NORTH CAROLINA DIVISION OF AIR QUALITY

Application Review

Issue Date:

Region: Raleigh Regional Office
County: Person
NC Facility ID: 7300029
Inspector's Name: Abdul Kadir
Date of Last Inspection: 05/17/2023
Compliance Code: 3 / Compliance - inspection

Facility Data

Applicant (Facility's Name): Duke Energy Progress, LLC - Roxboro Steam Electric Plant

Facility Address:
Duke Energy Progress, LLC - Roxboro Steam Electric Plant
1700 Dunnaway Road
Semora, NC 27343

SIC: 4911 / Electric Services
NAICS: 221112 / Fossil Fuel Electric Power Generation

Facility Classification: Before: Title V **After:** Title V
Fee Classification: Before: Title V **After:** Title V

Permit Applicability (this application only)

SIP: 15A NCAC 02D .0501(c), 02D .0503, 02D .0510, 02D .0515, 02D .0519, 02D .0521, 02D .0524, 02D .0530(u), 02D .0606, 02D .1100, 02D .1111, 02D .1425, 02Q .0402
NSPS: Subparts D, Y, OOO, IIII
NESHAP: Subpart UUUUU
PSD: NA
PSD Avoidance: NA
NC Toxics: NA
112(r): NA (General Duty Clause)
Other: Part 97 CSAPR

Contact Data

Facility Contact	Authorized Contact	Technical Contact
Robert Howard Lead EHS Professional (336) 598-4077 1700 Dunnaway Road Semora, NC 27343	Tom Copolo General Manager III (336) 597-6101 1700 Dunnaway Road Semora, NC 27343	Erin Wallace Manager - Permitting & Compl. (919) 546-5797 410 South Wilmington Street Raleigh, NC 27601

Application Data

Application Number: 7300029.23B (Title V), .23A (Title IV), and .23C (Title IV NOx Avg Plan)
Date Received: 03/31/2023 (.23B), 03/21/2023 (.23A), and 08/08/2023 (.23C)
Application Type: Renewals
Application Schedule: TV-Renewal and Title IV

Existing Permit Data
Existing Permit Number: 01001/T58
Existing Permit Issue Date: 04/25/2023
Existing Permit Expiration Date: 09/30/2023

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2021	2959.43	3670.53	69.01	578.57	376.48	14.69	7.16 [Hydrogen chloride (hydrochlori]
2020	2637.52	3601.12	66.17	554.80	346.27	14.04	6.82 [Hydrogen chloride (hydrochlori]
2019	4141.52	4885.67	86.65	725.93	366.09	19.30	9.71 [Hydrogen chloride (hydrochlori]
2018	3603.79	5613.55	74.50	625.78	374.69	16.77	8.47 [Hydrogen chloride (hydrochlori]
2017	3413.61	5774.33	73.26	616.33	371.61	15.63	7.45 [Hydrogen chloride (hydrochlori]

Review Engineer: Ed Martin

Review Engineer's Signature: **Date:**

Comments / Recommendations:
Issue 01001/T59
Permit Issue Date:
Permit Expiration Date:

1. Purpose of Applications

Application 7300029.23B

The purpose of this permit application is to renew the existing Title V permit pursuant to 02Q .0513. The renewal application was received on March 31, 2023, at least six months before the September 30, 2023 expiration date of the current permit; therefore, the application was filed in a timely manner and the application shield pursuant to 15A NCAC 02Q .0512(b)(1) remains in effect. This renewal permit is being issued for another five-year term and will expire five years from the date of issuance.

Duke Energy Progress (DEP) did not request any major modifications to the permit. However, they requested the following changes to the permit:

a. Removal of the following conditions in the permit that have been met and are no longer required, and are shown in the permit changes in Section 4 below:

- 2. 1 A.7.a (portion of example calc) - Percent Monitor Downtime Calculation for COMS. Note, this condition has not been met but was previously labeled for COMS and has now been correctly labeled as ”Percent Monitor Downtime (%MD) Calculation for CEMS.”
- 2.1 C.3 Option for obtaining Construction and Operating Permit - Dry Flyash Reliability Project
- 2.1 I.2.i Start of Construction and Startup Notifications - Limestone System

b. DEP requested that certain sources and control devices related to the dry flyash handling system in Section 2.1 C should be removed from the permit as these have been removed from the site or retired in place, as shown in Section 4 below.

c. Frequency of Observations for 02D .0515 and 02D .0521

The Roxboro Plant is comprised of several types of air emission sources, including material handling and storage sources, controlled by bagfilters. Monitoring requirements to demonstrate compliance with" 15A NCAC 02D .0515: Particulates from Miscellaneous Industrial Processes and 15A NCAC 02D .0521: Control of Visible Emissions include a monthly visual inspection of the system ductwork and material collection unit for leaks and a monthly observation of the emission point of each source for any visible emissions above "normal", as established during the first 30 days of operation. Given the plant's history of normal observations and inspections, DEP is respectfully requesting that the frequency of these observations be reduced to a semi-annual observation of the system ductwork, material collection units, and emission points. Silos are equipped with alarms on the pressure relief hatches that lift in the case of over pressurization. Additionally, plant operations staff make rounds through the plant twice per day to ensure the plant is running as expected.

The inspector at the Raleigh Regional Office for this facility was asked for his opinion on whether it makes sense to reduce the monitoring frequency from monthly to semi-annual as DEP requested based on the history of normal observations and inspections. This would be for the 02D .0515 monitoring is in sections 2.1 C.1.c and 2.1 J.1.c; and the 02D .0521 monitoring is in sections 2.1 C.2.c, 2.1 D.2.c, 2.1 G.2.c, 2.1 J.2.c, and 2.1 K.2.c. In an email on August 1, 2023, Abdul Kadir replied that he discussed the monitoring frequency issue for the Roxboro facility with Dena Pittman and Will Wike and suggested keeping monthly monitoring frequency. Therefore, no change was made.

d. Updates to Insignificant Activities

Also included with this permit renewal, DEP is requesting to make updates to the list of insignificant activities as provided in Attachment 2 of the application.

The following applications were consolidated with this application:

Application 7300029.23A (consolidated with Application 7300029.23B)
DEP submitted an Acid Rain Permit Application received March 21, 2023, for renewal of the acid rain permit for boilers ES-Unit 1, ES-Unit 2, ES-Unit 3A, ES-Unit 3B, ES-Unit 4A, and ES-Unit 4B.

Application 7300029.23C (consolidated with Application 7300029.23B)
DEP submitted this application to update and incorporate the Acid Rain NOx Compliance Plan and the Acid Rain NOx Averaging Plan into the acid rain portion of the Title V permit.

This permit change is a significant Title V permit modification that does not contravene or conflict with a condition in the existing permit pursuant to rule 15A NCAC 02Q .0501(b)(1). Public notice of the draft permit is required.

2. Facility Description

The Roxboro Plant consists of six coal- and oil-fired utility boilers (Units 1, 2, 3A, 3B, 4A, and 4B). The boilers are each equipped with electrostatic precipitators for particulate emissions control, low-NOx burners combined with selective catalytic reduction (SCR) systems for nitrogen oxides (NOx) emissions control, and wet limestone flue gas desulfurization (FGD) scrubbers for sulfur dioxide (SO_2) control. Ancillary equipment and activities include fuel oil and other petroleum storage tanks, coal handling and storage, gypsum handling and storage, limestone handling and storage, and emergency engines. The Roxboro Plant is located in Person County, North Carolina approximately 7.5 miles northwest of the city of Roxboro.

3. History/Background/Application Chronology

History/Background Since Last Renewal

October 8, 2018	Air Permit No. Permit No. 01001T54 was issued for the TV and Title IV permit renewal, with an expiration date of September 30, 2023. (See Russell Braswell's TV review for permit No. 01001T54).
October 29, 2018	Air Permit No. Permit No. 01001T55 was issued with an expiration date of September 30, 2023, as an administrative amendment to correct mismatched issuance dates on the permit cover page. The existing permit was issued on October 8, 2018, but one date was incorrectly written as October 6, 2018, instead (otherwise Permit No. 01001T54 and Permit No. 01001T55 are the same).
November 27, 2018	Air permit No. 01001T56 was issued with an expiration date of September 30, 2023. This was a TV Significant modification to retire the current wastewater treatment bioreactor (WWTBR) and replace it with a new wastewater treatment bioreactor (WWTFBR) to comply with the North Carolina Coal Ash Management Act (NC-CAMA) and EPA's Coal Combustion Residual (CCR) regulations. In addition, this permit included the second step (Part II) of the 02Q .0501(b)(2) permitting process for various sources and control devices added to Permit No. 7300029T51, issued on October 21, 2016, pursuant to application 7300029.16B.
June 25, 2021	Air permit No. 01001T57 was issued with an expiration date of September 30, 2023. This was a TV Significant modification in accordance with 02Q .0501(b)(2) Part I, where DEP requested authorization to excavate the Roxboro Plant East Ash Basin and West Ash Basin and place the excavated CCR in a lined expansion of the existing Ash Landfill. As part of this permit, 02D .0536 "Particulate Emissions from Electric Utility Boilers" was removed from the permit since the rule was repealed effective November 1, 2020, and therefore no longer applied. The annual average opacity, particulate matter limits, and the requirement to implement a Malfunction Abatement Plan as detailed in the 02D .0536 rule was removed from the permit for the boilers (units 1, 2 and 3). In addition, since the affected units are subject to the

	MATS regulation under 02D .1111, the provisions of 02D .0535 no longer applied and was removed for those boilers.
April 25, 2023	Air permit No. 01001T58 was issued with an expiration date of September 30, 2023. This was a TV Significant modification in accordance with 02Q .0501(b)(2) Part II, for the CCR Part I changes in Permit No. 01001T57 above.
xx	Air permit No. 01001T59 was issued with an expiration date of _____ to renew the Title V and Title IV permit.

