed as a 30-boiler operating day rolling average of the applicable numerical emissions limit value in Table 2 to Subpart UUUUU. [§63.10010(i)]
  - i. Install and certify the PM CEMS according to the procedures and requirements in Performance Specification 11—Specifications and Test Procedures for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix B to 40 CFR Part 60, using Method 5 at Appendix A-3 to 40 CFR Part 60 and ensuring that the front half filter temperature shall be 160° ±14°C (320° ±25 °F). The reportable measurement output from the PM CEMS must be expressed in units of the applicable emissions limit (e.g., lb/MMBtu, lb/MWh).
  - ii. Operate and maintain the PM CEMS according to the procedures and requirements in Procedure 2—Quality Assurance Requirements for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix F to 40 CFR Part 60.
    - (A) Conduct the relative response audit (RRA) for the PM CEMS at least once annually (once per 12 month period).
    - (B) Conduct the relative correlation audit (RCA) for the PM CEMS at least once every 3 (calendar) years.
  - iii. Collect PM CEMS hourly average output data for all boiler operating hours except as indicated in §63.10010(i).
  - iv. Calculate the arithmetic 30-boiler operating day rolling average of all of the hourly average PM CEMS output data collected during all nonexempt boiler operating hours.
  - v. Collect data using the PM CEMS at all times the process unit is operating and at the intervals specified in §63.10010(a), except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities.
    - (A) Use all the data collected during all boiler operating hours in assessing the compliance with the operating limit except:
      - (I) Any data collected during periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or quality control activities that temporarily interrupt the measurement of emissions (e.g., calibrations, certain audits). Report any monitoring system malfunctions or out of control periods in the annual deviation reports. Report any monitoring system quality assurance or quality control activities per the requirements of §63.10031(b);
      - (II) Any data collected during periods when the monitoring system is out of control as specified in the site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or quality control activities conducted during out-of-control periods. Report any such periods in the annual deviation report;
      - (III) Any data recorded during periods of startup or shutdown.
    - (B) Record and make available upon request results of PM CEMS system performance audits, dates and duration of periods when the PM CEMS is out of control to completion of the corrective actions necessary to return the PM CEMS to operation consistent with the site-specific monitoring plan.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the monitoring requirements in Sections 2.1 A.8.x through dd above are not met.

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

- ee. The Permittee shall keep records of the following:
  - i. Records required under appendix A and/or appendix B to Subpart UUUUU for continuous monitoring of Hg emissions.
  - ii. Each notification and report that is submitted to comply with Subpart UUUUU, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that was submitted, according to the requirements in §63.10(b)(2)(xiv).
  - iii. Records of performance stack tests, fuel analyses, or other compliance demonstrations and performance evaluations, as required in §63.10(b)(2)(viii). [§63.10032(a)]

- ff. For each CEMS, the Permittee shall keep records as follows:
  - i. Records described in §63.10(b)(2)(vi) through (xi).
  - ii. Previous (i.e., superseded) versions of the performance evaluation plan as required in §63.8(d)(3).
  - iii. Request for alternatives to relative accuracy test for CEMS as required in §63.8(f)(6)(i).
  - iv. Records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period. [§63.10032(b)]
- gg. For each EGU subject to an emission limit, the Permittee shall keep records of monthly fuel use by each EGU, including the type(s) of fuel and amount(s) used. [§63.10032(d)(1)]
- hh. If the Permittee elects to average emissions consistent with §63.10009 for any constituent, the Permittee must additionally keep a copy of the emissions averaging implementation plan required in §63.10009(f) and(j), all calculations required under §63.10009, including daily records of heat input or steam generation, as applicable, and monitoring records consistent with §63.10022. [§63.10032(e)]
- ii. If the Permittee chooses to rely on paragraph (1) of the definition of “startup” in §63.10042 for any EGU, records must be kept of the occurrence and duration of each startup or shutdown. [§63.10032(f)(1)]
- jj. The Permittee shall keep records of the occurrence and duration of each malfunction of an operation (i.e., process equipment) or the air pollution control and monitoring equipment. [§63.10032(g)]
- kk. The Permittee shall keep records of actions taken during periods of malfunction to minimize emissions in accordance with §63.10000(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [§63.10032(h)]
- ll. The Permittee shall keep records of the type(s) and amount(s) of fuel used during each startup or shutdown. [§63.10032(i)]
- mm. The Permittee shall keep records in a form suitable and readily available for expeditious review, according to §63.10(b)(1). The Permittee shall keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee shall keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee can keep the records off site for the remaining 3 years. [§63.10033(a) through (c)]  
The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the recordkeeping requirements in Sections 2.1 A.8.ee through mm above are not met.

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

- nn. The Permittee shall submit the reports required under §63.10031 and, if applicable, the reports required under appendices A and B to the Subpart. The electronic reports required by appendices A and B to the Subpart shall be sent to the Administrator electronically in a format prescribed by the Administrator, as provided in §63.10031. CEMS data (except for PM CEMS and any approved alternative monitoring using a HAP metals CEMS) shall be submitted using EPA's Emissions Collection and Monitoring Plan System (ECMPS) Client Tool. Other data, including PM CEMS data, HAP metals CEMS data, and CEMS performance test detail reports, shall be submitted in the file format generated through use of EPA's Electronic Reporting Tool, the Compliance and Emissions Data Reporting Interface, or alternate electronic file format, all as provided for under §63.10031. [§63.10021(f)]
- oo. The Permittee shall report each instance in which the Permittee did not meet an applicable emissions limit or operating limit in Tables 1 through 4 to 40 CFR 63 Subpart UUUUU or failed to conduct a required tune-up. These instances are deemed violations from the requirements of 40 CFR 63 Subpart UUUUU and shall be reported according to §63.10031. [§63.10021(g)]
- pp. The Permittee shall submit all of the notifications in §§63.7(b) and (c), 63.8 (e), (f)(4) and (6), and 63.9 (b) through (h), as applicable, by the dates specified, or according to an agreed upon schedule by NCDAQ [§63.9(i)(2)]. [§63.10030(a)]
- qq. When the Permittee is required to conduct a performance test, the Permittee shall submit a Notification of Intent to conduct a performance test at least 30 days before the performance test is scheduled to begin. [§63.10030(d)]
- rr. The Permittee shall submit each report in Table 8 to 40 CFR 63 Subpart UUUUU, as applicable. If the Permittee is required to (or elect to) continuously monitor Hg and/or HCl and/or HF emissions, the Permittee shall also submit the electronic reports required under appendix A and/or appendix B to the Subpart, at the specified frequency. [§63.10031(a)]
- ss. The Permittee shall submit each report in Table 8 to 40 CFR 63 Subpart UUUUU, as applicable 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. [§63.10031(b)]
- tt. The compliance report shall contain the following:
  - i. The information required by the summary report located in 63.10(e)(3)(vi).

- ii. The total fuel use by each affected source subject to an emission limit, for each calendar month within the semiannual reporting period, including, but not limited to, a description of the fuel, whether the fuel has received a non-waste determination by EPA or the basis for concluding that the fuel is not a waste, and the total fuel usage amount with units of measure.
- iii. Indicate whether the Permittee burned new types of fuel during the reporting period. If the Permittee did burn new types of fuel the Permittee must include the date of the performance test where that fuel was in use.
- iv. Include the date of the most recent tune-up for each EGU. The date of the tune-up is the date the tune-up provisions specified in §63.10021(e)(6) and (7) were completed.
- v. A certification.
- vi. If there is a deviation from any emission limit, work practice standard, or operating limit, the Permittee must also submit a brief description of the deviation, the duration of the deviation, emissions point identification, and the cause of the deviation.
- vii. For each excess emissions occurring at an affected source where the Permittee is using a CMS to comply with that emission limit or operating limit, the Permittee shall include the information required in §63.10(e)(3)(v) in the compliance report specified in §63.10031(c). [§63.10031(c) and §63.10031(d)]
- uu. Each affected source that has obtained a Title V operating permit pursuant to 40 CFR Part 70 or Part 71 shall report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a compliance report pursuant to Table 8 of Subpart UUUUU along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the compliance report includes all required information concerning deviations from any emission limit, operating limit, or work practice requirement in this subpart, submission of the compliance report satisfies any obligation to report the same deviations in the semiannual monitoring report. Submission of a compliance report does not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority. [§63.10031(e)]
- vv. On or after July 1, 2018, within 60 days after the date of completing each performance test, the Permittee shall submit the performance test reports required by the Subpart to EPA's WebFIRE database by using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) ([www.epa.gov/cdx](http://www.epa.gov/cdx)). The Permittee shall comply with all applicable requirements in §63.10031(f). [§63.10031(f)]
- ww. If the Permittee had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. [§63.10031(g)]

**9. Cross State Air Pollution Rule Requirements  
(40 CFR Part 97, Subparts AAAAA and CCCCC)**

For the two boilers (**ID Nos. ES-1 and ES-5**), the Permittee shall comply with all applicable requirements of 40 CFR Part 97, Subpart AAAAA "TR NO<sub>x</sub> Annual Trading Program" and Subpart CCCCC "TR SO<sub>2</sub> Group 1 Trading Program".

**10. 15A NCAC 02D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS**

- a. Emissions of particulate matter discharged from these sources (**ID Nos. ES-1 and ES-5**) into the atmosphere shall not exceed 0.09 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 A.10.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503.

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

- c. The monitoring and recordkeeping requirements in Sections 2.1 A.8.dd and ff shall satisfy the requirements of this section. A measured exceedance of 0.030 pounds per million Btu heat input (30-boiler operating day rolling average) or 0.30 pounds per megawatt hour (30-boiler operating day rolling average) shall be a violation of the corresponding emission standards in Section 2.1 A.10.a above.

If the Permittee does not comply with the monitoring and recordkeeping requirements in Section 2.1 A.8.dd and ff or if the results of the arithmetic 30-boiler operating day rolling average PM CEMS concentration exceeds 0.030 pounds per million Btu heat input (30-boiler operating day rolling average) or 0.30 pounds per megawatt hour (30-boiler operating day rolling average), the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503.

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

- d. The Permittee shall submit excess emissions and monitoring system performance reports 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 of each calendar year for the preceding three-month period between July and September. The compliance report shall include, at a minimum, the information required in 40 CFR 63.10 and contain the information specified in Section 2.1 A.8.tt, along with all 30-boiler operating day rolling average excess emissions (pounds per million Btu or pounds per megawatt hour) using the CEMS outlet data, including periods exempted during periods of startup and shutdown. The PM CEMS data submitted for compliance with 40 CFR Part 63 Subpart UUUUU can be used to satisfy the requirement of this section.
- e. All instances of excess emissions must be clearly identified.

**State-enforceable only**

**11. 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 NOx SIP Call control period (i.e., May 1 through September 30) listing the NOx emissions from these sources (**ID Nos. ES-1 and ES-5**) during the NOx SIP Call control period. The NOx emissions in this report shall be determined in accordance with 40 CFR Part 75 Subpart H.

**B. No. 2 fuel oil-fired auxiliary boiler (ID No. ES-6 (AuxB))**

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

| Pollutant                | Limits/Standards  | Applicable Regulation                             |
|--------------------------|---|---|
| Particulate Matter       | 0.09 pounds per million Btu heat input  | 15A NCAC 02D .0503                                |
| Sulfur Dioxide           | 0.5 weight percent sulfur content fuel oil.<br>Recordkeeping only; monthly fuel records.  | 15A NCAC 02D .0524<br>(40 CFR Part 60 Subpart Dc) |
| Visible Emissions        | Visible emissions from this source shall not be more than 20 percent opacity (except during startup, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. | 15A NCAC 02D .0521                                |
| Nitrogen Oxides          | Annual Boiler Tune-up requirement   | 15A NCAC 02D .1407 (RACT)                         |
| Hazardous Air Pollutants | Work practice standards and tune-up of the source every five years.   | 15A NCAC 02D .1111<br>(40 CFR Part 63, DDDDD)     |

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

- a. Emissions of particulate matter from the combustion of fuel oil or propane that are discharged from this source into the atmosphere shall not exceed **0.09 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 limits 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 this source (**ID No. ES-6 (AuxB)**) to ensure compliance with 15A NCAC 02D .0503.

