

**NORTH CAROLINA DIVISION OF  
AIR QUALITY**

**Application Review**

**Issue Date:**

**Region:** Wilmington Regional Office  
**County:** New Hanover  
**NC Facility ID:** 6500036  
**Inspector's Name:** Ashby Armistead  
**Date of Last Inspection:** 01/25/2024  
**Compliance Code:** 3 / Compliance - inspection

<p style="text-align: center;"><b>Facility Data</b></p> <p><b>Applicant (Facility's Name):</b> Duke Energy Progress, LLC - L.V. Sutton Electric Plant</p> <p><b>Facility Address:</b>                  Duke Energy Progress, LLC - L.V. Sutton Electric Plant                  801 Sutton Steam Plant Road                  Wilmington, NC 28401</p> <p><b>SIC:</b> 4911 / Electric Services  <b>NAICS:</b> 221112 / Fossil Fuel Electric Power Generation</p> <p><b>Facility Classification: Before:</b> Title V <b>After:</b> Title V  <b>Fee Classification: Before:</b> Title V <b>After:</b> Title V</p>	<p style="text-align: center;"><b>Permit Applicability (this application only)</b></p> <p><b>SIP:</b> 15A NCAC 02D .0503, 02D .0515, 02D .0516, 02D .0521, 02D .0524, 02D .1425, 02Q .0402  <b>NSPS:</b> Subparts Dc, IIII, KKKK, TTTT  <b>NESHAP:</b> Subpart ZZZZ  <b>PSD:</b> NA  <b>PSD Avoidance:</b> 02Q .0317(a)(1) (PSD avoidance)  <b>NC Toxics:</b> 02D .1100  <b>112(r):</b> NA  <b>Other:</b> 40 CFR Part 97 CSAPR</p>
---	--

<b>Contact Data</b>			<b>Application Data</b>
<p style="text-align: center;"><b>Facility Contact</b></p> Kent Tyndall Lead Environmental Professional (910) 341-4775 801 Sutton Steam Plant Road Wilmington, NC 28401	<p style="text-align: center;"><b>Authorized Contact</b></p> James Corriher Station Manager (910) 341-4750 801 Sutton Steam Plant Road Wilmington, NC 28401	<p style="text-align: center;"><b>Technical Contact</b></p> Sounetala Xayaveth Senior Engineering Technologist (919) 711-6444 1199 Blackjack Church Road Goldsboro, NC 27530	<p><b>Application Numbers:</b> 6500036.24A (Title V) and .24B (Title IV)  <b>Date Received:</b> 01/18/2024  <b>Application Type:</b> Renewals  <b>Application Schedule:</b> TV-Renewal and Title IV</p> <p style="text-align: center;"><b>Existing Permit Data</b></p> <p><b>Existing Permit Number:</b> 01318/T35  <b>Existing Permit Issue Date:</b> 01/05/2022  <b>Existing Permit Expiration Date:</b> 07/31/2024</p>

<b>Total Actual emissions in TONS/YEAR:</b>							
CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2022	8.54	582.67	6.89	39.22	131.31	1.50	0.8508 [Formaldehyde]
2021	8.94	587.92	9.52	39.26	140.87	1.62	0.9089 [Formaldehyde]
2020	8.55	602.21	12.04	72.00	144.45	2.28	1.52 [Formaldehyde]
2019	10.15	606.12	24.29	189.05	171.68	3.13	2.10 [Formaldehyde]
2018	8.24	555.04	25.95	250.09	145.60	2.88	1.94 [Formaldehyde]

<p><b>Review Engineer:</b> Ed Martin</p> <p><b>Review Engineer's Signature:</b> _____ <b>Date:</b> _____</p>	<p style="text-align: center;"><b>Comments / Recommendations:</b></p> <p><b>Issue</b> 01318/T36  <b>Permit Issue Date:</b> _____  <b>Permit Expiration Date:</b> _____</p>
--	--

## 1. Purpose of Applications

### Application 6500036.24A

The purpose of this permit application is to renew the existing Title V permit pursuant to 02Q .0513. The renewal application was received on January 18, 2024, at least six months before the July 31, 2024 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 equipment or significant modifications to the permit. Therefore, no fee or zoning determination is required. However, they requested updates to the insignificant activities list as shown below in Section 4. A permit fee is NOT required for this renewal application.

The following application was consolidated with this application:

### Application 6500036.24B (consolidated with Application 6500036.24A)

DEP submitted an Acid Rain Permit Application received January 18, 2024, for renewal of the acid rain permit for Turbine 1A, Turbine 1B, Turbine 4, and Turbine 5.

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 L.V. Sutton Electric Plant is an electric utility facility that generates electrical power using internal combustion turbines. The main emission sources are a 2x2x1 power block consisting of two natural gas/No. 2 fuel oil-fired simple/combined-cycle internal combustion turbines (Turbine 1A and Turbine 1B), two heat recovery steam generators (HRSGs) and one steam turbine with a total nominal generating capacity of 620 MW, which began commercial operation on November 27, 2013. Other sources include two natural gas/No. 2 fuel oil-fired Fast Start simple-cycle turbines rated at up to 65.6 MW output each (Turbines 4 and 5) and two 1,000 kW Black Start diesel engines (BS1 and BS2). Other ancillary operations at the site consist of an auxiliary boiler, dew point heaters, wet surface air cooler, turbine inlet chiller and diesel-fired firewater pump engine.