Application Chronology

March 21, 2023	The Title IV renewal Acid Rain Permit Application 7300029.23A was received and was complete for processing.
March 31, 2023	The Title V renewal application 7300029.23B was received and was complete for processing.
August 8, 2023	The Title IV Acid Rain NOx Compliance Plan and the Acid Rain NOx Averaging Plan application 7300029.23C was received and was complete for processing.
December 7, 2023	Sent the draft permit for supervisor's review.
December 21, 2023	Sent the draft permit to the Applicant, Stationary Source Compliance Branch, and the Raleigh Regional Office for review.
January 5, 2024	Received DEP's initial comments on the draft permit (see Section 8).
January 31, 2024	Received DEP's final comments on the draft permit (see Section 8).
February 7, 2024	Sent the draft permit to 30-day public notice and 45-day EPA review.
March 8, 2024	Public notice period ended.
March 23, 2024	EPA's comment period ended.
xx	Permit was issued.

4. Permit Changes

The following table describes the modifications to the current permit as part of the renewal process. This summary is not meant to be an exact accounting of each change but a summary of those changes.

Page No.	Section	Description of Changes
Cover Letter	---	Amended permit numbers and dates.
--	TOC	Revised the Phase II Acid Rain Permit Renewal Application, the Phase II NOx Compliance Plan, and the Phase II NOx Averaging Plan dates.
5	1, table	Removed the following sources and control devices from the dry flyash handling system: • ES-FA Silo 2 - Flyash conveying system storage and handling silo and associated control devices CD-BF3 and CD-BF 4. • ES-S-3L - Electrostatic flyash separation system, mineral-rich product load-out silo and associated control device CD-BF23. • ES-EFSS1 and ES-EFSS2 - Two electrostatic flyash separation systems, associated conveying systems and control device CD-BF24. • ES-SVS1- Stationary vacuum system for housekeeping and associated control device CD-BF26. • ES-FA Silo 3 - Flyash conveying system storage and handling silo. • ES-S-3L2 - Mineral-rich flyash loadout system and associated control devices CD-BF5 and CD-BF6.
9-10	2.1 A, regulation table	Added 15A NCAC 02D .0503 and 15A NCAC 02D .1425. Removed "Federally Enforceable Only" for 40 CFR Part 97, Subpart CCCCC for sulfur dioxide and for 40 CFR Part 97, Subpart AAAAA for nitrogen oxides. Removed 40 CFR Part 97, Subpart BBBBB for nitrogen oxides.
12**	2.1 A.4**	Removed these old intentionally left blank sections.
	2.1 A.5**	
	2.1 A.6**	
12	2.1 A.4.a (was 2.1 A.7.a)	Corrected reference to the MACT Subpart UUUUU condition from 2.2 B.2.dd to 2.2 B.2.cc.
		Corrected the Percent Monitor Downtime (%MD) Calculation for COMS to Percent Monitor Downtime (%MD) Calculation for CEMS.
13	2.1 A.5 new	Added 15A NCAC 02D .0503.
14	2.1 A.6 new	Added a recently adopted 02D .1425 NOx SIP Call Budget requirement to submit NOx emissions reports.

Page No.	Section	Description of Changes
15	2.1 B, regulation table	Removed "Federally Enforceable Only" for 40 CFR Part 97, Subpart CCCCC for sulfur dioxide and for 40 CFR Part 97, Subpart AAAAA for nitrogen oxides. Removed 40 CFR Part 97, Subpart BBBBB for nitrogen oxides. Added 15A NCAC 02D .1425.
18	2.1 B.4	Added a recently adopted 02D .1425 NOx SIP Call Budget requirement to submit NOx emissions reports.
19	2.1 C	Removed the following sources and control devices from the dry flyash handling system: • ES-FA Silo 2 - Flyash conveying system storage and handling silo and associated control devices CD-BF3 and CD-BF 4. • ES-S-3L - Electrostatic flyash separation system, mineral-rich product load-out silo and associated control device CD-BF23. • ES-EFSS1 and ES-EFSS2 - Two electrostatic flyash separation systems, associated conveying systems and control device CD-BF24. • ES-SVS1- Stationary vacuum system for housekeeping and associated control device CD-BF26. • ES-FA Silo 3 - Flyash conveying system storage and handling silo. • ES-S-3L2 - Mineral-rich flyash loadout system and associated control devices CD-BF5 and CD-BF6. Removed note: Operation of each existing Units 1, 3 and 4 dry flyash conveying system may continue until new systems are fully operational.
20-21	2.1 C.2.c	Reformatted for latest standard Title V condition.
20**	2.1 C.3**	Removed this 02Q .0504: OPTION FOR OBTAINING CONSTRUCTION AND OPERATION PERMIT.
22	2.1 D	Removed note: Operation of the No. 5 flyash conveying system may continue until the new system is fully operational.
22-23	2.1 D.2.c	Reformatted for latest standard Title V condition.
24	2.1 E.2.b	Reformatted for latest standard Title V condition.
25	2.1 E.2.d	Reformatted for latest standard Title V condition.
26	2.1 F.1.b	Reformatted for latest standard Title V condition.
27	2.1 G.1.e and f	Revised to include recordkeeping and reporting for 02D .0510.
27	2.1 G.2.c	Reformatted for latest standard Title V condition.
30	2.1 H.2.d	Reformatted for latest standard Title V condition. Removed the requirement to establish "normal" visible emissions in the first 30 days following the of beginning operation.
31	2.1 I.1.e	Corrected referenced section numbers for monitoring and recordkeeping.

Page No.	Section	Description of Changes
31	2.1 I.1.f	Revised to include reporting for 02D .0510.
32	2.1 I.2.f	Reformatted for latest standard Title V condition.
31**	2.1 I.2.i**	Removed start of construction and start-up notification for the limestone system.
34	2.1 J.2.c	Reformatted for latest standard Title V condition.
36	2.1 K.2.c	Reformatted for latest standard Title V condition. Removed the requirement to establish "normal" visible emissions in the first 30 days following the of beginning operation.
37-42	2.2 A.1.a	Removed the following sources: • ES-FA Silo 2 - Flyash conveying system storage and handling silo. • ES-S-3L - Electrostatic flyash separation system, mineral-rich product load-out silo. • ES-EFSS1 and ES-EFSS2 - Two electrostatic flyash separation systems, associated conveying systems. • ES-SVS1- Stationary vacuum system for housekeeping. • ES-FA Silo 3 - Flyash conveying system storage and handling silo. • ES-S-3L2 - Mineral-rich flyash loadout system.
43	2.2 B.1	Removed "Federally Enforceable Only" and Subpart BBBBB for Cross State Air Pollution Rule.
50	2.2 D	Removed statement that this condition is not shielded.
52-53	2.4	Acid Rain effective dates are now aligned with the Title V permit effective dates. Revised the Phase II Acid Rain Permit Renewal Application, the Phase II NOx Compliance Plan, and the Phase II NOx Averaging Plan dates in Section 2.4 D.
54-55	3	• Removed the following insignificant activities: IS-1, IS-10, IS-14, IS-15, IS-16, IS-17, IS-22, IS-24, IS-26, IS-51, IS-52, IS-53, IS-54, IS-SA. • Added the following insignificant activities: IS-63 and IS-64. • Revised the following insignificant activities: IS-12, IS-58, IS-60, IES-FWP2, IES-31, IES-32A, and IES-32B.
56-63	4	Updated General Conditions to version 7.0, dated 08/21/2023.

** Current permit page number or section.

5. Regulatory Evaluation

The Roxboro Steam Electric Plant is subject to the following source-by-source regulations, in addition to the requirements in the General Conditions. The permit was updated to reflect the most current stipulations for all applicable regulations, where necessary.

- 15A NCAC 02D .0501(c) "Compliance with National Ambient Air Quality Standards"
- 15A NCAC 02D .0503 "Particulates from Fuel Burning Indirect Heat Exchangers"
- 15A NCAC 02D .0510 "Particulates from Sand, Gravel, or Crushed Stone Operations"
- 15A NCAC 02D .0515 "Particulates from Miscellaneous Industrial Processes"

- 15A NCAC 02D .0519 "Control of Nitrogen Dioxide and Nitrogen Oxides Emissions"
- 15A NCAC 02D .0521 "Control of Visible Emissions"
- 15A NCAC 02D .0524 "New Source Performance Standards"
  (40 CFR Part 60, Subparts D, Y, OOO, IIII)
- 15A NCAC 02D .0530(u) "Prevention of Significant Deterioration"
  (Use of Projected Actual Emissions)
- 15A NCAC 02D .0606 "Sources Covered by Appendix P of 40 CFR Part 51"
- 15A NCAC 02D .1100 "Control of Toxic Air Pollutants"
- 15A NCAC 02D .1111 "Maximum Achievable Control Technology"
  (40 CFR Part 63, Subpart UUUUU)
- 15A NCAC 02D .1425 "NOx SIP Call Budget"
- 15A NCAC 02Q .0402 "Acid Rain Procedures"
- Cross State Air Pollution Rule (CSAPR)
  (40 CFR Part 97, Subparts AAAAA and CCCCC)

A. Boiler Units 1, 2, and 3:

- **coal/No. 2 fuel oil-fired electric utility boiler equipped with low-NO_X burner and $Mg(OH)_2$ fuel additive (ID No. ES-Unit 1) and associated selective catalytic reduction system (ID No. CD-SCR1) installed in series with electrostatic precipitator (ID Nos. CD-ESP1), in series with a wet scrubber (ID No. CD-FGD1), and sorbent injection system (ID No. CD-INJ-Sorb1)**

- **coal/No. 2 fuel oil-fired electric utility boiler equipped with low-NO_X burner, $Mg(OH)_2$ fuel additive (ID No. ES-Unit 2) and associated selective catalytic reduction system (ID No. CD-SCR2) installed in series with electrostatic precipitator (ID No. CD-ESP2), in series with a wet scrubber (ID No. CD-FGD2), and sorbent injection system (ID No. CD-INJ-Sorb2)**

- **two coal/No. 2 fuel oil-fired electric utility boilers each equipped with low-NO_X burners, $Mg(OH)_2$ fuel additive (ID Nos. ES-Unit 3A and ES-Unit 3B) and associated selective catalytic reduction systems (ID Nos. CD-SCR3a and CD-SCR3b) installed in series with two electrostatic precipitators (ID Nos. CD-ESP3a and CD-ESP3b), in series with a wet scrubber (ID No. CD-FGD3), and sorbent injection system (ID No. CD-INJ-Sorb3)**

1. 15A NCAC 02D .0519: CONTROL OF NITROGEN OXIDES EMISSIONS
   Emissions of nitrogen oxides from these sources when burning coal and oil (No. 2 fuel oil or recycled No.2 fuel oil) shall be calculated by the following equation:

$$E = \frac{(E_C)(Q_C)+(E_O)(Q_O)}{Q_t}$$

   Where:
   E = emission limit for combined burning of coal and oil in pounds per million Btu heat input
   Ec = 1.8 pounds per million Btu heat input for coal only
   Eo = 0.8 pounds per million Btu heat input for oil only
   Qc = coal heat input in Btu per hour
   Qo = oil heat input in Btu per hour
   Qt = Qc + Qo

   Monitoring
   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 (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).