**2. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60, SUBPART Dc)**

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart Dc, including Subpart A "General Provisions."
- b. The maximum sulfur content of any fuel oil received and burned in the auxiliary boiler (**ID No. ES-6 (AuxB)**) shall not exceed 0.5 percent by weight. [40 CFR 60.42c(d)]

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

- c. In addition to any other recordkeeping required by 40 CFR 60.48c or recordkeeping requirements of the EPA, the Permittee shall record and maintain monthly records of the amounts of each fuel fired during each month. Records must be maintained for a minimum of two years. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these records are not maintained.

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

- d. In addition to any other reporting required by 40 CFR 60.48c or notification requirements to the EPA, the Permittee is required to NOTIFY the DAQ in writing of the following:

- i. A summary report of the sulfur content of the distillate fuel oil fired, by January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June as follows:
- ii. Distillate Oil - Fuel supplier certification shall include the following information:
  - (1) The name of the oil supplier;
  - (2) A statement from the oil supplier that the oil complies with the specification under the definition of distillate oil in 40 CFR § 60.41c; and
  - (3) A certified statement signed by the owner or operator of an affected facility that the records of fuel supplier certification submitted represents all of the fuel fired during the semi-annual period.
- ii. All instances of deviations from the requirements of this permit must be clearly identified.

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

- a. Visible emissions from this source (**ID No. ES-6 AuxB**) shall not be more than 20 percent opacity (except during startup, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period.

**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 limits 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 02Q .0508(f)]

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

### 4. 15A NCAC 02D .1407: BOILERS AND INDIRECT PROCESS HEATERS

- a. Facilities with boilers with maximum heat input rate of less than or equal to 50 million Btu per hour shall comply with the annual tune-up requirements of 15A NCAC 02D .1414.

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

- b. If emission testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this testing are above the limits given in Section 2.1 B.4.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1407.

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

- c. To ensure compliance the Permittee shall conduct annual boiler tune-ups and any required recordkeeping and reporting requirements on or by December 31st of each calendar year. Boiler tune-ups shall be in accordance with the manufacturer's recommendations including the following:
  - i. Inspect each burner and clean or replace any component of the burner as required;
  - ii. Inspect the flame pattern and make any adjustments to the burner, or burners, necessary to optimize the flame pattern to minimize total emissions of NOx and carbon monoxide;
  - iii. Inspect the combustion control system to ensure proper operation and correct calibration of components that control the air to fuel ratio and adjust components to meet the manufacturer's established operating parameters; and
  - iv. Inspect any other component of the boilers and make adjustments or repairs as necessary to improve combustion efficiency. The Permittee shall perform the tune-up according to a unit specific protocol approved by the Director. The Director (or designee) shall approve the protocol if it meets the requirements of this Rule. The protocol shall be submitted to the Regional Office for approval.

If boiler tune-ups and inspections are not conducted (as per Section 2.1 B.4.c.i through iv above) the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .1407.

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

- d. The owner or operator shall maintain records of tune-ups performed. The following information shall be included for each source:

- i. Identification of the source;
- ii. The date and time the tune-up started and ended;
- iii. The person responsible for performing the tune-up;
- iv. For boilers the checklist for inspection of the burner, flame pattern, combustion control system, and all other components of the boiler identified in the protocol, noting any repairs or replacements made;
- v. Any stack gas analyses performed after the completion of all adjustments to show that the operating parameters of the boiler, have been optimized with respect to fuel consumption and output; at a minimum these parameters shall be within the range established by the equipment manufacturer to ensure that the emission limitation for nitrogen oxides has not been exceeded; and
- vi. Any other information requested by the Director (or designee) to show that the boiler is being operated and maintained in a manner to minimize the emissions of nitrogen oxides.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1407 if these records are not maintained.

- e. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. The date and time of each recorded action;
  - ii. The results of each annual tune-up and inspection along with any corrective actions taken; and
  - iii. The results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1407 if these records are not maintained.

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

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

**5. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (40 CFR Part 63, Subpart DDDDD)**

**Applicability** [40 CFR 63.7485, §63.7490(d), §63.7499(q, u)]

- a. For this boiler (**ID No. ES-6 (AuxB)**), existing source designed to burn light liquid fuel with a heat input capacity 10 million Btu per hour or greater), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart DDDDD "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" (Subpart 5D) and Subpart A "General Provisions."
- b. This boiler (**ID No. ES-6 (AuxB)**) qualifies as a limited-use boiler as defined in §63.7575, and is limited to an annual capacity factor of no more than 10 percent.

**Definitions and Nomenclature** [§63.7575]

- c. For the purpose of this permit condition, the definitions and nomenclature contained in 40 CFR 63.7575 shall apply.

**Subpart A General Provisions** [§63.7565]

- d. The Permittee shall comply with the requirements of 40 CFR 63 Subpart A General Provisions according to the applicability of Subpart A to such sources as identified in Table 10 to Subpart 5D.

**Compliance Date** [§63.7510(e), §63.56(b)]

- e. The Permittee shall complete the initial tune up (see Sections 2.1 B.6.k through m) no later than May 20, 2019. *The initial tune up has been completed.*

**General Compliance Requirements** [§63.7505(a), §63.7500(a)(3)]

- f. The Permittee shall be in compliance with the applicable work practice standards of Subpart 5D.
- g. At all times, the Permittee shall operate and maintain any affected source (as defined in §63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

**Emission Limits** [§63.7500(c)]

- h. This limited-use boiler must complete a tune-up every five years as specified in §63.7540. It is not subject to the emission limits in Tables 1 and 2 or 11 through 13, the annual tune-up, or the energy assessment requirements in Table 3, or the operating limits in Table 4 of Subpart 5D.

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

- i. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ

**Notifications** [§63.7545]

- j. The Permittee shall submit the Notification of Compliance Status report before the close of business on the 60th day following the compliance date and it must contain all the information in §63.7545(e)(1) and (e)(8). The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if this notification requirement is not met. *The Notification of Compliance Status report has been submitted.*

**Work Practice Standards** [15A NCAC 02Q .0508(f)]

- k. The Permittee shall conduct a tune-up of the source every five years as specified below. The Permittee shall conduct the tune-up while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up.
  - i. As applicable, inspect the burner, and clean or replace any components of the burner as necessary. The Permittee may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled or unscheduled unit shutdown, but each burner must be inspected at least once every 72 months.;
  - ii. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
  - iii. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the Permittee may delay the inspection until the next scheduled unit shutdown);
  - iv. Optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO<sub>x</sub> requirement to which the unit is subject; and
  - v. Measure the concentrations in the exhaust stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.
- l. [§63.7500(c), §63.7540(a)(10), §63.7540(a)(12)]
- l. Each 5-year tune-up shall be conducted no more than 61 months after the previous tune-up. [§63.7515(d)]
- m. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup. [§63.7540(a)(13)]
- n. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in Section 2.1 B.5.k through m are not met.

**Recordkeeping Requirements** [15A NCAC 02Q .0508(f), §63.7555]

- o. The Permittee shall:
  - i. Keep a copy of each notification and report submitted to comply with Subpart 5D, including all documentation supporting any Initial Notification or Notification of Compliance Status, or compliance report that has been submitted. [§§63.7555(a)(1), 63.10(b)(2)(xiv)]
  - ii. Maintain on-site and submit, if requested by the Administrator, the tune-up report containing the information in paragraphs (A) through (C) below:
    - A. The concentrations of carbon monoxide in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;
    - B. A description of any corrective actions taken as a part of the tune-up; and
    - C. The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.
- iii. [§63.7540(a)(10)(vi)]
- iii. Keep a copy of the federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent and fuel use records for the days the boiler was operating. [§63.7555(a)(3), §63.7525(k)]

- p. The Permittee shall:
  - i. Maintain records in a form suitable and readily available for expeditious review;
  - ii. Keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record; and
  - iii. Keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee can keep the records offsite for the remaining 3 years.

[§63.7560, §63.10(b)(1)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in Section 2.1 B.6.o through p are not met.

**Reporting Requirements** [15A NCAC 02Q .0508(f), §63.7550]

- q. The Permittee shall submit a compliance report to the DAQ every five years.
  - i. The first compliance report shall be postmarked on or before January 30, 2024 and cover the period from May 20, 2019 through December 31, 2023.
  - ii. The compliance reports shall also be submitted electronically to the EPA via the procedures in §63.7550(h).
- r. The compliance report shall contain the information as applicable per §63.7550(c)(1).

**C. Emergency/blackout protection diesel generator (ID No. ES-7 (EmGen))**

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

| <b>Pollutant</b>  | <b>Limits/Standards</b>  | <b>Applicable Regulation</b>                       |
|-------------------|--|--|
| Sulfur Dioxide    | 2.3 pounds per million Btu heat input  | 15A NCAC 02D .0516                                 |
| Visible Emissions | Visible emissions shall not be more than 20 percent opacity (except during startup, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. | 15A NCAC 02D .0521                                 |
| HAPs              | Recordkeeping  | 15A NCAC 02D .1111<br>40 CFR Part 63, Subpart ZZZZ |

**1. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES**

- a. Emissions of sulfur dioxide from this source (**ID No. ES-7(EmGen)**) 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 limits given in Section 2.1 C.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

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

- c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of No. 2 fuel oil in this source (**ID No. ES-7(EmGen)**).

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

- a. Visible emissions from this source (**ID No. ES-7(EmGen)**) shall not be more than 20 percent opacity (except during startup, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period.

**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 limits given in Section 2.1 C.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

- c. To ensure compliance, the Permittee shall perform a Method 9 test for 1 hour using a preapproved protocol to be submitted in accordance with General Condition JJ before the sources operate more than 1,100 hours using No. 2 fuel oil. This monitoring protocol shall be repeated before each subsequent 1,100 hours of operation using No. 2 fuel oil from the last test for each source. If the required monitoring is not performed, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521

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

- d. The Permittee shall keep records of the hours and associated dates, when these sources are in operation using No. 2 fuel oil, and the dates of performance of Method 9 tests. If the required records are not kept, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521

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

- e. The Permittee shall submit the results of the Method 9 test as a part of the quarterly report described in Section 2.1 A.3.g and 2.1 A.4.j, above. All instances of deviations from the requirements of this permit must be clearly identified.

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

**Applicability** [40 CFR 63.6585, 63.6590(a)(1)(i)]

- a. For this emission sources (*existing stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions*), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" as promulgated in 40 CFR 63 Subpart ZZZZ "National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines" including Subpart A "General Provisions."