## 3. History/Background/Application Chronology

### History/Background Since Last Renewal

August 5, 2019 Air permit No. 01318T34 (application 6500036.18C) was issued with an expiration date of July 31, 2024. This was to renew the Title V and Title IV permit pursuant to 02Q .0513. No significant modifications to the permit were requested by DEP. No modifications to the permit were requested by DEP in the application. However, other significant changes were made as follows:

- The permit was revised for the transition from the CAA §112(j) Case-by-Case MACT for Boilers and Process Heaters to the applicable CAA §112(d) MACT Subpart DDDDD standard (i.e., Boiler MACT) for the natural gas-fired auxiliary boiler AB1 and the natural gas-fired dew point heaters DPH1 and DPH2. The §112(j) MACT requirements for these sources were replaced with the Subpart DDDDD requirements.
- The Cross State Air Pollution Rule (CSAPR) requirements were added for Turbine 1A and Turbine 1B to replace the Clean Air Interstate Rule (CAIR) requirements which no longer applied and were removed.

In addition, the following applications were consolidated with this application:

- Application 6500036.16C  
This was an Acid Rain Permit Application for the simple cycle Fast Start combustion Turbines 3 and 4, which were added to Permit No. 01318T32 on April 18, 2016, and was superseded by the renewal Acid Rain Permit Application with application 6500036.18B (see below).
- Application 6500036.18A  
This was the Title V Part II operating permit application for the Fast Start project which added two simple-cycle turbines (Turbines 3 and 4, which Duke later requested be identified as Turbines 4 and 5) and two Black Start diesel engines (BS1 and BS2). This application was received on March 26, 2018. Also, NSPS Subpart TTTT - “Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units” was added for Turbines 4 and 5.
- Application 6500036.18B  
This was a renewal Acid Rain Permit Application to include simple-cycle Fast Start combustion Turbines 4 and 5 and combined-cycle combustion Turbines 1A and 1B.

January 5, 2022 Air permit No. 01318T35 (application 6500036.21A) was issued with an expiration date of July 31, 2024. This was a one-step TV Significant modification in accordance with 02Q .0501(c)(1) to reclassify the facility from a major source of hazardous air pollutants (HAPs) to an area source of HAPs. As a result, 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (40 CFR 63 Subpart YYYY - National Emissions Standards for Hazardous Air Pollutants for Stationary Combustion Turbines) was removed for sources Turbine 1A, Turbine 1B, Turbine 4, and Turbine 5; and 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (40 CFR PART 63, SUBPART DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters) was removed for sources AB1, DPH1, DPH2 and insignificant activities I79, I80 and I81.

#### Application Chronology

January 18, 2024 The Title V and Title IV renewal applications were received and administratively complete for processing.

February 16, 2024 Sent the draft permit for supervisor’s review.

February 22, 2024 Sent the draft permit to the Applicant, Stationary Source Compliance Branch, and the Wilmington Regional Office for review.

February 28, 2024 Received DEP’s comments on the draft permit.

March 6, 2024 Had a Teams call with Sounetala Xayaveth, Erin Wallace, Mark Cuilla, Mark Yoder and Ed Martin to discuss toxics rates needed for the permit as a result of MACT sources, previously exempt from toxics and not included in the permit, but are no longer exempt from toxics.

March 21, 2024 Sent the draft permit to 30-day public notice and 45-day EPA review.

xx Public notice period ended.

xx 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		Amended permit numbers and dates.
--	TOC	Revised Acid Rain Permit Application date.
4-5	1, table	Removed page numbers since they are no longer needed.  Added heat input rates for Turbine 4 and Turbine 5.
6	2.1 A, regulation table	Changed Particulate Matter limit to 0.18 pounds per million Btu heat input.  Added 15A NCAC 02D .1425.
	2.1 A.1.a	Changed Particulate Matter limit to 0.18 pounds per million Btu heat input.
8**	2.1 A.4**	Removed this intentionally left blank section and adjusted remaining 2.1 A section numbers.
9	2.1 A.5	Added the recently adopted 02D .1425 NOx SIP Call Budget requirement to submit NOx emissions reports.
10	2.1 B, table	Changed Particulate Matter limit to 0.18 pounds per million Btu heat input.
10	2.1 B.1.a	
10**	2.1 B.5**	Removed this intentionally left blank section.
12	2.1 C, table	Changed Particulate Matter limit to 0.18 pounds per million Btu heat input.
	2.1 C.1.a	
12**	2.1 C.4**	Removed this intentionally left blank section.
13	2.1 D, regulation table	Revised 15A NCAC 02D .1111 GACT 40 CFR 63 Subpart ZZZZ limits/standards to comply with the requirements of 15A NCAC 02D .0524 (40 CFR Part 60, Subpart III).
15	2.1 D.4	Revised to comply with the requirements of 40 CFR Part 60, Subpart III for an area source of HAP.
17	2.1 F, regulation table	Removed Clean Air Interstate Rule (CAIR) 15A NCAC 02D .2400.
		Added Cross State Air Pollution Rule 40 CFR Part 97, Subparts AAAAA and CCCCC.
		Added 15A NCAC 02D .1425.
19**	2.1 F.3**	Removed this intentionally left blank section and adjusted remaining 2.1 F section numbers.
20	2.1 F.3 (new)	Added Cross State Air Pollution Rule Requirements (40 CFR Part 97, Subparts AAAAA and CCCCC).
21	2.1 F.5	Added the recently adopted 02D .1425 NOx SIP Call Budget requirement to submit NOx emissions reports.