Recordkeeping
The Permittee shall maintain records of monthly coal and gas consumption (written or electronic form) and shall submit such records within 30 days of a request by DAQ.

Reporting
The Permittee shall submit the continuous emissions monitoring system data showing the 24-hour daily block values for periods of excess nitrogen oxide emissions semiannually.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

2. 15A NCAC 02D .0501(c): COMPLIANCE WITH EMISSION CONTROL STANDARDS
This regulation was added in permit 01001T41, issued on April 23, 2008, for the Units 1-4 boilers after DEP was asked to model the Roxboro facility because wet scrubbers were being installed for SO_2 control with new stacks replacing the existing stacks on all four units, with different stack parameters. This was to ensure the permit limits for all pollutants will protect the NAAQS under these new conditions. This modeling was received May 16, 2007.

The modeling was to demonstrate compliance with the NAAQS for SO_2, PM_{10}, NOx, CO and lead. The modeling showed compliance with the NAAQS for PM_{10}, CO and lead at the potential emission rates. However, compliance with the NAAQS for SO_2 and NOx required emission rates below the allowable emission limits in 02D .0516 (Units 1, 2 and 3) or 02D .0524 (NSPS Unit 4) for SO_2, and below the allowable emission limits in 02D .0519 (Units 1, 2 and 3) for NOx. Therefore, new lower SO_2 and NOx limits were added to the permit under 02D .0501(e) (now 02D .0501(c)) for Units 1, 2 and 3, to take effect and replace the 02D .0516 limit for each unit upon startup of that unit's scrubber. For the NSPS Unit 4, a new lower 02D .0501(e) limit was added for SO_2 to take effect upon startup of the scrubber in addition to retaining the 02D .0524 NSPS limit, so that after startup, Progress must comply with both limits. For Unit 4 for NOx, a 02D .0501(e) limit is not needed since the NSPS limit of 0.7 lb/mmBtu as used in the modeling showed compliance with the NAAQS.

Emission Limits
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.

For Units 1, 2, 3, and 4, in order to comply with the National Ambient Air Quality Standards (NAAQS) for sulfur dioxide, emissions of sulfur dioxide from these sources shall not exceed 0.547 pounds per million Btu heat input in accordance with the modeling analysis received May 16, 2007. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

For Units 1, 2, and 3, in order to comply with the NAAQS for nitrogen dioxide, emissions of nitrogen oxides from these sources shall not exceed either 1.066 pounds per million Btu heat input (in accordance with the modeling analysis received May 16, 2007) or the limit in Section 1.A.1 of the permit when burning oil, whichever is lower.

Monitoring/Recordkeeping
The Permittee shall ensure compliance with 15A NCAC 02D .0501(c) by determining sulfur dioxide and nitrogen oxides emissions in pounds per million Btu using continuous emissions monitoring (CEM) systems 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). Compliance

with sulfur dioxide and nitrogen oxides 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.

Reporting
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.

CEMs Monitor Availability - The Permittee shall submit quarterly sulfur dioxide and nitrogen oxides CEM systems monitor downtime reports, including monitor availability values (as calculated for 40 CFR Part 75) for the last hour of the reporting period.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

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

Emission Limit
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.

Monitoring/Recordkeeping/Reporting
No monitoring/recordkeeping/reporting is required to demonstrate compliance with 15A NCAC 02D .0521 for these sources since these sources are subject to the MATS rule (40 CFR PART 63, Subpart UUUUU) which ensures compliance with visible emissions by using a PM CEMS as discussed in Section A.8 below.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

4. 15A NCAC 02D .0606: SOURCES COVERED BY APPENDIX P OF 40 CFR PART 51 (SULFUR DIOXIDE MONITORING, CONTINUOUS OPACITY MONITORING, AND EXCESS EMISSIONS)
Fossil fuel-fired steam generators is one of the sources to be monitored as described in 40 CFR Part 51, Appendix P.

Monitoring/Recordkeeping
The alternative monitoring and recordkeeping procedure in this section 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 40 CFR 63.10010(i), as specified in Section 2.2.B.2.cc of the permit.

The quarterly excess emissions (EE) reports shall be used as an indication of good operation and maintenance of the electrostatic precipitators. These 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, except that Total Excess Emission Time contains all one-hour periods greater than 0.030 pounds per million Btu heat input*. 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 shall have a 5% CO_2 diluent cap, or a 14% O_2 diluent cap, substituted in the emission rate calculation whenever the actual CO_2 concentration is lower than 5% or whenever the actual O_2 concentration is higher than 14%.

Calculations for %EE and %MD

Percent Excess Opacity Emission (%EE) Calculation:

$$\%EE = \frac{Total\ Excess\ Emission\ Time*}{Total\ Source\ Operating\ Time*** - Monitor\ Downtime} x100$$

Percent Monitor Downtime (%MD) Calculation for CEMS:

$$\%MD = \frac{Total\ Monitor\ Downtime**}{Total\ Source\ Operating\ Time***} x\,100$$

* Total Excess Emission Time contains any one-hour period greater than 0.030 pounds per million Btu heat input of PM emissions, 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.

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 0.547 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 that are 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 above.

Reporting

The Permittee shall submit the excess emissions and monitor downtime reports as required under Appendix P of 40 CFR Part 51 on a three-month basis. Reporting shall be in accordance with Paragraphs 4 and 5.1 of Appendix P of 40 CFR Part 51.

a. 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 including the application of any applicable diluent caps during a startup or shutdown hour.

b. For sulfur dioxide, excess emissions are defined as greater than 1.0 pounds per million Btu calculated on a 24-hour block average basis.

The applicability of this regulation has not changed as part of this renewal processing other than as noted above. Continued compliance with this regulation is expected.

5. 15A NCAC 02D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS
Since regulation 15A NCAC 02D .0536 "Particulate Emissions from Electric Utility Boilers" was repealed effective November 1, 2020, it was removed in Permit 01001T57 on June 25, 2021, as discussed in Section 3 above. Regulation 02D .0503 "Particulates from Fuel Burning Indirect Heat Exchangers" is being added to the permit for these boilers in Section 2.1 A.5 of the permit as recommended in a memorandum dated October 11, 2019, from Dennis Igboko, Stationary Source Compliance Branch. This would provide a suitable backstop should the federal MATS rule 0.030 pounds per million Btu heat input standard change (see discussion under streamlining below).

Emission Limit
Emissions of particulate matter discharged from Units 1 and 5 into the atmosphere shall not exceed 0.076 pounds per million Btu heat input.

This rule applies to installations burning fuel, including natural gas and fuel oils, for the purpose of producing heat or power by indirect heat transfer. For the purpose of this rule, the maximum heat input shall be the total heat content of all fuels which are burned in a fuel burning indirect heat exchanger, of which the combustion products are emitted through a stack or stacks. The sum of maximum heat input of all fuel burning indirect heat exchangers at a plant site which are in operation, under construction, or permitted shall be considered as the total heat input for the purpose of determining the allowable emission limit for particulate matter for each fuel burning indirect heat exchanger. Fuel burning indirect heat exchangers constructed or permitted after February 1, 1983, shall not change the allowable emission limit of any fuel burning indirect heat exchanger whose allowable emission limit has previously been set. The removal of a fuel burning indirect heat exchanger shall not change the allowable emission limit of any fuel burning indirect heat exchanger whose allowable emission limit has previously been established. However, for any fuel burning indirect heat exchanger constructed after, or in conjunction with, the removal of another fuel burning indirect heat exchanger at the plant site, the maximum heat input of the removed fuel burning indirect heat exchanger shall no longer be considered in the determination of the allowable emission limit of any fuel burning indirect heat exchanger constructed after or in conjunction with the removal.

The affected sources to which this regulation applies are the following:

Source	Heat Input (mmBtu/hr)
Boiler ES-Unit 1	4,722
Boiler ES-Unit 2	7,035
Boiler ES-Unit 3A	4,261
Boiler ES-Unit 3B	4,261
Boiler ES-Unit 4A	4,099
Boiler ES-Unit 4B	4,099
Total	28,477

Allowable emissions of particulate matter from fuel combustion shall be calculated as follows:

$$E = 1.090\ Q^{-0.2594}$$

where: E = allowable particulate emission rate, pounds per million Btu
Q = maximum heat input rate (total at plant site), million Btu per hour

Therefore, $E = 1.090\ Q^{-0.2594}$
$= 1.090\ (28{,}477)^{-.2594}$
$= 0.076$ lb/mmBtu

The 02D .0503 limits are based on compliance with the MATS rule in Section 2.1 A.8 of the permit.

Streamlining the 02D .0503 condition with MATS
As allowed under 40 CFR 70.6(a)(3)(i)(A):

"If more than one monitoring or testing requirement applies, the permit may specify a streamlined set of monitoring or testing provisions provided the specified monitoring or testing is adequate to assure compliance at least to the same extent as the monitoring or testing applicable requirements that are not included in the permit as a result of such streamlining."

The monitoring (including recordkeeping) for the MATS requirements in Section 2.2 B.2 of the permit is adequate to ensure compliance at least to the same extent as required for the 02D .0503 monitoring requirements in Section 2.1 A.5 of the permit; therefore, streamlining is specified for compliance. The 0.030 pounds per million Btu heat input PM limit for MATS compliance is much more stringent than the 0.076 pounds per million Btu heat input 02D .0503 limit.