**Definitions and Nomenclature**

- b. For the purposes of Section 2.1 C.3, the definitions and nomenclature contained in 40 CFR 63.6675 shall apply. [40 CFR 63.6675]

**Emergency Engine Compliance Requirements** [15A NCAC 02Q .0508(b)]

- c. For the purposes of Section 2.1 C.3, the Permittee shall only operate these sources(s) as emergency stationary reciprocating internal combustion engine(s) (RICE), which is defined as follows: Emergency stationary RICE means any stationary reciprocating internal combustion engine that meets all of the criteria in c.i through c.ii below. All emergency stationary RICE must comply with the requirements specified in Section 2.1 C.3.d below in order to be considered emergency stationary RICE. If an engine does not comply with the requirements specified in Section 2.1 C.3.d below, then it is not considered to be an emergency stationary RICE.
  - i. The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc.
  - ii. The stationary RICE is operated under limited circumstances for situations not included in c.i above, as specified in Section 2.1 C.3.d below.  
[40 CFR 63.6675]
- d. In order for the engine to be considered an emergency stationary RICE as defined in Section 2.1 C.3.c above, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in d.i through d.iii below, is prohibited.
  - i. There is no time limit on the use of emergency stationary RICE in emergency situations.
  - ii. The Permittee may operate the emergency stationary RICE for any combination of the purposes specified in d.ii.(A) below for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by d.iii below counts as part of the 100 hours per calendar year allowed by this paragraph d.ii.  
(A) Emergency stationary RICE 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 RICE beyond 100 hours per calendar year.
  - iii. Emergency stationary RICE located at major sources of HAP 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 d.ii above. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.  
[40 CFR 63.6640(f)]

**Stationary RICE subject to limited requirements**

- e. Sources that meet the requirements of Section 2.1 C.3.c and d above do not have any other applicable requirements under 40 CFR 63 Subpart ZZZZ and Subpart A, including initial notification requirements. [40 CFR 63.6590(b)(3)]

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

- f. To ensure compliance with Section 2.1 C.3.c and d above, the Permittee shall maintain the following records. The Permittee shall record:
  - i. the hours for each engine spent in emergency operation, including what classified the operation as emergency;
  - ii. the hours for each engine spent for non-emergency operation; and
  - iii. the dates of operation of each engine.

The records shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The Permittee shall keep a record of the applicability determination on site at the source for a period of 5 years after the determination.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these records are not maintained. [40 CFR 63.10(b)(3)]

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

- g. No reporting is required.

## D. Limestone, Receiving, Storage, Transfer, and Grinding

- Railcar unloading enclosure dust collection system with fabric filter (**ID No. CDRULBF**) installed on:
  - Railcar transfer to dual hopper (**ID No. ES-8-1**) not subject to NSPS OOO notification or opacity requirements,
  - Hopper No. 1 transfer to hopper conveyor No.1 (**ID No. ES-8-2A**),
  - Hopper No. 2 transfer to hopper conveyor No. 2 (**ID No. ES-8-2B**), and
  - Hopper conveyors No.1 and No. 2 transfer-to-transfer tower stockpile conveyor (**ID No. ES-8-3**).
- Preparation building dust collection system with fabric filter (**ID No. CDLSBF**) installed on:
  - Preparation plant feed conveyor with flop gate transfer to day bin No. 2 feed conveyor (**ID No. ES-13**),
  - Preparation plant feed conveyor with flop gate transfer to day bin No. 1 (**ID No. ES-14**), and
  - Day bin No. 2 feed conveyor to day bin No. 2 (**ID No. ES-15**).
- Day bin No. 1 transfer to wet ball mill No. 1 in preparation building (**ID No. ES-16**).
- Day bin No. 2 transfer to wet ball mill No. 2 in preparation building (**ID No. ES-17**).
- Wet ball mill No. 1 and product classifier in preparation building (**ID No. ES-18A**).
- Wet ball mill No. 2 and product classifier in preparation building (**ID No. ES-18B**).
- Transfer tower stockpile conveyor transfer to stockpile stack out conveyor in transfer tower (**ID No. ES-9**).
- Grate feeder transfer to stock pile reclaim conveyor (**ID No. ES-11B**).
- Stockpile reclaim conveyor transfer to preparation plant feed conveyor in transfer tower (**ID No. ES-12**).

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

| Pollutant            | Limits/Standards   | Applicable Regulation                    |
|----------------------|--|--|
| Particulate Matter   | Ambient air quality standards, opacity, and control requirements for non-process fugitive dust pursuant to 15A NCAC 02D .0540 [See Facility Wide Requirements - Section 2.2 A.1] | 15A NCAC 02D .0510                       |
| Particulate Matter   | 0.022 grains per dry standard cubic foot for stack emissions and building vents  | 15A NCAC 02D .0524 [40 CFR 60.672(a)(1)] |
| Visible Emissions    | Seven percent opacity for stack emissions and building vents   | 15A NCAC 02D .0524 [40 CFR 60.672(a)(2)] |
| Visible Emissions    | 10 percent opacity for fugitive emissions (Excludes conveyor to storage pile transfer point and truck, front end loader, railcar dumping into feed bin)                          | 15A NCAC 02D .0524 [40 CFR 60.672(b)]    |
| Visible Emissions    | No visible emissions from buildings, excluding building vents  | 15A NCAC 02D .0524 [40 CFR 60.672(e)(1)] |
| Particulate Matter   | Control requirements for non-process fugitive dust [See Facility Wide Requirements - Section 2.2 A.2]  | 15A NCAC 02D .0540                       |
| Toxic Air Pollutants | <b>State-enforceable only</b><br>See Section 2.2 B   | 15A NCAC 02D .1100                       |

### 1. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60, SUBPART OOO)

- a. On and after the date on which the performance test is completed, the Permittee shall not allow to be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility any stack emissions that:
  - i. Contain particulate matter in excess of 0.05 g/dscm (0.022 gr/dscf) [40 CFR 60.672(a)(1)]; and
  - ii. Exhibit greater than 7 percent opacity [40 CFR 60.672(a)(2)].
  - iii. Emission sources with stack emissions affected by these requirements include:
    - (A) Railcar unloading enclosure dust collection system with fabric filter (**ID No. CDRULBF**) installed on: dual hopper transfer to hopper conveyor No.1 (**ID No. ES-8A**), dual hopper transfer to hopper conveyor No. 2

(**ID No. ES-8B**), and hopper conveyors No. 1 and No. 2 transfer to transfer tower stock pile conveyor (**ID No. ES-8-3**);

(B) Preparation building dust collection system with fabric filter (**ID No. CDLSBF**) installed on: preparation plant feed conveyor with flop gate transfer to day bin No. 2 feed conveyor (**ID No. ES-13**), preparation plant feed conveyor with flop gate transfer to day bin No. 1 (**ID No. ES-14**), and day bin No. 2 feed conveyor to day bin No. 2 (**ID No. ES-15**); and

(C) Any vent of any building enclosing any affected emission source including; the railcar unloading enclosure, transfer tower for **ID No. ES-9**, transfer tower for **ID No. ES-12**, and the reagent preparation building.

- b. The Permittee shall not allow to be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility any fugitive emissions that exhibit greater than 10 percent opacity.
- c. The Permittee shall not allow to be discharged into the atmosphere from any building enclosing any transfer point on a conveyor belt or any other affected facility any visible fugitive emissions. Affected buildings include the railcar unloading enclosure, transfer tower for ES-9, transfer tower for ES-12, and the reagent preparation building.

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

- d. The Permittee completed initial testing on June 10, 2009 (test reference number 2009-095ST).
- e. If additional 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 D.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

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

- f. Particulate matter emissions from sources **ID Nos. ES-8-1, ES-8-2A, ES-8-2B, and ES-8-3** shall be controlled by fabric filter **ID No. CDRULBF**, and particulate matter emissions from sources **ID Nos. ES 13, ES-14, and ES-15** shall be controlled by fabric filter **ID No. CDLSBF**. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
  - i. A monthly visual inspection of the system ductwork and bag house for leaks; and
  - ii. An annual internal inspection of the bag house and ducting for structural integrity.The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the ductwork, baghouse, and fabric filters are not inspected and maintained.
- g. For each emission sources, as listed above in Section 2.1 D, subject to an opacity standard listed, including building enclosures, once a month the Permittee shall observe the emissions point(s) for any visible emissions above normal to ensure compliance. If visible emissions from this source are observed to be above normal, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0524; unless, an approved Method 9 opacity determination meeting the requirements of 15A NCAC 02D .0501(c)(8) is performed and visible emissions are demonstrated to comply with the applicable limit given above in Section 2.1 D.1.a.ii, b, and c. If compliance with the applicable limit cannot be demonstrated, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0524.

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

- h. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. The date and time of each recorded action;
  - ii. The results of each inspection;
  - iii. The results of any maintenance performed on the fabric filters, duct work, or baghouse; and
  - iv. Any variance from manufacturer's recommendations, if any, and corrections made.
- i. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. The date and time of each recorded action;
  - ii. The results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
  - iii. The results of any corrective actions performed.
- j. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these records are not maintained.

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

- k. The Permittee shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in this permit, including reports of opacity observations made using Method 9 and Method 22 to demonstrate compliance. [40 CFR 60.676(f)]

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

**E. Limestone, Receiving, Storage, Transfer, and Grinding**

- Railcar transfer to dual hopper (**ID No. ES-8-1**).
- Stockpile stack out conveyor to stockpile and stockpile (**ID No. ES-10**).
- Stockpile transfer to grate feed of stockpile reclaim conveyor (**ID No. ES-11A**).

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

| Pollutant            | Limits/Standards   | Applicable Regulation |
|----------------------|--|-----------------------|
| Particulate Matter   | Ambient air quality standards, opacity, and control requirements for non-process fugitive dust pursuant to 15A NCAC 02D .0540<br>[See Multiple Emission Sources - Section 2.2 A.1]   | 15A NCAC 02D .0510    |
| Visible Emissions    | Visible emissions shall not be more than 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent 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    |
| Particulate Matter   | Control requirements for non-process fugitive dust<br>[See Multiple Emissions Sources - Section 2.2 A.2]   | 15A NCAC 02D .0540    |
| Toxic Air Pollutants | <b>State-enforceable only</b><br>See Section 2.2 B   | 15A NCAC 02D .1100    |

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

- a. Visible emissions from these sources (**ID Nos. ES-8-1, ES-10, and ES-11A**) shall not be more than 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent 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 limits given in Section 2.1 E.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

- c. To ensure compliance, once a month the Permittee shall observe the emission points (**ID Nos. ES-8-1, ES-10 and ES 11A**) for any visible emissions above normal. If visible emissions from these sources are observed to be above normal, the Permittee shall either:
- i. immediately shutdown the source and repair the malfunction,
  - ii. be deemed to be in noncompliance with 15A NCAC 02D .0521 or
  - iii. demonstrate that the percent opacity from the emission points of the emission sources in accordance with 15A NCAC 02D .2601 for 30 minutes is below the limit given in Section 2.1 E.1.a above.
- If the demonstration in (c) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521.

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

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- i. The date and time of each recorded action;

- ii. The results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
- iii. The results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

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

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

**F. Dry Flyash System**

- Eight flyash transfer filter separators (**ID Nos. ES-FS1/2, ES-FS1/2b, ES-FS3, ES-FS3b, ES-FS4, ES-FS4b, ES-FS5 and ES-FS5b**) and associated baghouses (**ID Nos. CD-U1/2FS, CD-U1/2FSa, CD-U3FS, CD-U3FSb, CD-U4FS, CD-U4FSb, CD-U5FS and CD-U5FSb**)
- Two ash silos (**ID Nos. ES-AS1 and ES-AS2**) and two (dry) flyash truck loading equipment (**ID Nos. ES-FTLD1 and ES-FTLD2**) and associated baghouses (**ID Nos. CD-S1Bf and CD-S2Bf**)
- Two (wet) flyash truck loading equipment (**ID Nos. ES-FTLW1 and ES-FTLW2**)
- Truck transport (**ID No. Fugitive 1**), truck unloading (**ID No. Fugitive 2**), and dry ash landfill management (**ID No. Fugitive 3**)

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

| Pollutant   | Limits/Standards   | Applicable Regulation             |
|---|--|-----------------------------------|
| <b>Affected emission sources: ID Nos. ES-FS1/2, ES-FS1/2b, ES-FS3, ES-FS3b, ES-FS4, ES-FS4b, ES-FS5, ES-FS5b, ES-AS1, ES-AS2, ES-FTLD1 and ES-FTLD2</b> |  |                                   |
| Particulate Matter  | $E = 4.10 \times P^{0.67}$ for $P \leq 30$<br>$E = 55.0 \times P^{0.11} - 40$ for $P > 30$<br>where:<br>E = allowable emission rate in pounds per hour<br>P = process weight rate in tons per hour   | 15A NCAC 02D .0515                |
| Visible Emissions   | Visible emissions shall not be more than 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent 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                |
| Toxic Air Pollutants  | <b>State-enforceable only</b><br>See Section 2.2 B   | 15A NCAC 02D .1100                |
| <b>Affected Emission Source: ID No. Fugitive 3</b>  |  |                                   |
| PM-10   | no observation of visible dust emissions without taking corrective action.   | 15A NCAC 02Q.0317 (PSD avoidance) |