Monitoring/Recordkeeping
The monitoring and recordkeeping requirements in Sections 2.2 B.2.cc and ee of the permit 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.5.a of the permit.

Reporting
The Permittee shall submit quarterly excess emissions and monitoring system performance reports. The compliance report shall include, at a minimum, the information required in 40 CFR 63.10 and contain the information specified in Section 2.2 B.2.ss of the permit, 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 regulation.

The applicability of this regulation is new for these sources as part of this renewal process. Compliance with this regulation is expected.

6. 15A NCAC 02Q .0402 ACID RAIN PERMITTING PROCEDURES (40 CFR Part 72) Phase II Acid Rain Permit Requirements
Units 1-4 are subject to this regulation. The purpose of this Rule is to implement 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 Parts 72 and 76. Pursuant to 40 CFR 72.6, any unit listed in Table 2 or 3 of 40 CFR 73.10 is an affected unit and is subject to the requirements of the Acid Rain Program, including the Allen units.

Acid Rain Permit Application
DEC submitted a renewal Acid Rain Permit Application (application 7300029.23A), received March 21, 2023, for these sources.

The effective dates of the acid rain portion of the permit are the same as the Title V permit itself. The Acid Rain Permit Application dated March 16, 2023, will become part of the Title V permit (as an attachment).

The applicable acid rain rules for these sources, as specified in the Acid Rain Permit Application includes the following emission and monitoring requirements:

15A NCAC 02Q .0402 Acid Rain Procedures (40 CFR Part 72 Permits Regulation)
North Carolina air quality regulation 15A NCAC 02Q .0400 implements Phase II of the federal acid rain program pursuant to Title IV of the CAA as provided in 40 CFR Part 72. Issuance or denial of acid rain permits shall follow the procedures under 40 CFR Part 70 (Title V) and Part 72. If the provisions or requirements of Part 72 conflict with or are not included in Part 70, the Part 72 provisions and requirements shall apply and take precedence.

15A NCAC 2Q .0400 "Acid Rain Procedures" (40 CFR Part 73 "Sulfur Dioxide Allowance System")
Establishes the procedures for allocation, tracking, holding and transfer of sulfur dioxide emission allowances, including the initial allowances allocated to each applicable Phase II unit account to be held in calendar years 2010 and beyond (Table 2 of 40 CFR 73.10, column F).

15A NCAC 2Q .0400 "Acid Rain Procedures" (40 CFR Part 76 "Acid Rain Nitrogen Oxides Emission Reduction Program")

Acid Rain NOx Compliance Plan and Acid Rain NOx Averaging Plan
The revised Title IV Acid Rain NOx Compliance Plan and Acid Rain NOx Averaging Plan (application 7300029.23C) was received August 8, 2023.

DEP is subject to NOx emission limits for the coal-fired boilers in Section 2.4 section of the permit. The standard emission limits are based on the boiler type as shown in the Acid Rain NOx Compliance Plan according to 40 CFR 76.5, 76.6, or 76.7 (see 40 CFR 76.11(a)(5)).

As an alternative to the standard emission limit, the operator of a facility may choose to average the NOx emission rates of coal-fired boilers using the alternative contemporaneous emissions limitation (ACEL) method in 40 CFR 76.11. In order to use the ACEL method, the Btu-weighted annual average emission rate (see 40 CFR 76.11(d)(1)(ii)) for all of the ACEL units must be less than the Btu-weighted annual average emission rate of those units had they each been operated using the standard emission limits in 40 CFR 76.5, 76.6, or 76.7. According to DEP's application, the Roxboro boilers are either dry bottom wall-fired, which have a standard Phase II NOx annual average emission limit of 0.46, or tangentially-fired, which have standard Phase II NOx emission limit of 0.40, as shown in the table below.

DEP has submitted a revised NOx averaging plan and established an ACEL for the coal-fired units at the following facilities:

- Belews Creek (facility ID 8500004)
- Cliffside [excluding Unit 6] (facility ID 8100028)
- GG Allen (facility ID 3600039)
- Marshall (facility ID 1800073)
- Mayo (facility ID 7300045)
- Roxboro (facility ID 7300029)

The plan reflects the retirement of Units 2, 3, and 4 at the Allen facility; however, none of the ACEL and associated heat input limits for the coal-fired boilers at the six facilities were changed. Therefore, the limits in the existing permits will not change.

The table below includes the proposed ACEL emission limits and associated heat input limits.

Facility	Unit ID	Emission Limit (§76.5, 76.6, or 76.7) (pounds per million Btu)	ACEL (pounds per million Btu)	Annual Heat Input Limit (million Btu per year)
Belews Creek	1	0.68	0.25	26,834,070
Belews Creek	2	0.68	0.25	27,664,080
Cliffside	5	0.40	0.25	13,315,200
GG Allen	1	0.40	0.45	18,755,160
GG Allen	5	0.40	0.45	36,013,720
Marshall	1	0.40	0.45	41,662,560
Marshall	2	0.40	0.45	39,787,920
Marshall	3	0.40	0.25	16,438,140
Marshall	4	0.40	0.45	65,577,360
Mayo	1A	0.46	0.25	10,731,000
Mayo	1B	0.46	0.25	10,731,000
Roxboro	1	0.46	0.25	10,341,180
Roxboro	2	0.40	0.25	15,794,280
Roxboro	CS003A	0.46	0.25	9,331,590
Roxboro	CS003B	0.46	0.25	9,331,590
Roxboro	CS004A	0.46	0.25	9,855,000
Roxboro	CS004B	0.46	0.25	9,855,000

Btu-weighted annual emission rate averaged over the units if they are operated in accordance with the proposed averaging plan
0.358

Btu-weighted annual average emission rate for same units operated in compliance with 40 CFR 76.5, 76.6, or 76.7
0.452

Section 2.4 of the permit shows the ACEL and associated heat input limits for the boilers at this facility.

15A NCAC 02Q .0402 Acid Rain Procedures (40 CFR Part 75 Continuous Emissions Monitoring)

This regulation establishes requirements for the installation, certification, operation, and maintenance of continuous emissions or opacity monitoring systems.

The updated Acid Rain NOx Compliance Plan and Acid Rain NOx Averaging Plan dated June 28, 2023, will be included in the Title V permit as Attachment 2.

The applicability of this regulation has not changed as part of this renewal processing except that the NOx Compliance Plan and NOx Averaging Plan have been revised. Continued compliance with this regulation is expected.

7. Cross State Air Pollution Rule Requirements (40 CFR Part 97, Subparts AAAAA and CCCCC)
Units 1-4 are subject to this regulation. For these boilers, the Permittee shall comply with all applicable requirements of 40 CFR Part 97, Subpart AAAAA "TR NOx Annual Trading Program" and Subpart CCCCC "TR SO_2 Group 1 Trading Program".

The applicability of this regulation has not changed as part of this renewal processing except the applicability of Subpart BBBBB of 40 CFR Part 97 was removed because it does not apply to the boilers at this facility. Continued compliance with this regulation is expected.

8. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (40 CFR PART 63, SUBPART UUUUU)
The Subpart UUUUU (MATS) requirements apply to units 1-4 and were added to permit 01001T52 on December 20, 2017, for units 1-4. Each of the Electric Generating Units (EGUs) are subject to all applicable requirements pertaining to coal-fired EGUs with heating value greater than or equal to 8,300 Btu/lb.

The Roxboro units are existing EGUs under the MATS rule since they did not commence construction or reconstruction after May 3, 2011 (§63.9982(d)). An existing EGUs must comply with the MATS rule no later than April 16, 2015 (§63.9984(b)). DEP requested a one-year extension of the compliance date for the MATS work practice standards applicable to startup and shutdown, as allowed by the rule, in a letter dated December 16, 2014, for the Roxboro, Mayo, Belews Creek, Cliffside, Allen and Marshall Stations. NC DAQ approved the request extending the compliance date until April 16, 2016, in a letter to Mr. Larry Hatcher (Vice President, Environmental) from Lee Daniel dated January 16, 2015.

The Permittee must install, certify, operate, and maintain a PM CEMS to monitor and record PM emissions according to the applicable standards in §63.10010(i) of 40 CFR Part 63 Subpart UUUUU as specified in Section 2.2.B.2.cc of the permit.

Emission Limitations
The following limits apply as shown in Table 2 to Subpart UUUUU.

a. 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)	1.1E0 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)	2.8E0 lb/TBtu or 3.0E-2 lb/GWh
Cobalt (Co)	8.0E-1 lb/TBtu or 8.0E-3 lb/GWh
Lead (Pb)	1.2E0 lb/TBtu or 2.0E-2 lb/GWh
Manganese (Mn)	4.0E0 lb/TBtu or 5.0E-2 lb/GWh
Nickel (Ni)	3.5E0 lb/TBtu or 4.0E-2 lb/GWh
Selenium (Se)	5.0E0 lb/TBtu or 6.0E-2 lb/GWh

b. i. limit the emissions of hydrogen chloride (HCl) to 2.0E-3 lb/MMBtu or 2.0E-2 lb/MWh; or
ii. limit the emissions of sulfur dioxide (SO_2) to 2.0E-1 lb/MMBtu or 1.5E0 lb/MWh.

c. limit the emissions of mercury (Hg) to 1.2E0 lb/TBtu or 1.3E-2 lb/GWh.

Roxboro has chosen to comply with MATS by limiting emission as follows:

a. filterable particulate matter (PM) to 3.0E-2 lb/MMBtu or 3.0E-1 lb/MWh (using PM CEMS),
b. hydrogen chloride (HCl) to 2.0E-3 lb/MMBtu or 2.0E-2 lb/MWh (by demonstrating initial and continuous compliance by conducting an initial and periodic quarterly performance stack test for HCl), and
c. mercury (Hg) to 1.2E0 lb/TBtu or 1.3E-2 lb/GWh (using Hg CEMS and/or sorbent trap(s)).

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

State-enforceable only

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

This recently adopted regulation applies to units 1-4 and is being added during this renewal. The Permittee is required to submit a report to the Division no later than January 30 of the calendar year after the NOx SIP Call control period listing the NOx emissions from these sources during the NOx SIP Call control period.

This regulation is part of the recently amended 15A NCAC 02D .1400 rules to address revisions by the EPA on the monitoring provisions for the NOx SIP Call and to incorporate the NOx SIP Call budgets into the rules.

As required by EPA, the proposed amendments will re-establish the NOx SIP Call statewide ozone season budgets for EGUs and large non-EGUs. The proposed changes are largely administrative in nature and are necessary to satisfy the anti=backsliding requirements of 40 CFR Part 51 and facilitate clean-up and synchronization of the approved state and federal requirements. The information provided by the EGU and large non-EGU sources will be used to evaluate state level NOx budgets in Paragraph (d) of this Rule.

Compliance with this new regulation is expected.

B. Boiler Unit 4:

Two coal/No. 2 fuel oil-fired electric utility boilers, each equipped with low-NOx burners, Mg(OH)2 fuel additive (ID Nos. ES-Unit 4A and ES-Unit 4B) and associated selective catalytic reduction systems (ID Nos. CD-SCR4a and CD-SCR4b) installed in series with eight electrostatic precipitators (ID Nos. CD-ESP4a through CD-ESP4h) in series with a wet scrubber (ID No. CD-FGD4), and sorbent injection system (ID No. CD-INJ-Sorb4)

1. 15A NCAC 02D .0524: NEW SOURCE PER FORMANCE STANDARDS (40 CFR PART 60 SUBPART D)

This rule applies to each fossil-fuel-fired steam generating unit with a heat input greater than 250 million British thermal units per hour that commenced construction or modification after August 17, 1971. Units 1, 2, 3A and 3B at Roxboro were constructed before this date and have not undergone a modification that meets the definition of "modification" under 40 CFR Part 60. Therefore, only Units 4A and 4B are subject to Subpart D.

Subpart D has emission limits for nitrogen oxides, sulfur dioxide, and particulates. As an alternate to meeting the particulate standard in 40 CFR 60.42(a), for Units 4A and 4B, DEP has elected to install, calibrate, maintain, and operate a continuous emissions monitoring systems (CEMS) for measuring particulate emissions and has petitioned to comply with the particulate standard in 40 CFR 60.42Da(a), as allowed by 40 CFR 60.42(c).

Emission Limits

The following emission limits shall not be exceeded:

Pollutant	Emission Limit (pounds per million Btu)
Sulfur Dioxide (SO_2)	$\frac{y(0.80) + z(1.2)}{y + z}$ [40 CFR 60.43(a), (b)]
Nitrogen Oxides (expressed as NO_2)	$\frac{y(0.30) + z(0.70)}{y + z}$ [§60.44(a), (b)]
Particulates	0.03 [§60.42(c), §60.42Da(a)]

y = percentage of total heat input derived from liquid fossil fuel
z = percentage of total heat input derived from solid fossil fuel

Testing
Once per calendar year, the Permittee shall conduct a stack test for particulate matter in accordance with either Method 5 at a sample temperature of 320° ± 25° F as described in §63.10010(i)(1) or Method 5B of Appendix A of 40 CFR Part 60. In the event that a boiler exceeds 80 percent of its particulate emission limit during the stack test, the Permittee shall schedule and conduct another stack test within 6 months. Upon demonstration that the source is operating under 80 percent of its particulate limit, as shown by three consecutive semiannual stack tests, the source may resume annual stack tests.

Monitoring/Recordkeeping
The Permittee shall install, maintain, and operate a PM CEMS.

. The Permittee shall install, maintain, and operate a CEMS for measuring sulfur dioxide emissions, nitrogen oxide emissions, and either oxygen or carbon dioxide, as per the requirements of 40 CFR Part 75.

Compliance with the SO_2 and NOx emission limits above shall be determined by averaging hourly continuous emission monitoring system values over any three-hour (rolling) period. The three-hour average shall be the arithmetic average of three contiguous one-hour periods of sulfur dioxide or nitrogen oxides as measured by the continuous emission monitoring system. Missing data shall not be filled nor shall the data be bias adjusted in accordance with 40 CFR Part 75. The minimum number of data points, equally spaced, required to determine a valid hour value shall be determined by 40 CFR Part 75.

Compliance with the above particulate limit shall be determined using the PM CEMS.

a. Each PM CEMS shall be installed, evaluated, operated, and maintained according to the requirements in §60.49Da(v). For affected facilities using a PM CEMS, a COMS is not required.
b. When demonstrating compliance, the PM emission rate shall be determined based on a 24-hour daily (block) average of the hourly arithmetic average emissions concentrations using the CEMS outlet data each boiler operating day, except for data obtained during startup, shutdown, and malfunction. Averages are only calculated for boiler operating days that have valid data for at least 18 hours of unit operation during which the standard applies. Instead, all of the valid hourly emission rates of the operating day(s) not meeting the minimum 18 hours valid data daily average requirement are averaged with all of the valid hourly emission rates of the next boiler operating day with 18 hours or more of valid PM CEMS data to determine compliance. The 24-hour block arithmetic average emission concentration shall be calculated using EPA Reference Method 19 of Appendix A of 40 CFR Part 60, section 4.1.
c. At a minimum, valid PM CEMS hourly averages shall be obtained for 75 percent of all operating hours on a 30-day rolling average basis. Valid PM CEMS hourly averages shall be obtained for 90 percent of all operating hours on a 30-day rolling average basis. At least two data points per hour shall be used to calculate each 1-hour arithmetic average.
d. The 1-hour arithmetic averages of PM CEMS data shall be expressed in pounds per million Btu and shall be used to calculate the boiler operating day daily arithmetic average emission concentrations. The 1-hour arithmetic averages shall be calculated using the data points

required under §60.13(e)(2) of Subpart A of 40 CFR Part 60.

e. All valid PM CEMS data shall be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph iii above are not met.
f. When PM emissions data are not obtained because of PM CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the DAQ or EPA Reference Method 19 of Appendix A of 40 CFR Part 60 to provide, as necessary, valid emissions data for a minimum of 90 percent of all operating hours per 30-day rolling average.

Reporting

The Permittee shall submit excess emissions and monitoring system performance reports for sulfur dioxide, nitrogen oxide and PM and shall include, at a minimum, the information required in 40 CFR 60.7(c), as follows:

a. Sulfur Dioxide - Report all three-hour periods of excess emissions (pounds per million Btu) during the reporting period including periods exempted during startup, shutdown and malfunction. Monitor availability values (as calculated for 40 CFR Part 75) for the last hour of the reporting period shall be included.
b. Nitrogen Oxides - Report all three-hour periods of excess emissions (pounds per million Btu) during the reporting period including periods exempted during startup, shutdown and malfunction. Monitor availability values (as calculated for 40 CFR Part 75) for the last hour of the reporting period shall be included.
c. PM –
    i. Report all 24-hour daily (block) average excess emissions (pounds per million Btu) using the PM CEMS outlet data, including periods exempted during startup, shutdown, and malfunction.
    ii. Within 15 days of a written request, report all PM CEMS hourly averages (in written or electronic form) to show, at a minimum, that valid PM CEMS hourly averages have been obtained for 90 percent (only 75 percent is required prior to January 1, 2012) of all operating hours on a 30-day rolling average basis.

The results of any stack test shall be reported within 30 days, and the test report shall be submitted within 60 days after the test.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

2. 15A NCAC 02D .0501(c): COMPLIANCE WITH EMISSION CONTROL STANDARDS
See Section A.2 above.

3. 15A NCAC 02Q .0402 ACID RAIN PERMITTING PROCEDURES (40 CFR Part 72) Phase II Acid Rain Permit Requirements
See Section A.6 above.

4. Cross State Air Pollution Rule Requirements (40 CFR Part 97, Subparts AAAAA and CCCCC)
See Section A.7 above.

5. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (40 CFR PART 63, SUBPART UUUUU)
See Section A.8 above.

State-enforceable only

6. 15A NCAC 02D .1425: NOX SIP CALL BUDGET
See Section A.9 above.

7. 15A NCAC 02D .0530(u): PREVENTION OF SIGNIFICANT DETERIORATION
(Use of Projected Actual Emissions)
This is for the replacement of the existing low NOx-burners for coal firing on the Unit 4A and 4B boilers in permit 01001T53 issued May 3, 2018.

The Permittee has used projected actual emissions to avoid applicability of prevention of significant deterioration requirements for a project consisting of replacement of existing low NOx burners for coal firing on Unit 4 boilers).

Pollutant	Projected Actual Emissions* (tons per year)
PM	28.6
PM_{10}	44.7
$PM_{2.5}$	39.0
SO_2	390.4**
NOx	427.0**
VOC	6.6
CO	428.1
Lead	0.0082
Sulfuric Acid Mist	25.1
GHG as CO_2e	560,565.9

* The projected actual emissions are not enforceable limitations. Maximum annualized value for period 2019 through 2023.

** Maximum annualized value, Fuel and Operations Forecast Model output for period 2019 through 2023.

Monitoring/Recordkeeping
In order to verify the assumptions used in the projected actual emissions calculations, the Permittee shall maintain records of annual emissions related to the Low-NOx burner replacement project. The records shall be maintained for five years following the completion of this project.

i. The replacement project was completed in CY2018.
ii. The last year of recordkeeping will be CY2023.

Reporting
The Permittee shall submit a report of the records required above.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

C.