**1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES**

- a. Emissions of particulate matter from these sources (**ID Nos. ES-FS1/2, ES-FS1/2b, ES-FS3, ES-FS3b, ES-FS4, ES-FS4b, ES-FS5, ES-FS5b, ES-AS1, ES-AS2, ES-FTLD1 and ES-FTLD2**) shall not exceed an allowable emission rate as calculated by the following equations:

$$E = 4.10 \times P^{0.67} \quad (\text{for process rates less than or equal to 30 tons per hour}), \text{ or}$$

$$E = 55.0 \times P^{0.11} - 40 \quad (\text{for process rates greater than 30 tons per hour})$$

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

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

**Testing** [15A NCAC 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 F.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

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

- c. Particulate matter emissions from the eight flyash transfer filter separators (**ID Nos. ES-FS1/2, ES-FS1/2b, ES-FS3, ES-FS3b, ES-FS4, ES-FS4b, ES-FS5 and ES-FS5b**) shall be controlled by the bagfilters (**ID Nos. CD-U1/2FS, CD-U1/2FSa, CD-U3FS, CD-U3FSb, CD-U4FS, CD-U4FSb, CD-U5FS and CD-U5FSb**), and particulate matter emissions from the two ash silos (**ID Nos. ES-AS1 and ES-AS2**) and two (dry) flyash truck loading equipment (**ID Nos. ES-FTLD1 and ES-FTLD2**) shall be controlled by the bagfilters (**ID Nos. CD-S1Bf and CD-S2Bf**). To

ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:

- i. A monthly visual inspection of the system ductwork and material collection unit for leaks; and
- ii. An annual (for each 12 month period following the initial inspection) internal inspection of the bagfilter's structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork and bagfilters are not inspected and maintained.

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

- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. The date and time of each recorded action;
  - ii. The results of each inspection;
  - iii. The results of any maintenance performed on the bagfilters; and
  - iv. Any variance from manufacturer's recommendations, if any, and corrections made.The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

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

- e. The Permittee shall submit the results of any maintenance performed on the bagfilters within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

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

- a. Visible emissions from these sources (**ID Nos. ES-FS1/2, ES-FS1/2b, ES-FS3, ES-FS3b, ES-FS4, ES-FS4b, ES-FS5, ES-FS5b, ES-AS1, ES-AS2, ES-FTLD1 and ES-FTLD2**) shall not be more than 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent 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 F.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

- c. To ensure compliance, once a month the Permittee shall observe the emission points of these sources for any visible emissions above normal. If visible emissions from these sources are observed to be above normal, the Permittee shall either:
  - i. immediately shutdown the source and repair the malfunction,
  - ii. be deemed to be in noncompliance with 15A NCAC 02D .0521 or
  - iii. demonstrate that the percent opacity from the emission points of the emission sources in accordance with 15A NCAC 02D .2601 for 30 minutes is below the limit given in Section 2.1 F.2.a above.If the demonstration in iii above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521.

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

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

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

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

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

**3. 15A NCAC 02Q .0317: AVOIDANCE CONDITION for  
15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION**

- a. In order to avoid applicability of 15A NCAC 02D .0530, fugitive dust emissions from dryash landfill management (**ID No. Fugitive 3**) shall be controlled by mixing water with the dry flyash when loading into trucks prior to transporting to the landfill for spreading and compacting.

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

- b. The Permittee shall ensure that, when loading flyash into trucks from the silos, sufficient water is mixed with the flyash to avoid any visible fugitive dust emissions beyond the immediate loading area. The Permittee shall maintain daily records indicating whether any visible emissions are observed from truck loading beyond the immediate loading area. If dust emissions are observed, the operator shall take corrective action to adjust the amount of water being mixed with the flyash, or call for manual watering of the trucks as filled if the system is malfunctioning, or discontinue operation until repairs are made. The following shall be recorded:
  - i. The date and time of each recorded action;
  - ii. Whether any visible emissions are observed; and
  - iii. Any corrective action taken.

These records shall be maintained in a logbook (written or electronic format) on-site and be made available to an authorized DAQ representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if no corrective action is taken after visible dust emissions are observed or if these records are not maintained.

**G. One Units 4 and 5 DSI ACI storage silo (ID No. ES-U4/5ACISilo) and associated Units 4 and 5 ACI storage silo bin vent filter baghouse (ID No. CD-U4/5ACISiloBf)**

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

| Pollutant          | Limits/Standards   | Applicable Regulation |
|--------------------|--|-----------------------|
| Particulate Matter | $E = 4.10 \times P^{0.67}$ for $P \leq 30$<br>$E = 55.0 \times P^{0.11} - 40$ for $P > 30$<br>where:<br>E = allowable emission rate in pounds per hour<br>P = process weight rate in tons per hour   | 15A NCAC 02D .0515    |
| Visible Emissions  | Visible emissions shall not be more than 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent 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    |

**1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES**

- a. Emissions of particulate matter from this source (**ID No. ES-U4/5ACISilo**) shall not exceed an allowable emission rate as calculated by the following equation:

$$E = 4.10 \times P^{0.67} \quad (\text{for process rates less than or equal to 30 tons per hour), or}$$

$$E = 55.0 \times P^{0.11} - 40 \quad (\text{for process rates greater than 30 tons per hour})$$

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

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

**Testing** [15A NCAC 02D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 G.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

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

- c. Particulate matter emissions from the Units 4 and 5 DSI ACI storage silo (**ID No. ES-U4/5ACISilo**) shall be controlled by the bagfilter (**ID No. CD-U4/5ACISiloBf**). To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer’s inspection and maintenance recommendations, or if there are no manufacturer’s inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
  - i. A monthly visual inspection of the system ductwork and material collection unit for leaks; and
  - ii. An annual (for each 12-month period following the initial inspection) internal inspection of the bagfilter's structural integrity.
 The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork and bagfilter is not inspected and maintained.

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

- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. The date and time of each recorded action;
  - ii. The results of each inspection;
  - iii. The results of any maintenance performed on the bagfilter; and
  - iv. Any variance from manufacturer’s recommendations, if any, and corrections made.
 The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

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

- e. The Permittee shall submit the results of any maintenance performed on the bagfilter within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

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

- a. Visible emissions from this source (**ID No. ES-U4/5ACISilo**) shall not be more than 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent 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 15A NCAC 02D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 G.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

- c. To ensure compliance, once a month the Permittee shall observe the emission points of these sources for any visible emissions above normal. If visible emissions from these sources are observed to be above normal, the Permittee shall either:

- i. immediately shutdown the source and repair the malfunction,
- ii. be deemed to be in noncompliance with 15A NCAC 02D .0521 or
- iii. demonstrate that the percent opacity from the emission points of the emission sources in accordance with 15A NCAC 02D .2601 for 30 minutes is below the limit given in Section 2.1 F.2.a above.

If the demonstration in iii above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521.

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

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:

- i. The date and time of each recorded action;
- ii. The results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
- iii. The results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

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

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

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

### A. Limestone, Receiving, Storage, Transfer, and Grinding

- Day bin No. 1 transfer to wet ball mill No. 1 in preparation building (ID No. ES-16),
- Day bin No. 2 transfer to wet ball mill No. 2 in preparation building (ID No. ES-17),
- Wet ball mill No. 1 and product classifier in preparation building (ID No. ES-18A),
- Wet ball mill No. 2 and product classifier in preparation building (ID No. ES-18B),
- Transfer tower stockpile conveyor transfer to stockpile stack out conveyor in transfer tower (ID No. ES-9),
- Grate feeder transfer to stock pile reclaim conveyor (ID No. ES-11B),
- Stockpile reclaim conveyor transfer to preparation plant feed conveyor in transfer tower (ID No. ES-12),
- Railcar unloading enclosure dust collection system with fabric filter (ID No. CDRULBF) installed on:
  - Railcar transfer to dual hopper (ID No. ES-8-1),
  - Hopper No. 1 transfer to hopper conveyor No.1 (ID No. ES-8-2A),
  - Hopper No. 2 transfer to hopper conveyor No. 2 (ID No. ES-8-2B), and
  - Hopper conveyors No.1 and No. 2 transfer-to-transfer tower stockpile conveyor (ID No. ES-8-3).
- Preparation building dust collection system with fabric filter (ID No. CDLSBF) installed on:
  - Preparation plant feed conveyor with flop gate transfer to day bin No. 2 feed conveyor (ID No. ES-13),
  - Preparation plant feed conveyor with flop gate transfer to day bin No. 1 (ID No. ES-14), and
  - Day bin No. 2 feed conveyor to day bin No. 2 (ID No. ES-15).

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

| Pollutant          | Limits/Standards  | Applicable Regulation |
|--------------------|---|-----------------------|
| Particulate Matter | Ambient air quality standards, opacity, and control requirements for non-process fugitive dust pursuant to 15A NCAC 02D .0540 | 15A NCAC 02D .0510    |
| Particulate Matter | Control requirements for non-process fugitive dust  | 15A NCAC 02D .0540    |

#### 1. 15A NCAC 02D .0510: PARTICULATES FROM SAND, GRAVEL, OR CRUSHED STONE OPERATIONS

- a. The Permittee shall not cause, allow, or permit any material in a sand, gravel, or crushed stone operation to be produced, handled, transported or stockpiled without taking measures to reduce to a minimum any particulate matter from becoming airborne to prevent exceeding the ambient air quality standards beyond the property line for particulate matter, both PM10 and total suspended particulates.
- b. Fugitive non-process dust emissions from sand, gravel, or crushed stone operations shall be regulated by Section 2.2 A.2. (15A NCAC 02D .0540).
- c. The Permittee shall control process-generated emissions from conveyors, screens, and transfer points, such that the applicable opacity standards in Section 2.1 D (15A NCAC 02D .0524 - 40 CFR 60, Subpart OOO) or 2.1 E.1. (15 A NCAC 02D .0521) are not exceeded.

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

- d. If emissions tests are required, the testing shall be performed in accordance with the applicable permit limit. If the results of this test are above the applicable limit, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0510.

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

- e. The Permittee shall comply with the monitoring/recordkeeping/reporting required in the applicable requirement. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0510 if monitoring, recordkeeping, and recordkeeping are not conducted in accordance with the applicable permit condition.

**2. 15A NCAC 02D .0540: PARTICULATES FROM FUGITIVE NON-PROCESS DUST EMISSION SOURCES**

- a. The Permittee shall not cause or allow fugitive non-process dust emissions (i.e., particulate matter that is not collected by a capture system and is generated from areas such as pit areas, process areas, haul roads, stockpiles, and plant roads) to cause or contribute to substantive complaints (i.e., complaints that are verified with physical evidence acceptable to the DAQ).
- b. If fugitive non-process dust emissions cause or contribute to substantive complaints, the Permittee shall:
  - i. Within 30 days upon receipt of written notification from the Director of a second substantive complaint in a 12-month period, submit to the Director a written description of what has been done and what will be done to reduce fugitive non-process dust emissions from that part of the facility that caused the second substantive complaint;
  - ii. Within 90 days of receipt of written notification from the Director of a second substantive complaint in a 12-month period, submit to the Director a control plan; and
  - iii. Within 30 days after the Director approves the plan, be in compliance with the plan.
- c. The Director may require that the Permittee develop and submit a fugitive non-process dust control plan if:
  - i. Ambient air quality measurements or dispersion modeling acceptable to the DAQ show violation or a potential for a violation of an ambient air quality standard for particulates in 15A NCAC 02D .0400 "Ambient Air Quality Standards;" or
  - ii. If the DAQ observes excessive fugitive non-process dust emissions from the facility beyond the property boundaries.