- **Unit 1 dry flyash pneumatic transfer system including surge bin and filter separators (ID No. ES-FA Handling 1) and associated bagfilters (ID Nos. CD-BF14, CD-FS-1A and CD-FS-1B)**
- **Unit 3 dry flyash pneumatic transfer systems and filter separators (ID Nos. ES-FA Handling 3A and ES-FA Handling 3B), and associated bagfilters ID Nos. CD-FS-3A and CD-FS-3B)**
- **Unit No. 3 dry flyash conveying system surge/transfer tank (ID No. ES-Surge Bin 3), and associated bagfilter (ID No. CD-BF15)**
- **Unit 4 dry flyash pneumatic transfer systems and filter separators (ID Nos. ES-FA Handling 4A, ES-FA Handling 4B and ES-FA Handling 4C), and associated bagfilters CD-FS-4A, CD-FS-4B and CD-FS-4C)**
- **Two flyash conveying system storage and handling silos (ID Nos. ES-FA Silo 1 and ES-FA Silo 4), and associated bagfilters (ID Nos. CD-BF1, CD-BF2, CD-BF7, and CD-BF8)**
- **One flyash conveying system storage and handling silo (ID No. ES-FA Silo 5) and associated bagfilters (ID Nos. CD-BF9 and CD-BF10)**

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

Emission Limit
Emissions of particulate matter from these sources shall not exceed an allowable emission rate as calculated by the following equation:

$E = 4.10 \times P^{0.67}$ (for process rates less than or equal to 30 tons per hour), or
$E = 55.0 \times P^{0.11} - 40$ (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.

Monitoring/Recordkeeping
Particulate matter emissions from these sources shall be controlled by the associated bagfilters as described above. To ensure that optimum control efficiency is maintained, the Permittee shall perform inspections and maintenance as recommended by the manufacturer implemented in the plant's Work Management System. 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:

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

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

a. the date and time of each recorded action;
b. the results of each inspection;
c. the results of any maintenance performed on the bagfilters; and
d. any variance from manufacturer's recommendations, if any, and corrections made.

Reporting
The Permittee shall submit the results of any maintenance performed on the bagfilters within 30 days of a written request by the DAQ.

The Permittee shall submit semiannual summary reports of the monitoring and recordkeeping activities above.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

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

Emission Limit
Visible emissions from these sources 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.

Monitoring
To ensure compliance, once a month the Permittee shall observe the emission points of these sources for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from these sources are observed to be above normal, the Permittee shall either:

i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the above limit.

Recordkeeping
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:

a. the date and time of each recorded action;
b. 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
c. the results of any corrective actions performed.

Reporting
The Permittee shall submit semiannual summary reports of the monitoring and recordkeeping activities.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

State-enforceable only

3. 15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS
See Section L below.

D.

- **No. 1 flyash conveying system storage and handling silo, and load-out stations (ID No. ES-S-1) and associated wet flyash conditioners (ID Nos. CD-WS1 and CD-WS2)**
- **No. 4 flyash conveying system storage and handling silo, and load-out stations (ID No. ES-S-4) and associated wet flyash conditioners (ID Nos. CD-WS3, CD-WS4 and CD-WS5)**
- **No. 5 flyash conveying system storage and handling silo, and load-out station (ID No. ES-S-5) and associated flyash mixer conditioners (ID Nos. CD-WS6 and CD-WS7)**

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

Emission Limit
Emissions of particulate matter from these sources shall not exceed an allowable emission rate as calculated by the following equation:

$E = 4.10 \times P^{0.67}$ (for process rates less than or equal to 30 tons per hour), or
$E = 55.0 \times P^{0.11} - 40$ (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.

Monitoring/Recordkeeping/Reporting
According to the review for permit 01001T51, issued October 21, 2016, no monitoring/recordkeeping/reporting is required for emissions from these sources. Emissions from these silo and load-out activities were estimated using the predictive emission factor equation from AP-42 Section 13.2.4 Aggregate Handling and Storage Piles with a 80% wet spray control applied for the flyash conditioners. This results in potential combined PM/PM_{10} emissions of 0.0514 tons per year compared to the 02D .0515 limit of 54.3 pounds per hour (237.8 tons per year) at a total potential process rate of 134 tons per hour.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

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

Emission Limit
Visible emissions from these sources 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.

Monitoring
To ensure compliance, once a month the Permittee shall observe the emission points of these sources for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from these sources are observed to be above normal, the Permittee shall either:

a. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
b. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the above limit.

Recordkeeping
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:

a. the date and time of each recorded action;
b. 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
c. the results of any corrective actions performed.

Reporting
The Permittee shall submit semiannual summary reports of the monitoring and recordkeeping activities.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

State-enforceable only

3. 15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS
See Section L below.

E.

- **Six coal storage silos (ID Nos. ES-Coal Silo 1 through ES-Coal Silo 6)**
- **Four coal conveyors (ID Nos. ES-37A, ES-37B, ES-39A, and ES-39B)**

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

Emission Limit
Emissions of particulate matter from these sources shall not exceed an allowable emission rate as calculated by the following equation:

$E = 4.10 \times P^{0.67}$ (for process rates less than or equal to 30 tons per hour), or
$E = 55.0 \times P^{0.11} - 40$ (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.

Monitoring/Recordkeeping/Reporting
The Permittee shall maintain production records such that the process rates "P" in tons per hour, as specified by the formulas contained above, can be derived and shall make these records available to a DAQ authorized representative upon request.

No reporting is required for particulate emissions from these sources.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

2. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60 SUBPART Y)
The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements in accordance with 15A NCAC 02D .0524, "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60, Subpart Y "Standards of Performance for Coal Preparation and Processing Plants", including Subpart A "General Provisions."

Subpart Y is applicable to any of the following affected facilities that commenced construction, reconstruction or modification after October 27, 1974, and on or before April 28, 2008: thermal dryers, pneumatic coal-cleaning equipment, coal processing and conveying equipment, and coal storage systems, transfer and loading systems. The coal handling sources at this facility are subject to this rule as "coal processing and conveying equipment" defined as any machinery used to reduce the size of coal or to separate coal from refuse, and the equipment used to convey coal to or remove coal and refuse from the machinery.

Emission Limit
Visible emissions from these sources shall not be 20 percent opacity or greater.

Monitoring
To ensure compliance, once a month the Permittee shall observe the emission points of these sources for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from these sources are observed to be above normal, the Permittee shall either:

a. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
b. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the above limit.

Recordkeeping
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:

a. the date and time of each recorded action;
b. 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
c. the results of any corrective actions performed.

Reporting
The Permittee shall submit semiannual summary reports of the monitoring and recordkeeping activities.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

State-enforceable only

3. 15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS
   See Section L below.

F. Coal unloading hopper (ID No. ES-Coal Hopper) with wet suppression and two coal conveyors (ID Nos. ES-Coal Convey 1 and ES-Coal Convey 2)

1. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS
   The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements in accordance with 15A NCAC 02D .0524, "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60, Subpart Y "Standards of Performance for Coal Preparation and Processing Plants", including Subpart A "General Provisions."

   Visible emissions from these sources shall not be 20 percent opacity or greater.

Monitoring/Recordkeeping/Reporting
No monitoring/recordkeeping/reporting is required for visible emissions from these sources using wet suppression.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

State-enforceable only

2. 15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS
   See Section L below.

G. limestone rail unloading station (ID No. LS Rail) with wet suppression

1. 15A NCAC 02D .0510: PARTICULATES FROM SAND, GRAVEL, OR CRUSHED STONE OPERATIONS
   The Permittee shall not cause, allow, or permit any material 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.

   Fugitive non-process dust emissions shall be controlled by 15A NCAC 02D .0540.

   The Permittee shall control emissions from conveyors, screens, and transfer points, such that the applicable opacity standards in Section G.2 below are not exceeded.

   Monitoring/Recordkeeping
   The Permittee shall comply with the visible emission monitoring and recordkeeping requirements in Section G.2 below.

   Reporting
   The Permittee shall comply with the reporting requirements in Section G.2 below.

   The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

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

   Emission Limit
   Visible emissions from this source shall not be more than 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. 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.

   Monitoring
   To ensure compliance, once a month the Permittee shall observe the emission points of this source for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from these sources are observed to be above normal, the Permittee shall either:
   a. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   b. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the above limit.

Recordkeeping
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:

a. the date and time of each recorded action;
b. 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
c. the results of any corrective actions performed.

Reporting
The Permittee shall submit semiannual summary reports of the above monitoring and recordkeeping.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

State-enforceable only

3. 15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS
See Section L below.

H. Limestone Handling Equipment with Fugitive Emissions:

- **Two limestone unloading hoppers (ID Nos. ES-LS Unload A and ES-LS Unload B),**
- **Three limestone belt feeders (ID Nos. ES-LS Feeder 1, ES-LS Feeder 3A, and ES-LS Feeder 3B),**
- **Two limestone reclaim hoppers (ID Nos. ES-LS Reclaim A and ES-LS Reclaim B),**
- **Three limestone conveyors (ID Nos. ES-LS Convey 2, ES-LS Convey 4A [tail-end transfer only], and ES-LS Convey 4B [tail-end transfer only]), and**
- **Three wet limestone grinders (ID Nos. ES-LS Grinder 1, ES-LS Grinder 2, and ES-LS Grinder 3)**

1. 15A NCAC 02D .0510: PARTICULATES FROM SAND, GRAVEL, OR CRUSHED STONE OPERATIONS
The Permittee shall not cause, allow, or permit any material 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.

Fugitive non-process dust emissions shall be controlled by 15A NCAC 02D .0540.

The Permittee shall control emissions from conveyors, screens, and transfer points, such that the applicable opacity standard in Section H.2 below is not exceeded.

Monitoring/Recordkeeping
The Permittee shall comply with the visible emission monitoring and recordkeeping requirements in Section H.2 below.

Reporting
The Permittee shall comply with the reporting requirements in Section H.2 below.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

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

The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart OOO "Standards of Performance for Nonmetallic Mineral Processing Plants", including Subpart A "General Provisions."

An affected facility under Subpart OOO that commences construction, modification, or reconstruction after August 31, 1983, is subject to the requirements for the following affected facilities in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station.

Emission Limit

Fugitive visible emissions from these sources shall not be more than 10 percent opacity.

Monitoring

To ensure compliance, once a month the Permittee shall observe the emission points of these sources for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from these sources are observed to be above normal, the Permittee shall either:

a. immediately shutdown the source and repair the malfunction, or
b. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the above visible emissions limit.

Recordkeeping

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:

a. the date and time of each recorded action;
b. 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
c. the results of any corrective actions performed.

Reporting

The Permittee shall submit semiannual summary reports of the above monitoring and recordkeeping.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

State-enforceable only

3. 15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS

See Section L below.