The control plan shall be submitted to the Director no later than 90 days after notification. The facility shall be in compliance with the plan within 30 days after the Director approves the plan.

- d. A fugitive dust control plan shall:
  - i. Identify the sources of fugitive non-process dust emissions within the facility;
  - ii. Describe how fugitive non-process dust will be controlled from each identified source;
  - iii. Contain a schedule by which the plan will be implemented;
  - iv. Describe how the plan will be implemented, including training of facility personnel; and
  - v. Describe methods to verify compliance with the plan.
- e. The Director shall approve the plan if he finds that:
  - i. The plan contains all required elements;
  - ii. The proposed schedule contained in the plan will reduce fugitive non-process dust emissions in a timely manner;
  - iii. The methods used to control fugitive non-process dust emissions are sufficient to prevent fugitive non-process dust emissions from causing or contributing to a violation of the ambient air quality standards for particulates; and
  - iv. The described compliance verification methods are sufficient to verify compliance with the plan.

If the Director finds that the proposed plan does not meet the requirements, he shall notify the Permittee of any deficiencies in the proposed plan. The Permittee shall have 30 days after receiving written notification from the Director to correct the deficiencies.
- f. If after a plan has been implemented, the Director finds that the plan inadequately controls fugitive non-process dust emissions; he shall require the Permittee to correct the deficiencies in the plan. Within 90 days after receiving written notification from the Director identifying the deficiency, the Permittee shall submit a revision to his plan to correct the deficiencies.

**B. Facility Wide**

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

| Pollutant                     | Limits/Standards   | Applicable Regulation |
|-------------------------------|--|-----------------------|
| Toxic Air Pollutant Emissions | Emissions rates modeled to demonstrate compliance with acceptable ambient levels.<br><b>State-enforceable only</b> | 15A NCAC 02D .1100    |

**State-enforceable only**

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

- a. Pursuant to 15A NCAC 02D .1100 and in accordance with the approved application for an air toxic compliance demonstration, the following permit limits shall not be exceeded:

| Emission Source   | Toxic Air Pollutant  | Emissions Limit                  |  |
|---|--|----------------------------------|--|
|   |  | (lb/yr)                          | (lb/day)                                     |
| CDRULBF<br>(ES-8-1, ES-8-2A, ES-8-2B, ES-8-3)   | arsenic and inorganic arsenic compounds<br>beryllium (7440-41-7)<br>cadmium (7440-43-9)<br>manganese and compounds<br>mercury, vapor (7439-97-6)<br>nickel metal (7440-02-0)   | 1.39E-01<br>1.77E-01<br>6.86E-01 | 6.68E-01<br>9.49E-04<br>1.48E-02             |
| EPLSBF<br>(ES-13, ES-14, ES-15)   | arsenic and inorganic arsenic compounds<br>beryllium (7440-41-7)<br>cadmium (7440-43-9)<br>manganese and compounds<br>mercury, vapor (7439-97-6)<br>nickel metal (7440-02-0)   | 4.32E-02<br>5.49E-02<br>2.13E-01 | 2.07E-01<br>2.95E-04<br>4.61E-03             |
| FILTSEP<br>(ES-FS1/2, ES-FS1/2b, ES-FS3,<br>ES-FS3b, ES-FS4, ES-FS4b,<br>ES-FS5, ES-FS5b) | arsenic and inorganic arsenic compounds<br>beryllium (7440-41-7)<br>cadmium (7440-43-9)<br>chromium VI (soluble chromate compounds)<br>manganese and compounds<br>mercury, vapor (7439-97-6)<br>nickel metal (7440-02-0) | 1.53E+00<br>2.68E+00<br>6.73E-01 | 9.06E-03<br>3.67E-01<br>1.59E-03<br>8.36E-02 |
| BINVENT1<br>(ES-AS1)  | arsenic and inorganic arsenic compounds<br>beryllium (7440-41-7)<br>cadmium (7440-43-9)<br>chromium VI (soluble chromate compounds)<br>manganese and compounds<br>mercury, vapor (7439-97-6)<br>nickel metal (7440-02-0) | 7.58E-01<br>1.32E+00<br>3.32E-01 | 4.48E-03<br>1.81E-01<br>7.84E-04<br>4.13E-02 |
| BINVENT2<br>(ES-AS2)  | arsenic and inorganic arsenic compounds<br>beryllium (7440-41-7)<br>cadmium (7440-43-9)<br>chromium VI (soluble chromate compounds)<br>manganese and compounds<br>mercury, vapor (7439-97-6)<br>nickel metal (7440-02-0) | 7.58E-01<br>1.32E+00<br>3.32E-01 | 4.48E-03<br>1.81E-01<br>7.84E-04<br>4.13E-02 |
| NSLF_AL<br>Ash Loading at NSLF  | arsenic and inorganic arsenic compounds<br>beryllium (7440-41-7)<br>cadmium (7440-43-9)<br>chromium VI (soluble chromate compounds)<br>manganese and compounds<br>mercury, vapor (7439-97-6)                             | 2.29E-01<br>4.43E-01<br>1.09E-01 | 2.21E-03<br>1.11E-01<br>4.81E-04             |

| Emission Source  | Toxic Air Pollutant  | Emissions Limit                  |  |
|--|--|----------------------------------|--|
|  |  | (lb/yr)                          | (lb/day)                                     |
|  | nickel metal (7440-02-0)   |                                  | 2.14E-02                                     |
| AAB_AUL<br>Ash Unloading at Active Ash Basin             | arsenic and inorganic arsenic compounds<br>beryllium (7440-41-7)<br>cadmium (7440-43-9)<br>chromium VI (soluble chromate compounds)<br>manganese and compounds<br>mercury, vapor (7439-97-6)<br>nickel metal (7440-02-0) | 5.72E-02<br>1.11E-01<br>2.72E-02 | 5.52E-04<br>2.76E-02<br>1.20E-04<br>5.35E-03 |
| LANDFILL<br>(Fugitive 2, Fugitive 3, I-3)                | arsenic and inorganic arsenic compounds<br>beryllium (7440-41-7)<br>cadmium (7440-43-9)<br>chromium VI (soluble chromate compounds)<br>manganese and compounds<br>mercury, vapor (7439-97-6)<br>nickel metal (7440-02-0) | 7.38E-02<br>1.43E-01<br>3.51E-02 | 5.07E-04<br>2.54E-02<br>1.11E-04<br>4.92E-03 |
| FLS<br>(F-LS, ES-10, ES-11A, ES-11B, ES-12)              | arsenic and inorganic arsenic compounds<br>beryllium (7440-41-7)<br>cadmium (7440-43-9)<br>manganese and compounds<br>mercury, vapor (7439-97-6)<br>nickel metal (7440-02-0)   | 5.23E-02<br>6.65E-02<br>2.58E-01 | 2.97E+00<br>4.23E-03<br>6.61E-02             |
| GYPSPILE<br>(I-63, I-64, I-65, I-66, I-67)               | arsenic and inorganic arsenic compounds<br>cadmium (7440-43-9)<br>manganese and compounds<br>mercury, vapor (7439-97-6)<br>nickel metal (7440-02-0)  | 3.86E-02<br>2.29E-01             | 3.86E+00<br>4.30E-02<br>3.36E-02             |
| COALP<br>(I-1)   | arsenic and inorganic arsenic compounds<br>beryllium (7440-41-7)<br>cadmium (7440-43-9)<br>chromium VI (soluble chromate compounds)<br>manganese and compounds<br>mercury, vapor (7439-97-6)<br>nickel metal (7440-02-0) | 3.46E-01<br>1.06E+00<br>2.39E-01 | 3.19E-02<br>9.89E-01<br>6.62E-02<br>4.02E-01 |
| NSLF_WA<br>NSLF Wind Erosion - Active Area               | arsenic and inorganic arsenic compounds<br>beryllium (7440-41-7)<br>cadmium (7440-43-9)<br>chromium VI (soluble chromate compounds)<br>manganese and compounds<br>mercury, vapor (7439-97-6)<br>nickel metal (7440-02-0) | 2.35E+00<br>4.55E+00<br>1.12E+00 | 2.52E-01<br>1.26E+01<br>5.50E-02<br>2.44E+00 |
| NSLF_WIA<br>NSLF Wind Erosion - Inactive Area            | arsenic and inorganic arsenic compounds<br>beryllium (7440-41-7)<br>cadmium (7440-43-9)<br>chromium VI (soluble chromate compounds)<br>manganese and compounds<br>mercury, vapor (7439-97-6)<br>nickel metal (7440-02-0) | 2.53E-01<br>4.91E-01<br>1.21E-01 | 2.72E-02<br>1.36E+00<br>5.94E-03<br>2.64E-01 |
| AAB_WA<br>Active Ash Basin Wind<br>Erosion - Active Area | arsenic and inorganic arsenic compounds<br>beryllium (7440-41-7)<br>cadmium (7440-43-9)<br>chromium VI (soluble chromate compounds)<br>manganese and compounds<br>mercury, vapor (7439-97-6)<br>nickel metal (7440-02-0) | 4.69E+00<br>9.09E+00<br>2.24E+00 | 5.04E-01<br>2.53E+01<br>1.10E-01<br>4.89E+00 |
| AAB_WIA  | arsenic and inorganic arsenic compounds  | 1.08E+00                         |  |

| Emission Source                               | Toxic Air Pollutant                      | Emissions Limit |          |
|---|--|-----------------|----------|
|   |  | (lb/yr)         | (lb/day) |
| Active Ash Basin Wind Erosion - Inactive Area | beryllium (7440-41-7)                    | 2.09E+00        |          |
|   | cadmium (7440-43-9)                      | 5.13E-01        |          |
|   | chromium VI (soluble chromate compounds) |                 | 1.16E-01 |
|   | manganese and compounds                  |                 | 5.80E+00 |
|   | mercury, vapor (7439-97-6)               |                 | 2.53E-02 |
|   | nickel metal (7440-02-0)                 |                 | 1.12E+00 |
| Wastewater Bioreactor (ID No. WWTBR)          | hydrogen sulfide                         |                 | 5.1E+01  |

- b. The Permittee has submitted a toxic air pollutant dispersion modeling analysis dated April 28, 2021 for the facility’s toxic air pollutant emissions as listed in the above table. The modeling analysis was reviewed and approved by the AQAB on June 14, 2021. Placement of the emission sources, configuration of the emission points, and operation of the sources shall be in accordance with the submitted dispersion modeling analysis and should reflect any changes from the original analysis submittal as outlined in the AQAB review memo.

**Monitoring/Recordkeeping/Reporting** [15A NCAC 02D .0611]

- c. No monitoring, recordkeeping, or reporting shall apply to any emission sources included in Section 2.2 B.1.a above.

**C.**

- **Ash Landfill (ID No. LF)**
- **Ash Deposition (ID No. AD)**
- **Ash Excavation (ID No. AE)**
- **Active Ash Basin (ID No. AAB)**
- **Ash Hauling (ID No. HAULRD)**

**1. 15A NCAC 02Q .0504: OPTION FOR OBTAINING CONSTRUCTION AND OPERATION PERMIT**

**Permitting** [15A NCAC 02Q .0504(d)]

- a. Pursuant to 15A NCAC 02Q .0501(b)(2) or (c)(2), for completion of the two-step significant modification process initiated by Application No. (3600039.21B), the Permittee shall file an amended application following the procedures of Section 15A NCAC 02Q .0500 within one year from the date of beginning operation of any of these sources (**ID Nos. LF, AD, AE, AAB and HAULRD**).

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

- b. The Permittee shall notify the Regional Office in writing of the date of the first excavation of ash from the Active Ash Basin (**ID No. AAB**), postmarked no later than 30 days after such date.

## 2.3 Permit Shield for Non-applicable Requirements

This condition is to clarify that issuance of this permit provides no shield from the Act, or regulations promulgated thereunder, including state regulations, pertaining to requirements of the New Source Performance Standards or major or minor new source preconstruction review requirements, which EPA is currently alleging or may allege in the future as having been violated by the Permittee. The permit may be subject to reopening to include a compliance plan and schedule addressing any judicial or administrative order establishing new applicable requirements arising out of past or ongoing noncompliance with those provisions for any affected emission units.

The Permittee is shielded from the following non-applicable requirements as of the date of issuance of this permit based on information furnished with all previous applications. This shield does not apply to future modifications or changes in the method of operation. [15A NCAC 02Q .0512(a)(1)(B)]

### A. The following requirements are not applicable to Units 1 and 5 boilers (ID Nos. ES-1 and ES-5)

1. 15A NCAC 02D .0501(c)(11), testing for mercury emissions, is not applicable because 15A NCAC 02D .0537, "Control of Mercury Emissions", does not apply to fuel combustion.
2. 15A NCAC 02D .0501(c)(14), testing for sources for which emissions are based on process rates, is not applicable because emissions for these sources are not based on process rates.
3. 15A NCAC 02D .0521(d), visible emissions shall not exceed 20% opacity, is not applicable because these sources were manufactured as of July 1, 1971.
4. 15A NCAC 02D .0607, calibration and maintenance requirements do not apply as these sources do not combust wood and wood-fossil fuels.
5. 15A NCAC 02D .1110, NESHAP promulgated in 40 CFR Part 61, is not applicable because no NESHAP evaluation has been triggered.
6. 15A NCAC 02D .0902(c), applicability of VOC rules to sources in non-attainment areas, is not applicable because there are no rules applicable to these sources in 02D .0900.
7. 15A NCAC 02D .0902(f)(1), exemptions from VOC rules in 15A NCAC 02D .0900, are not applicable because there are no rules applicable to these sources in 02D .0900.
8. 15A NCAC 02D .0903(b) and (c), recordkeeping on VOC emissions and control equipment, is not applicable because there are no rules applicable to these sources in 02D .0900.
9. 15A NCAC 02D .0903(d)(2), recordkeeping on VOC source compliance, is not applicable because there are no rules applicable to these sources in 02D .0900.
10. 15A NCAC 02D .0903(e), recordkeeping on VOCs, is not applicable because there are not rules applicable to these sources in 02D .0900.
11. 15A NCAC 02D .0912(c), testing on VOCs, is not applicable because there are no rules applicable to these sources in 02D .0900.
12. 15A NCAC 02D .0912(d), reporting on VOCs and corrective actions, is not applicable because there are no rules applicable to these sources in 02D .0900.
13. 15A NCAC 02D .0912(e), testing on VOCs, is not applicable because there are no rules applicable to these sources in 02D .0900.
14. 15A NCAC 02D .0939(a), testing for VOCs for sources subject to 02D .0912, is not applicable because there are no rules applicable to these sources in 02D .0900.
15. 15A NCAC 02D .0939(b), testing for VOCs for sources subject to 02D .0912, is not applicable because there are no rules applicable to these sources in 02D .0900.
16. 15A NCAC 02Q .0508(p)(1), recordkeeping on alternative operating scenarios, is not applicable because there are no alternative operating scenarios.
17. 15A NCAC 02Q .0508(g), option to only reference Accidental Release Risk Management Plan in the Title V application, is not applicable because the facility does not exceed the threshold limit for Section 112(r) applicability for accidental releases.
18. 15A NCAC 02D .0503(a), particulates from fuel burning indirect heat exchangers, is not applicable since the boilers are covered under 15A NCAC 02D .0536 for particulate emissions.

### B. The following requirements are not applicable to auxiliary boiler (ID No. ES-6AuxB):

1. 15A NCAC 02D .0519, nitrogen oxide emission limits, is not applicable because the auxiliary boiler is a non-NSPS applicable boiler with a heat input rating of less than 250 million Btu per hour.

2. 15A NCAC 02D .0535(d) and (e), malfunction abatement plan requirements and submittal, is not applicable because the plan is only required for electric utility boilers.
3. 15A NCAC 02D .0536, emission limits for particulate matter from utility boilers, is not applicable because this boiler is not a utility boiler.
4. 15A NCAC 02D .0606, monitoring of fossil-fired steam generators in accordance with Appendix P of 40 CFR Part 51, is not applicable because the auxiliary boiler has a heat input of less than 250 million Btu per hour.
5. 15A NCAC 02D .0608, sulfur dioxide emissions from other coal or residual oil burners, is not applicable because this boiler does not burn coal or residual oil.
6. 15A NCAC 02Q .0401, implementation of Phase II of the federal acid rain program pursuant to the requirements of Title IV of the Clean Air Act as provided in 40 CFR Part 72, is not applicable because this boiler is not a utility unit.

**C. The following requirements are not applicable to the No. 2 fuel oil storage tank ID No. I-57.**

1. 15A NCAC 02D .0925 "Petroleum Liquid Storage in Fixed Roof Tanks" is not applicable to the No. 2 Fuel Oil Storage Tank, because the vapor pressure of the No. 2 fuel oil is less than 1.52 psia.
2. The NSPS for Storage Vessels of VOC including Petroleum Liquid (40 CFR Part 60, Subpart Kb) is not applicable to the No. 2 Fuel Oil Storage Tank, because it was constructed before June 23, 1984.
3. The NSPS for Storage Vessels of Petroleum Liquid (40 CFR Part 60, Subpart K and Ka) is not applicable to the No. 2 Fuel Oil Storage Tank, because fuel oil is not included in the definition of petroleum liquid.

## 2.4 Phase II Acid Rain Permit Requirements

**ORIS code: 2718**

**Effective dates: Same as the Title V permit effective dates**

### A. Statement of Basis

Statutory and Regulatory Authorities: In accordance with the provisions of Article 21B of Chapter 143, General Statutes of North Carolina as amended and Titles IV and V of the Clean Air Act, the Department of Environmental Quality, 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.

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

1. For each boiler (**ID Nos. ES-1 and ES-5**), the number of allowances of sulfur dioxide is allocated to Phase II-affected units by U.S. EPA under Tables 2, 3, or 4 of 40 CFR Part 73 and may change. In addition, the number of allowances actually held by an affected source in a unit account may differ from the number allocated by U.S. EPA. Neither of the aforementioned conditions necessitates a revision to the unit SO<sub>2</sub> allowance allocations identified in this permit (See 40 CFR 72.84).
2. Pursuant to 40 CFR 76.11, the Division of Air Quality approves a NO<sub>x</sub> emissions averaging plan for these boilers (**ID Nos. ES-1 and ES-5**).

Under the plan, the actual Btu-weighted annual average NO<sub>x</sub> emission rate for the units in the plan shall be less than or equal to the Btu-weighted annual average NO<sub>x</sub> emission rate for the same units had they each been operated, during the same period of time, in compliance with the individual applicable emission limitations under 40 CFR 76.5, 76.6, or 76.7, except that for any early election units, the applicable emission limitations shall be under 40 CFR 76.7. If the designated representative demonstrates that the requirement of the prior sentence (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) is met for the plan year, then this unit shall be deemed to be in compliance for the year with its alternative contemporaneous annual emission limitation and annual heat input limit.

If the designated representative cannot make the above demonstration (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) for a plan year, and if any unit(s) fails to meet the annual average Alternative Contemporaneous Emission Limitation (ACEL) listed below or has an annual heat input less than the amount listed below, then excess emissions of nitrogen oxides occur during the year at this unit. A penalty for excess emissions will be assessed in accordance with 40 CFR 77.6.

| Boiler<br>(ID Number) | ACEL<br>(lb <sub>NOx</sub> /MMBtu) | Annual Heat Input<br>(MMBtu/yr) |
|-----------------------|------------------------------------|---------------------------------|
| ES-1                  | 0.450                              | 18,755,160                      |
| ES-5                  | 0.450                              | 35,013,720                      |

### C. Comments, Notes and Justifications

None.

### D. Phase II Permit Applications (attached)

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

Acid Rain Permit Renewal Application, dated August 26, 2022  
Phase II NO<sub>x</sub> Compliance Plan and NO<sub>x</sub> Averaging Plan, dated June 23, 2015

## 2.5 Consent Decree – Applicable Requirements

Allen Units 1, 2 and 3 (**ID Nos. ES-1, ES-2, and ES-3**)<sup>1</sup> are subject to the compliance schedule described below. This compliance schedule is a sequence of actions with milestones leading to compliance with applicable requirements for which the source has agreed to under the October 20, 2015 Consent Decree described below. [15A NCAC 02Q .0508(i)(16) and (m)].

The United States District Court for the Middle District of North Carolina entered a consent decree in United States et al. v. Duke Energy Corporation, No. 1:00 cv 1262 (M.D.N.C.), on October 20, 2015, resolving certain PSD claims related to Duke Energy's Plant Modernization Program and ordered, adjudged, and decreed the following.

### **A. Retirement of Plant Modernization Program Units**

1. By no later than December 31, 2024, Duke Energy shall permanently retire Allen Unit 1 and Allen Unit 2. [Consent Decree ¶49]

### **B. Interim NO<sub>x</sub> Emission Reductions and Controls**

1. Operation and Performance NO<sub>x</sub> Requirements at Allen Units 1 and 2
  - a. Commencing no later than February 17, 2016, and continuing until the unit is retired, Duke Energy shall continuously operate the existing selective non-catalytic reduction (SNCR) at Allen Unit 1. Commencing no later than February 16, 2017, and continuing until the unit is retired, Duke Energy shall achieve and maintain a 365-day rolling average NO<sub>x</sub> emission rate no greater than 0.250 lb/mmBtu. [Consent Decree ¶50]
  - b. Commencing no later than February 17, 2016, and continuing until the unit is retired, Duke Energy shall continuously operate the existing SNCR at Allen Unit 2. Commencing no later than February 16, 2017, and continuing until the unit is retired, Duke Energy shall achieve and maintain a 365-day rolling average NO<sub>x</sub> emission rate no greater than 0.250 lb/mmBtu. [Consent Decree ¶51]
2. Allen Unit 1 and 2 Annual NO<sub>x</sub> Tonnage Limitations
  - a. Beginning in calendar year 2016 and continuing each calendar year thereafter until the unit is retired, Duke Energy shall not exceed an annual NO<sub>x</sub> tonnage limitation of 600 tons per year at Allen Unit 1. [Consent Decree ¶52]
  - b. Beginning in calendar year 2016 and continuing each calendar year thereafter until the unit is retired, Duke Energy shall not exceed an annual NO<sub>x</sub> tonnage limitation of 600 tons per year at Allen Unit 2. [Consent Decree ¶53]
3. Monitoring of NO<sub>x</sub> Emissions
  - a. In determining a 365-day rolling average NO<sub>x</sub> emission rate, Duke Energy shall use NO<sub>x</sub> emission data obtained from a CEMS in accordance with the procedures of 40 CFR Part 75, except that the missing data substitution procedures of 40 CFR Part 75 shall not apply to such determinations. Diluent capping (*i.e.*, 5% CO<sub>2</sub>) will be applied to the NO<sub>x</sub> emission rate for any hours where the measured CO<sub>2</sub> concentration is less than 5% following the procedures in 40 CFR Part 75, Appendix F, Section 3.3.4.1. [Consent Decree ¶54]
  - b. For purposes of determining compliance with the annual NO<sub>x</sub> tonnage limitations at Allen Unit 1 and Allen Unit 2, Duke Energy shall use NO<sub>x</sub> emission data obtained from a CEMS in accordance with the procedures specified in 40 CFR Part 75. [Consent Decree ¶55]

### **C. Interim SO<sub>2</sub> Emission Reductions and Controls**

1. Operation and Performance SO<sub>2</sub> Requirements at Allen Units 1 and 2
  - a. Commencing no later than February 17, 2016, and continuing until the unit is retired, Duke Energy shall continuously operate the existing FGD at Allen Unit 1. Commencing no later than February 16, 2017, and continuing until the unit is Retired, Duke Energy shall achieve and maintain a 365-day rolling average SO<sub>2</sub> emission rate of no greater than 0.120 lb/mmBtu. [Consent Decree ¶56]
  - b. Commencing no later than February 17, 2016, and continuing until the unit is retired, Duke Energy shall continuously operate the existing FGD at Allen Unit 2. Commencing no later than February 16, 2017<sup>2</sup>, and

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<sup>1</sup>DEC has submitted retirement notifications for units ES-2 (U2Boiler), ES-3 (U3Boiler), and ES-4 (U4Boiler) and these sources are being removed elsewhere in this permit. However, under Section 2.5 H, the Consent Decree contains certain requirements before the Decree can be terminated. Therefore, no changes are being made to the Decree at this time.