I. Limestone Handling Equipment with Stack Emissions:

- **Five limestone conveyors (ID Nos. ES-LS Convey 4A [head-end transfer only], ES-LS Convey 4B [head-end transfer only], ES-LS Convey 5, ES-LS Convey 6, and ES-LS Convey 7), and three limestone silos (ID Nos. ES-LS Silo A, ES-LS Silo B, and ES-LS Silo C) with associated bagfilter (ID No. CD-LB-BF-1),**
- **One limestone silo (ID No. ES-LS Mayo Silo) with associated bagfilter (ID No. CD-LB-BF-2), and**
- **One truck loading spout (ID No. ES-Truck Spout) with associated bagfilter (ID No. CD-LB-BF-3)**

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

   The Permittee shall not cause, allow, or permit any material 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.

   Fugitive non-process dust emissions shall be controlled by 15A NCAC 02D .0540.

   The Permittee shall control emissions from conveyors, screens, and transfer points, such that the applicable opacity standard in Section I.2 below is not exceeded.

   Monitoring/Recordkeeping

   The Permittee shall comply with the monitoring and recordkeeping requirements in Section I.2 below.

   Reporting

   The Permittee shall comply with the reporting requirements in Section I.2 below.

   The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

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

   The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart OOO "Standards of Performance for Nonmetallic Mineral Processing Plants", including Subpart A "General Provisions."

   Emission Limit

   Emissions of particulate matter from these sources shall not exceed 0.022 grains per standard dry cubic foot.

   Visible emissions from these sources shall not be more than 7 percent opacity.

   Monitoring

   Particulate matter emissions from these sources shall be controlled by the bagfilters as described above. To ensure that optimum control efficiency is maintained, the Permittee shall perform inspections and maintenance as recommended by the manufacturer implemented in the plant's Work Management System. 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:

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

To ensure compliance, once a month the Permittee shall observe the emission points of these sources for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from these sources are observed to be above normal, the Permittee shall either:

a. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
b. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the above visible emissions limit.

Recordkeeping

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

a. the date and time of each recorded action;
b. the results of each inspection;
c. the results of any maintenance performed on the bagfilters;
d. the results of any 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;
d. the results of any corrective actions performed; and
e. any variance from manufacturer's recommendations, if any, and corrections made.

Reporting

The Permittee shall submit semiannual summary reports of the above monitoring and recordkeeping.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

State-enforceable only

3. 15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS

See Section L below.

J.

- **Stationary sorbent Silo 1 for Unit 4 (ID No. ES-SORB-5) and associated bagfilter (ID No. CD-SORB-5), and Unit 4 Silo 1 pneumatic conveying equipment system (ID No. ES-SORB-7)**
- **Stationary sorbent Silo 1 for Unit 3 (ID No. ES-SORB-9) and associated bagfilter (ID No. CD-SORB-9), and Unit 3 Silo 1 pneumatic conveying equipment system (ID No. ES-SORB-11)**
- **Stationary sorbent Silo 1 for Unit 2 (ID No. ES-SORB-13) and associated bagfilter (ID No. CD-SORB-13), and Unit 2 Silo 1 pneumatic conveying equipment system (ID No. ES-SORB-15)**
- **Stationary sorbent Silo 1 for Unit 1 (ID No. ES-SORB-17) and associated bagfilter (ID No. CD-SORB-17), and Unit 1 Silo 1 pneumatic conveying equipment system (ID No. ES-SORB-19)**

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

Emission Limit

Emissions of particulate matter from these sources shall not exceed an allowable emission rate as calculated by the following equation:

$E = 4.10 \times P^{0.67}$ (for process rates less than or equal to 30 tons per hour), or
$E = 55.0 \times P^{0.11} - 40$ (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.

Monitoring

Particulate matter emissions from these sources shall be controlled by the bagfilters as described above. To ensure that optimum control efficiency is maintained, the Permittee shall perform inspections and maintenance as recommended by the manufacturer implemented in the plant's Work Management System. 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 must include the following:

a. an annual (for each 12-month period following the initial inspection) internal inspection of the bagfilters' structural integrity; and
b. a monthly visual inspection of the system ductwork, and material collection unit for leaks.

Recordkeeping

The results of inspection and maintenance shall be maintained in a log book (written or electronic form) on site and made available to an authorized representative upon request. The log book shall record the following:

a. the date and time of actions recorded;
b. the results of each inspection;
c. the results of any maintenance performed on the bagfilter; and
d. any variance from manufacturer's recommendations, if any, and corrections made.

Reporting

The Permittee shall submit the results of any maintenance performed on the bagfilter within 30 days of a written request by the DAQ.

The Permittee shall submit semiannual summary reports of the above monitoring and recordkeeping.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

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

Emission Limit
Visible emissions from these sources 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.

Monitoring
To ensure compliance, once a month the Permittee shall observe the emission points of these sources for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from these sources are observed to be above normal, the Permittee shall either:

a. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
b. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the above limit.

Recordkeeping
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:

a. the date and time of each recorded action;
b. 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
c. the results of any corrective actions performed.

Reporting
The Permittee shall submit semiannual summary reports of the above monitoring and recordkeeping.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

K. Wastewater treatment facility lime storage silo (ID No. ES-WWTF Silo) with associated bin vent filter (ID No. CD-WWTF-Silo-BF)

1. 15A NCAC 02D .0510: PARTICULATES FROM SAND, GRAVEL, OR CRUSHED STONE OPERATIONS
The Permittee shall not cause, allow, or permit any material 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.

Fugitive non-process dust emissions shall be controlled by 15A NCAC 02D .0540.

The Permittee shall control emissions from conveyors, screens, and transfer points, such that the applicable opacity standard in Section K.2 below is not exceeded.

Monitoring
Particulate matter emissions from this source shall be controlled by the associated bin vent filter. 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:

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

Recordkeeping
The results of inspection and maintenance in Section 2.1.K.1.e above shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
a. The date and time of each recorded action;
b. The results of each inspection;
c. The results of any maintenance performed on the bin vent filter; and
d. Any variance from manufacturer's recommendations, if any, and corrections made.

Reporting
The Permittee shall submit semiannual summary reports of the monitoring and recordkeeping activities.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

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

Emission Limit
Visible emissions from this source shall not be more than 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. 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.

Monitoring
To assure compliance, once a month the Permittee shall observe the emission points of this source for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from this source are observed to be above normal, the Permittee shall either:
a. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
b. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the above limit.

Recordkeeping
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:
a. the date and time of each recorded action;
b. 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
c. the results of any corrective actions performed.

Reporting
The Permittee shall submit semiannual summary reports of the observations.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

State-enforceable only

3. 15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS
   See Section L below.

L. Facility Wide Toxics Demonstration

State-enforceable only
15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS
The Permittee has submitted a toxic air pollutant dispersion modeling analysis dated January 21, 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 March 23, 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
No monitoring, recordkeeping, or reporting is required since the modeled emission rates are significantly below the toxic Acceptable Ambient Levels.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

M.

- **Wind erosion, generated ash unloading, relocated ash unloading, and off-specification gypsum unloading at the Ash Landfill (ID No. LAND)**
- **Wind erosion and excavation of ash at the East Ash Basin (ID No. EASHBASIN)**
- **Wind erosion and excavation of ash at the West Ash Basin (ID No. WASHBASIN)**
- **Haul roads for generated and excavated ash to the Ash Landfill (ID No. ES-Haul Roads)**
- **Transfer and unloading of FGD filter cake at Ash (ID No. IS-FGDC)**
- **one diesel-fired emergency generator for emergency power at the Expanded Landfill (ID No. IS-LANDGEN**

1. 15A NCAC 02D .0530(u): USE OF PROJECTED ACTUAL EMISSIONS TO AVOID APPLICABILITY OF PREVENTION OF SIGNIFICANT DETERIORATION REQUIREMENTS
   This is for DEP's ash basin closure project (Application 7300029.21A) to excavate the Roxboro Plant East Ash Basin and West Ash Basin (the Ash Basins) and place the excavated coal combustion residuals (CCR) in a lined expansion of the existing Ash Landfill (the Expanded Landfill) in accordance with Permit No. 01001 T57 issued June 25, 2021, as shown in Section 3 of this review above.

   DEP elected to use *projected actual emissions* to determine applicability with PSD requirements. Under the 15A NCAC 02D .0530(u) rule, if the *projected actual emissions*, calculated pursuant to 40 CFR 51.166(b)(40)(ii)(a) and (b), minus baseline actual emissions, is 50 percent or greater of the amount that is a significant emissions increase, without reference to the amount that is a significant net emissions increase, for the regulated NSR pollutant, then a permit condition is required for monitoring, recordkeeping and reporting of the annual emissions related to the project in tons per year, for 10 years following resumption of regular operations after the change if the project involves increasing the emissions unit's design capacity or its potential to emit for the regulated NSR pollutant; otherwise, these records shall be maintained for five years following resumption of regular operations after the change.

   Monitoring/Recordkeeping/Reporting
   The Permittee shall perform the following:
   a. The Permittee shall maintain records of annual emissions in tons per year, on a calendar year basis related to the ash basin closure project, for five years following first placement of ash in the Expanded Landfill after the change is made.

b. The Permittee shall submit a report to the director within 60 days after the end of each calendar year during which these records must be generated. The report shall contain the items listed in 40 CFR 51.166(r)(6)(v)(a) through (c).
c. The Permittee shall make the information documented and maintained under this condition available to the Director or the general public pursuant to the requirements in 40 CFR 70.4(b)(3)(viii).
d. The reported actual emissions (post-construction emissions) for each of the five calendar years will be compared to the projected actual emissions (pre-construction projection) as included below:

Regulated NSR Pollutant	Projected Actual Emissions (tons per year)
PM	25.71
PM_{10}	11.85

The projected actual emissions are not enforceable limitations. If the reported actual emissions exceed the projected actual emissions, the Permittee shall include in its annual report an explanation as to why actual emissions exceeded the projected actual emissions. These projected actual emissions include total post project emissions (including projected actual emissions for existing sources and potential to emit emissions for new sources) as used in the application.