<sup>2</sup> The start date by which operating days are included in the 365-day rolling average was February 17, 2016.

continuing until the unit is retired, Duke Energy shall achieve and maintain a 365-day rolling average SO<sub>2</sub> emission rate of no greater than 0.120 lb/mmBtu. [Consent Decree ¶57]

2. Monitoring of SO<sub>2</sub> Emissions

- a. In determining a 365-day rolling average SO<sub>2</sub> emission rate, Duke Energy shall use SO<sub>2</sub> emission data obtained from a CEMS and certified FGD inlet duct SO<sub>2</sub> monitors in accordance with the procedures of 40 CFR Part 75, except that the missing data substitution procedures of 40 CFR Part 75 shall not apply to such determinations. Diluent capping (i.e., 5% CO<sub>2</sub>) will be applied to the SO<sub>2</sub> emission rate for any hours where the measured CO<sub>2</sub> concentration is less than 5% following the procedures in 40 CFR Part 75, Appendix F, Section 3.3.4.1. [Consent Decree ¶58]

**D. Allowance Surrender Requirements**

1. Use and Surrender of NOx and SO<sub>2</sub> Allowances

- a. Except as may be necessary to comply with Section XIV (Stipulated Penalties) of the Consent Decree, Duke Energy shall not use NOx or SO<sub>2</sub> allowances to comply with any requirement of the Consent Decree, including by claiming compliance with any emission limitation by using, tendering, or otherwise applying NOx or SO<sub>2</sub> allowances to offset any excess emissions. [Consent Decree ¶59]
- b. Except as otherwise provided, beginning in calendar year 2016 and continuing each calendar year thereafter, Duke Energy shall not sell, bank, trade, or transfer its interest in any NOx or SO<sub>2</sub> allowances allocated to Allen Unit 1, Allen Unit 2, Buck Unit 3, Buck Unit 4, Buck Unit 5, Cliffside Unit 1, Cliffside Unit 2, Cliffside Unit 3, Cliffside Unit 4, Dan River Unit 3, Riverbend Unit 4, Riverbend Unit 6, and Riverbend Unit 7. [Consent Decree ¶60]
- c. Beginning in calendar year 2016, and continuing each calendar year thereafter, Duke Energy shall surrender all NOx and SO<sub>2</sub> allowances allocated to Allen Unit 1, Allen Unit 2, Buck Unit 3, Buck Unit 4, Buck Unit 5, Cliffside Unit 1, Cliffside Unit 2, Cliffside Unit 3, Cliffside Unit 4, Dan River Unit 3, Riverbend Unit 4, Riverbend Unit 6, and Riverbend Unit 7 for that calendar year that Duke Energy does not need to meet federal and/or state CAA regulatory requirements for those Units<sup>3</sup>. [Consent Decree ¶61]
- d. Nothing in the Consent Decree shall prevent Duke Energy from purchasing or otherwise obtaining NOx or SO<sub>2</sub> Allowances from another source for purposes of complying with federal and/or state CAA regulatory requirements to the extent otherwise allowed by law. [Consent Decree ¶62]
- e. The requirements of the Consent Decree pertaining to Duke Energy's use and Surrender of NOx Allowances are permanent and are not subject to any termination provision of the Consent Decree. [Consent Decree ¶63]

2. Method for Surrender of NOx and SO<sub>2</sub> Allowances

- a. Duke Energy shall Surrender, or transfer to a non-profit third-party selected by Duke Energy for Surrender, all NOx and SO<sub>2</sub> Allowances required to be Surrendered pursuant to Section VII.A of the Consent Decree (Section 2.5.D.1 above) by June 30 of the immediately following calendar year. [Consent Decree ¶64]
- b. If any Allowances required to be Surrendered under the Consent Decree are transferred directly to a non-profit third-party, Duke Energy shall include a description of such transfer in the next report submitted to EPA pursuant to Section XII (Periodic Reporting) of the Consent Decree (Section 2.5.G below). Such report shall: (a) identify the non-profit third-party recipient(s) of the Allowances and list the serial numbers of the transferred Allowances; and (b) include a certification by the third-party recipient(s) stating that the recipient(s) will not sell, trade, or otherwise exchange any of the Allowances and will not use any of the Allowances to meet any obligation imposed by any environmental law. No later than the third periodic report due after the transfer of any Allowances, Duke Energy shall include a statement that the third-party recipient(s) Surrendered the Allowances for permanent Surrender to EPA in accordance with the provisions of Paragraph 66 of the Consent Decree (Section 2.5.D.2.c below) within one year after Duke Energy transferred the Allowances to them. Duke Energy shall not have complied with the Allowance Surrender requirements of this Paragraph until all third-party recipient(s) have actually Surrendered the transferred Allowances to EPA. [Consent Decree ¶65]
- c. For all Allowances required to be Surrendered, Duke Energy shall, with respect to the Allowances that Duke Energy is to Surrender, ensure that an Allowance transfer request form is first submitted to EPA's Office of Air and Radiation's Clean Air Markets Division directing the transfer of such Allowances to the EPA Enforcement Surrender Account or to any other EPA account that EPA may direct in writing. Such Allowance transfer requests may be made in an electronic manner using the EPA's Clean Air Markets Division Business System, or similar system provided by EPA. As part of submitting these transfer requests, Duke Energy shall ensure that

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<sup>3</sup> Allowances allocated under the Cross-State Air Pollution Rule (CSAPR) for NOx and SO<sub>2</sub> are required to be surrendered only for control periods starting on or after the fourth anniversary of the Date of Entry of the Consent Decree (Date of Entry is October 20, 2015).

the transfer of its Allowances are irrevocably authorized and that the source and location of the Allowances being Surrendered are identified by name of account and any applicable serial or other identification numbers or station names. [Consent Decree ¶66]

#### **E. Prohibition on Netting Credits or Offsets**

1. Emission reductions that result from actions to be taken by Duke Energy after October 20, 2015 to comply with the requirements of the Consent Decree shall not be considered as a creditable contemporaneous emission decrease for the purpose of obtaining a netting credit or offset under the CAA's nonattainment NSR and PSD programs. Notwithstanding the preceding sentence, to the extent otherwise allowed by law, Duke Energy may use any creditable contemporaneous emission decreases resulting solely from retiring Allen Unit 3 for the purposes of permitting combined cycle or simple cycle natural gas-fired combustion turbine(s) where the Allen Station is located, subject to the following additional requirements:
  - a. The emission reductions must be contemporaneous and otherwise creditable within the meaning of the CAA and the North Carolina SIP, and Duke Energy must comply with, and be subject to, all requirements and criteria for creating contemporaneous creditable decreases as set forth in 40 CFR §52.21(b) and the North Carolina SIP, subject to the limitations in this Section 2.5.E.1.
  - b. Duke Energy must apply for, and obtain, minor NSR permits for the construction and operation of such new combined cycle natural gas-fired combustion turbine(s), and must provide notice and a copy of the permit application to the United States and the Environmental Defense, the North Carolina Sierra Club, and the North Carolina Public Interest Research Group (Plaintiff-Intervenors) collectively (Plaintiffs) in accordance with Section XIX (Notices) of the Consent Decree, concurrent with its permit application submission to the Division of Air Quality. Duke Energy's request for such minor NSR permit must include federally-enforceable emission limitations that reflect either Best Available Control Technology or Lowest Achievable Emission Rate, as appropriate, depending upon the attainment classification for the relevant regulated pollutants for which Duke Energy is utilizing emission reductions as provided in Paragraph 67 of the Consent Decree (this Section 2.5.E.1).
  - c. At a minimum, such new combined and/or simple cycle natural gas-fired combustion turbine(s) must include low NOx burners and in the case of combined cycle natural gas-fired turbine(s), must also include Selective Catalytic Reduction pollution control(s).
  - d. The emission reductions that Duke Energy intends to utilize for netting shall not be available under Section VIII of the Consent Decree (this Section 2.5.E.1) if such use would result in an exceedance of a PSD increment, or an interference with "reasonable further progress" toward attainment of a NAAQS in accordance with Part D of Title I of the CAA.
  - e. Duke Energy must be and remain in full compliance with the provisions of the Consent Decree establishing performance, operational, and control technology including, but not limited to, (a) the interim NOx emission reductions and controls specified in Section V of the Consent Decree (Section 2.5.B above), (b) the interim SO<sub>2</sub> emission reductions and controls specified in Section VI of the Consent Decree (Section 2.5.C above), (c) requirements pertaining to the surrender of SO<sub>2</sub> and NOx Allowances (Section 2.5.D above), and (d) the Retirement of Allen Units 1, 2, and 3 as required under the Consent Decree (Sections 2.5.A.1 and 2.5.F.1). [Consent Decree ¶67]

#### **F. Additional Injunctive Relief**

1. By no later than December 31, 2024 Duke Energy shall permanently retire Allen Unit 3. [Consent Decree ¶69]

#### **G. Periodic Reporting**

1. Duke Energy shall submit to Plaintiffs a periodic report, within 60 days after the end of each half of the calendar year (January through June and July through December. The report shall include the following information:
  - a. All information necessary to determine compliance during the reporting period with: all applicable 365-day rolling average emission rates and annual NOx tonnage limitations; the obligation to monitor NOx and SO<sub>2</sub> emissions; and the obligation to surrender NOx allowances and SO<sub>2</sub> allowances.
  - b. An identification of all periods when any pollution control device required by the Consent Decree to continuously operate was not operating, the reason(s) for the equipment not operating, and the basis for Duke Energy's compliance or non-compliance with the continuous operation requirements of the Consent Decree.
  - c. A summary of Duke Energy's actions implemented and expenditures (cumulative and in the current reporting period) made pursuant to implementation of the Additional Injunctive Relief required pursuant to Section IX of the Consent Decree.

If the initial periodic report covers a period of time of less than 60 days, Duke Energy shall not be required to submit a periodic report for that period, but shall include all of the above information and data for that period in its next

- periodic report. [Consent Decree ¶82]
2. In any periodic report submitted pursuant to Section XII of the Consent Decree (this Section 2.5.G), Duke Energy may incorporate by reference information previously submitted under its Title V permitting requirements, provided that Duke Energy attaches the Title V permit report (or the pertinent portions of such report) and provides a specific reference to the provisions of the Title V permit report that are responsive to the information required in the periodic report. [Consent Decree ¶83]
  3. Duke Energy shall submit to Plaintiffs a report of any violation or deviation from any provision of the Consent Decree within 15 working days after Duke Energy knew or should have known of the event. In the report, Duke Energy shall explain the cause or causes of the violation or deviation and all measures taken or to be taken by Duke Energy to cure the reported violation or deviation or to prevent such violations or deviations in the future. If at any time the provisions of the Consent Decree are included in Title V permits, consistent with the requirements for such inclusion in the Consent Decree, then the deviation reports required under applicable Title V regulations shall be deemed to satisfy all the requirements of this paragraph. [Consent Decree ¶84]
  4. Each report required by the Consent Decree shall be signed by the Responsible Official as defined in Title V of the CAA for the appropriate unit, and shall contain the following certification: [Consent Decree ¶85]

*This information was prepared either by me or under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my evaluation, or the direction and my inquiry of the person(s) who manage the system, or the person(s) directly responsible for gathering the information, I hereby certify under penalty of law that, to the best of my knowledge and belief, this information is true, accurate, and complete. I understand that there are significant penalties for submitting false, inaccurate, or incomplete information to the United States.*

## **H. Termination**

1. Once Duke Energy has:
  - a. completed the requirements of Section IV of the Consent Decree (Retirement of Units Allegedly Modified Pursuant to the Plant Modernization Program), Section IX of the Consent Decree (Additional Injunctive Relief), and Section XVII of the Consent Decree (Permits);
  - b. maintained continuous compliance with the Consent Decree, including the interim requirements of Section V of the Consent Decree (Interim NO<sub>x</sub> Emission Reductions and Controls) and Section VI of the Consent Decree (Interim SO<sub>2</sub> Emission Reductions and Controls), and Section VII of the Consent Decree (Allowance Surrender Requirements); and
  - c. paid the civil penalty and any accrued stipulated penalties as required by the Consent Decree; and
  - d. certified that the date is later than December 31, 2025,Duke Energy may serve upon the Plaintiffs a Request for Termination of this Consent Decree as a whole, stating that Duke Energy has satisfied all the requirements of this Paragraph (this Section 2.5.H.1), together with all necessary supporting documentation. [Consent Decree ¶151]
2. Notwithstanding the provisions of Paragraph 151 of the Consent Decree (Section 2.1.H.1 above), Duke Energy may serve upon Plaintiffs a Request for Termination as to Completed Tasks. As soon as Duke Energy completes a Retirement or any other requirement of this Consent Decree that is not ongoing or recurring, Duke Energy may serve upon Plaintiffs a Request for Termination of the provision or provisions of the Consent Decree that imposed the requirement. [Consent Decree ¶152]
3. Following receipt by the Plaintiffs of Duke Energy's Request for Termination, the Parties shall confer informally concerning the Request and any disagreement that the Parties may have as to whether the Duke Energy has satisfactorily complied with the requirements for termination of this Consent Decree. If the United States, after consultation with the other Plaintiffs, agrees that the Decree may be termination, the Parties shall submit, for the Court's approval, a joint stipulation terminating the Decree. [Consent Decree ¶153]
4. If the United States, after consultation with the other Plaintiffs, does not agree that the Decree may be termination, Duke Energy may invoke Dispute Resolution under Section XVI of this Decree. However, Duke Energy shall not seek Dispute Resolution of any dispute regarding termination, under Paragraph 107 of Section XVI of the Consent Decree, until 60 days after service of its Request for Termination or receipt of an adverse decision from the Plaintiffs, whichever is earlier. [Consent Decree ¶154]

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

| <b>Emission Source I.D.</b> | <b>Emission Source Description</b>  |
|-----------------------------|---|
| I-1                         | Coal pile and coal handling system - fugitive emissions. Includes coal pile, coal unloading operations, conveyors, crusher operations, feed systems, etc.   |
| I-3                         | Ash and ash handling system - fugitive emissions. Includes ash removal system, ash loading system, leaks in ash collection pipes and hopper system, emission during maintenance, hauling of ash in trucks, duct vacuum truck unloading, and associated operations.  |
| I-4                         | Non-stack emissions of hydrazine and ammonia from throughout the plant (blow down vents, overpressure vents, de-aerator vents, valve leakage, purge vents, etc.) Condensate and feed water systems have potential for fugitive emission of hydrazine and ammonia from boiler blow down of systems and steam jet air ejectors. |
| I-7                         | Gasoline and fuel oil pumps   |
| I-8                         | Two welding shops, both vent directly to the outside atmosphere.  |
| I-9                         | 500-gallon above ground gasoline storage tank (old 550-gallon tank was removed from service)  |
| I-11                        | Sandblasting room   |
| I-15                        | Two turbine oil tanks for Units 1 & 2, 11,000 gallons total capacity, and associated unloading station (tanks installed before 1973).   |
| I-16                        | Three turbine oil tanks for Units 3, 4, & 5, 25,500 gallons total capacity, and associated unloading station (tanks installed before 1973).   |
| I-17                        | Turbine oil storage tank for maintenance of Units 1 & 2, 5,250 gallons capacity, and associated unloading station (normally empty, tank installed before 1973).   |
| I-18                        | Turbine oil storage tank for maintenance of Units 3 & 4, 8,400 gallon capacity and associated unloading station (normally empty, tank installed before 1973).   |
| I-19                        | Turbine oil storage tank for maintenance of Unit 5, 23,750 gallon capacity, and associated unloading station (normally empty, tank installed before 1973).  |
| I-20                        | Vapor extractors which vent gases off of turbine lube oil tanks, one on each unit   |
| I-21                        | Engine and gear lube oil storage barrels in tractor shed, 4,500 gallon total capacity   |
| I-22                        | New oil storage area, 2,000 gallon total storage capacity in barrels, variety of engine, lube, and cutting oils   |
| I-23                        | Used oil barrels at used oil staging area and groundwater remediation area, 770 gallon total capacity   |
| I-24                        | Satellite accumulation areas for storage of used oil in barrels   |
| I-25                        | Transformers containing oil, 107,685 gallons total capacity   |
| I-26                        | Four transformers for yard drain/coal yard sump pump, containing 1,080 gallons of oil   |
| I-27                        | Circuit breaker, 115 KvSY, containing 73,229 gallons of oil   |

| <b>Emission Source I.D.</b> | <b>Emission Source Description</b>   |
|-----------------------------|--|
| I-29                        | Various equipment containing lubricating oil including:<br>5 boiler feed pumps, 500 gallons total,<br>13 hot well pumps, 104 gallons total,<br>34 pulverizer mills, 3,890 gallons total,<br>20 fans, 55 gallons total,<br>10 CCW pumps, 550 gallons total, and<br>10 heater drain pumps, 150 gallons total |
| I-30                        | Misc. oil trap tanks used for spill collection for oils in transformers and other yard drain locations   |
| I-32                        | 1,500 gallon above ground sulfuric acid storage tank (old 5,000 gallon tank was decommissioned)  |
| I-33                        | 250 gallon hydrazine storage tank and 75 gallon hydrazine mixing tank  |
| I-34                        | 250 gallon ammonium hydroxide storage tank and 125 gallon ammonia hydroxide mixing tank  |
| I-35                        | Misc. cylinders containing SO <sub>2</sub> , NO <sub>x</sub> , CO, CO <sub>2</sub> , hydrogen, nitrogen, acetylene, argon, oxygen, helium, HeF, or any combination of these  |
| I-36                        | Misc. CFC and HCFC refrigerant cylinders   |
| I-37                        | Misc. non-CFC and HCFC refrigerant cylinders   |
| I-38                        | Propane storage tanks for supplying fuel to microwave tower backup generator   |
| I-40                        | Satellite accumulation area for used antifreeze  |
| I-41                        | Storage of new antifreeze in sealed containers   |
| I-42                        | Containers of Oil-Dri resulting from cleanup of oil spills   |
| I-43                        | Containers for collection of oil contaminated materials  |
| I-45                        | Chiller systems used for cooling of control equipment  |
| I-47                        | Continuous Emissions Monitoring Systems (CEM) Equipment, which potentially emit ozone, CO <sub>2</sub> , SO <sub>2</sub> , and other pollutants.   |
| I-48                        | Sewage treatment plant   |
| I-49                        | Sewer system vents located throughout the plant  |
| I-50                        | Vents from groundwater monitoring wells for areas contaminated with diesel fuel, gasoline, etc.  |
| I-51                        | Laboratory for performing analyses of plant operating conditions   |
| I-52                        | Use and storage of small amounts of pesticide and herbicide for pest and weed control.   |
| I-53                        | Application of paints, solvents, degreasers, etc.  |
| I-55                        | 600-1,000 lbs elemental sulfur/year blended on coal pile (intermittently produced from occasional spillage, clogging, and leakage resulting from maintenance of SO <sub>3</sub> injection system and storage). Only elemental sulfur generated on site may be burned                                       |
| I-57                        | 111,000 gallons capacity No. 2 fuel oil storage tank   |

| <b>Emission Source I.D.</b>                                  | <b>Emission Source Description</b>  |
|--|---|
| I-58   | 1,600 gallon above ground diesel fuel oil storage tank  |
| I-62   | Limestone belt scale calibration/emergency backup reclaim front end loader process                |
| I-63   | Gypsum storage piles  |
| I-64   | Gypsum belt scale calibration   |
| I-65   | Gypsum emergency loading  |
| I-66   | Gypsum collection conveyor transfer to stacker conveyor at transfer tower (120 ton per hour)      |
| I-67   | Gypsum stacker conveyor transfer to storage pile  |
| I-69   | 515 gallon diesel storage tank  |
| I-70   | Wastewater treatment facility lime silo with fabric filter  |
| I-71   | Liquid urea storage tank No. 1; 23,264 gallons  |
| I-72   | Liquid urea storage tank No. 2; 23,264 gallons  |
| I-73   | Liquid urea storage tank No. 3; 23,264 gallons  |
| I-75   | Sulfuric acid tank; 5,000 gallons   |
| I-80   | 30,000 gallon fuel oil storage tank for coal handling   |
| <b>IES-EmQP</b><br><b>NSPS III;</b><br><b>MACT ZZZZ</b>      | Diesel-fired emergency quench pump (440 horsepower maximum engine power)                          |
| <b>IES-EmFP</b><br><b>NSPS III;</b><br><b>MACT ZZZZ</b>      | Diesel-fired emergency fire pump (288 horsepower maximum engine power)                            |
| <b>IES-EmGenMWT</b><br><b>NSPS JJJJ;</b><br><b>MACT ZZZZ</b> | Propane-fired emergency generator for microwave tower (23.6 horsepower maximum engine power)      |
| <b>I-81</b><br><b>NSPS III;</b><br><b>MACT ZZZZ</b>          | 35 kW diesel-fired CAT seep pump engine as a primary power source to support ash basin activities |
| I-82   | Coal tripper room for control of fugitive emissions   |
| <b>I-83</b><br><b>NSPS III;</b><br><b>MACT ZZZZ</b>          | NSLF pump station diesel-fired emergency generator (137 bhp)                                      |
| <b>I-84</b><br><b>NSPS III;</b><br><b>MACT ZZZZ</b>          | SSLF pump station diesel-fired emergency generator (137 bhp)                                      |

| <b>Emission Source I.D.</b>    | <b>Emission Source Description</b>  |
|--------------------------------|---|
| I-85<br>NSPS III;<br>MACT ZZZZ | Leachate basin pump station diesel-fired emergency generator (244 bhp)                            |
| I-86                           | 1000-gallon above ground diesel fuel tank (replaces the I-10 kerosene tank in that same location) |
| I-87                           | 200-gallon sulfuric acid tank at the Secondary Retention Pond chemical treatment building         |
| I-88                           | 330-gallon hydrochloric acid tank at the Ultra Filtration building                                |
| I-89                           | 330-gallon sodium hypochlorite tank at the Ultra Filtration building                              |

1. Because an activity is insignificant does not mean that the activity is exempted from an applicable requirement 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.

Attachment 1 to Air Quality Permit No. 03757T50

**Acid Rain Permit Application**

(Dated August 26, 2022)

(Five pages)

Attachment 2 to Air Quality Permit No. 03757T50

**Acid Rain Permit NO<sub>x</sub> Compliance Plan and NO<sub>x</sub> Averaging Plan**

(Dated June 23, 2015)

(Five pages)