The applicability of this regulation has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

6. Public Notice

Pursuant to 15A NCAC 02Q .0521, a notice of the draft Title V Operating Permit will be published on the DAQ website to provide for a 30-day comment period with an opportunity for a public hearing. Copies of the draft (proposed) permit, review and public notice will be sent to EPA for their 45-day review, to persons on the Title V mailing list, to the Raleigh Regional Office, and to the Permittee.

7. Other Requirements

PE Seal
NA. No controls are being added.

Zoning
There is no expansion of the facility, therefore zoning consistency is not needed.

Fee Classification
The facility fee classification before and after this modification will remain as "Title V".

Removing the emergency affirmative defense provisions in operating permits
EPA has promulgated a rule (88 FR 47029, July 21, 2023), with an effective date of August 21, 2023, removing the emergency affirmative defense provisions in operating permits programs, codified in both 40 CFR 70.6(g) and 71.6(g). EPA has concluded that these provisions are inconsistent with the EPA's current interpretation of the enforcement structure of the CAA, in light of prior court decisions[1]. Moreover, per EPA, the removal of these provisions is also consistent with other recent EPA actions involving affirmative defenses[2] and will harmonize the EPA's treatment of affirmative defenses across different CAA programs.

1 NRDC v. EPA, 749 F.3d 1055 (D.C. Cir. 2014).
2 In newly issued and revised New Source Performance Standards (NSPS), emission guidelines for existing sources, and NESHAP regulations, the EPA has either omitted new affirmative defense provisions or removed existing affirmative defense provisions. See, e.g., National Emission Standards for Hazardous Air Pollutants for the Portland Cement Manufacturing Industry and Standards of Performance for Portland Cement Plants; Final Rule, 80 FR 44771 (July 27, 2015); National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial,

As a consequence of this EPA action to remove these provisions from 40 CFR 70.6(g), it will be necessary for states and local agencies that have adopted similar affirmative defense provisions in their Part 70 operating permit programs to revise their Part 70 programs (regulations) to remove these provisions. In addition, individual operating permits that contain Title V affirmative defenses based on 40 CFR 70.6(g) or similar state regulations will need to be revised.

Regarding NCDAQ, it has not adopted these discretionary affirmative defense provisions in its Title V regulations (15A NCAC 02Q .0500). Instead, DAQ has chosen to include them directly in individual Title V permits as General Condition (GC) J.

Per EPA, DAQ is required to promptly remove such impermissible provisions, as stated above, from individual Title V permits, after August 21, 2023, through normal course of permit issuance.

15A NCAC 02D .0614: COMPLIANCE ASSURANCE MONITORING (40 CFR 64)
CAM applies to an emission source and associated control device if the following criteria are met:

- The source being controlled is subject to a non-exempt emission standard (defined by 02D .0614(b)(1)),
- The control device is being used to comply with the emission standard, and
- The source being controlled has potential emissions of the pollutant subject to the emission standard greater than major source thresholds.

This facility uses control devices to comply with several emission limits. The table below shows the rules and emission sources for CAM applicability.

Rule	Sources	Pollutant	Triggers CAM?	Notes
02D .0501(c)	Units 1 – 4	NOx, SO_2	No	*
02D .0503	Units 1 - 3	PM	No	*
02D .0510	Limestone handling	PM	No	This rule does not have a specific emission limit
02D .0515	Coal, flyash, and limestone handling	PM	No	**
02D .0519	Units 1 – 3	NOx	No	*
02D .0524 (Subpart D)	Unit 4	NOx, SO_2, PM	No	*
02D .0524 (Subpart Y)	Coal handling	VE	No	***
02D .0524 (Subpart OOO)	Flyash and limestone handling	PM, VE	No	**,***
02D .1100	Facility-wide	TAPs	No	***
02D .1111 (Subpart UUUUU)	Units 1 – 4	PM, HCl, Hg	No	02D .0614(b)(1)(A)
02Q .0402	Units 1 – 4	NOx, SO_2	No	02D .0614(b)(1)(C)
CSAPR	Units 1 – 4	NOx, SO_2	No	02D .0614(b)(1)(D)

Commercial, and Institutional Boilers and Process Heaters; Final Rule, 80 FR 72789 (November 20, 2015); Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units; Final Rule, 81 FR 40956 (June 23, 2016).

* Each subject source operates a CEMS for this pollutant. A CEMS is considered a continuous compliance determination method (CCDM), which allows for exemption from CAM per 02D .0614(b)(1)(F).
** Potential emissions are less than the major source threshold.
*** This pollutant does not have a major source threshold.

None of the emission sources trigger CAM requirements, and therefore CAM does not apply to this facility.

8. Comments on the Draft Permit

The draft permit and review were sent to Erin Wallace at DEP, Abdul Kadir at the Raleigh Regional Office, and Samir Parekh with SSCB on December 21, 2023, for review.

DEP Comments
The following comments were received in an email from Erin Wallace on January 5, 2024, in a "track changes" copy of the draft permit that contains two minor comments/questions regarding the 02D .0503 addition for Units 1-3 as follows:

- In Section 2.1 A.5, Erin asks: So I am able to explain to the site, what is the driver for adding this regulation to the permit at this time?
- In Section 2.1 A.5.d Reporting: "The compliance report shall include, at a minimum, the information required in 40 CFR 63.10 and contain the information specified in Section 2.2 B.2.ss, 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." Can this verbiage be clarified a bit more to explicitly state periods of startup and shutdown shall be excluded as per 2.2.B.2.cc. The word "including" may make this a bit confusing.

Also, on January 5, 2024, Erin Wallace stated she reached out to the Raleigh Regional Office via phone and subsequently via email to request additional consideration to reduce the frequency of visual observations (as discussed in Section 1.c above).

The above email from Erin states that she spoke with Will Wike and he asked that she pose this question to this audience (Dawn Reddix, Will Wike, Abdul Kadir, and Ed Martin) in an email:

> *I am reviewing the draft renewal permit for the Duke Energy Roxboro Plant. In our permit application we had made a request to reduce the frequency of visible observations for compliance with the 02D .0515 and 02D .0521 regulations for Particulate and Visible Emissions from monthly to semi-annually. We have another site in our fleet that allows for semi-annual visible observations on the material handling equipment, which was the basis for our request. The monitoring and recordkeeping requirement is currently a monthly observation for both the emission points and ductwork/material collection unit. Plant operations staff make rounds through the plant twice per day to ensure the plant is operating as expected. Should there be any visible emissions, this would be an equipment malfunction and would be rectified immediately to return to normal operations. The visual observations and inspections have not historically shown observations of abnormal conditions.*
>
> *If DAQ feels that quarterly observations would be acceptable, that would be greatly appreciated.*

On January 8, 2024, when DEP was asked which facility allows for semi-annual visible observations on the material handling equipment, Erin replied that the observations are at Buck for the ash handling equipment associated with the ash beneficiation activities at the site. Buck is one of three of Duke's STAR® flyash beneficiation processing sites and it is the only one of the three that was written to allow for semi-annual visible monitoring. Since this is a different type of facility, it does not appear to be similar enough to sources at a coal-fired plant and was not reason enough to consider changing from monthly 02D .0515 and 02D .0521 monitoring at any of Duke's coal-fired plants.

On January 10, 2024, it was decided to poll the regional inspectors at the six Duke Energy coal-fired facilities to get their opinion on whether we can allow Duke Energy to reduce the monitoring frequency

from monthly to semi-annual (or quarterly) for 02D .0515 and 02D .0521 as Duke requested in the application for the Roxboro permit renewal.

The facilities are:

Facility	Inspector	Region
Roxboro	Abdul Kadir	RRO
Mayo	Abdul Kadir	RRO
Allen	Amir Stewart	MRO
Belews Creek	Dylan Wright	WSRO
Marshall	Joe Foutz	MRO
Cliffside	Chris Scott	ARO

There was not a unanimous opinion on the best monitoring frequency. In addition, Permitting supervisors and SSCB were consulted and it was recommended to keep monthly monitoring.

Response
On January 18, 2024, the following response was sent to Erin Wallace addressing the above DEP's comments as follows:

1. For the 02D .0521 and 02D .0515 monitoring frequency you requested, we have been discussing this further here and with all the regions for your six coal-fired facilities, and with SSCB. The end result of this is that we are keeping monthly monitoring for various reasons including the following:

    - A semi-annual monitoring frequency does not provide representative data for compliance. If the unit subject to 02D .0515 and 02D .0521 was also subject CAM, the facility would have to do a minimum monitoring of once daily. In this case, I believe emission units are small and not subject to CAM, therefore monthly monitoring frequency is appropriate.

    - The frequency of monitoring needs to be based on the amount of pollution, its impacts, and most importantly, whether the sufficient data can be obtained from the prescribed frequency that are representative of source's compliance with the appliable requirement. So, since the 515 (allowable) standard is based on hourly and the 521 is based on 6-minutes averaging, would once per quarter or once per six-month monitoring data representative for compliance with these underlying standards.

2. For your comment in section 2.1 A.5 asking why we are putting 02D .0503 in the permit at this time. This is because with repeal of 02D .0536, effective November 1, 2020, as discussed in the review, it was removed in Permit 01001T57 on June 25, 2021, and 02D .0503 is being added as recommended in a memorandum dated October 11, 2019, from Dennis Igboko, Stationary Source Compliance Branch (see memo attached). Allen, Belews Creek and Marshall already have this same 02D .0503 language.

3. For your comment in section 2.1 A.5.d, we typically include periods of SSM in reporting per SSCB even though those periods are not necessarily used for compliance with the limits like in this case for MATS or 02D .0503. If this verbiage was changed, it would be different than the other three permits (in 2 above) that already have it. How would we change it?

Erin was asked if there were any comments before this was sent to notice. When no response was received from DEP, Erin Wallace was asked on January 30, 2024, if she was okay with sending the permit to notice.

Erin responded on January 31, 2024, that she was good with this going to notice.

SSCB Comments
In an email on January 5, 2024, Samir Parekh stated he had no comments.

RRO Comments
In an email dated January 1, 2024, Abdul Kadir stated he had no comments.

9. Recommendations

TBD