Page No.	Section	Description of Changes
22	2.1 G, regulation table	Revised 15A NCAC 02D .1111 GACT 40 CFR 63 Subpart ZZZZ limits/standards to comply with the requirements of 15A NCAC 02D .0524 (40 CFR Part 60, Subpart IIII).
24	2.1 G.4	Revised to comply with the requirements of 40 CFR Part 60, Subpart IIII for an area source of HAP.
25	2.2 A.1.a	Revised the toxic emission rate limits in accordance with the May 16, 2016 modeling demonstration.
26	2.2 A.1.b	Added this condition to document the AQAB's approval of the most recent modeling analysis.
26	2.2 A.2.a	Corrected date of toxic air pollutants demonstration.
33	2.3 D	Revised Acid Rain Permit Application date.
34	3	Created this new section for insignificant activities.  Revised or removed the following sources: I67 – Removed “ash handling” in the description, ash handling is no longer active. I72 – Removed this source. I76 – Removed this source, Monofill activity no longer active. I77 – Removed this source, Ash handling to support monofill is no longer active. I78 – Removed this source.  Added source 182.
35-43	4	Created this new section and moved General Conditions to this section.  Updated General Conditions to version 7.0, dated 08/21/2023.

\*\* Current permit page number or section.

This permit renewal is being processed without modification; however, minor Title V Equipment Editor description changes are needed.

## 5. Regulatory Review

The Sutton 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 .0503 "Particulates from Fuel Burning Indirect Heat Exchangers"
- 15A NCAC 02D .0515 "Particulates from Miscellaneous Industrial Processes"
- 15A NCAC 02D .0516 "Sulfur Dioxide from Combustion Sources"
- 15A NCAC 02D .0521 "Control of Visible Emissions"
- 15A NCAC 02D .0524 "New Source Performance Standards" (40 CFR Part 60, Subparts Dc, IIII, KKKK, TTTT)
- 15A NCAC 02D .1100 "Control of Toxic Air Pollutants"
- 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (GACT 40 CFR Part 63, Subpart ZZZZ)
- 15A NCAC 02D .1425 "NOx SIP Call Budget"
- 15A NCAC 02Q .0317(a)(1) (PSD avoidance)
- 15A NCAC 02Q .0402 "Acid Rain Procedures"
- Cross State Air Pollution Rule (CSAPR) (40 CFR Part 97, Subparts AAAAA and CCCCC)

- A. **Two natural gas/No. 2 fuel oil-fired simple/combined cycle internal combustion turbines (ID Nos. Turbine 1A and Turbine 1B), each equipped with dry low-NO<sub>x</sub> combustors (for natural gas combustion) and water injection control (for fuel oil combustion), a heat recovery steam generator with natural gas-fired duct burner, and a common steam turbine; and associated selective catalytic reduction (ID Nos. Turb 1A SCR and Turb 1B SCR) and oxidation catalyst (ID Nos. Turb 1A OxdnCat and Turb 1B OxdnCat)**

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

This rule applies to sources Turbine 1A, Turbine 1B, AB1, DPH1, and DPH2. 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 emission rate of 0.11 lb/mmBtu for the indirect heat exchangers currently in the permit (Turbine 1A, Turbine 1B, AB1, DPH1, and DPH2) was determined in permit 01318T25 (issued December 30, 2010) for the indirect heat exchangers in the permit at that time as shown below.

<u>Source</u>	<u>Heat Input (mmBtu/hr)</u>
Boiler 1 (existing)	1266
Boiler 2 (existing)	1273
Boiler 3 (existing)	4484
Turbine 3 (duct burner only) (new)	453
Turbine 4 (duct burner only) (new)	453
AB1 (new)	52.45
DPH1 (new)	2.6
<u>DPH2 (new)</u>	<u>2.6</u>
Total	7986.65

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, emissions of particulate matter from all indirect heat exchangers shall not exceed the following:

$$\begin{aligned} E &= 1.090 Q^{-0.2594} \\ &= 1.090 (7986.65)^{-0.2594} \\ &= \mathbf{0.11 \text{ lb/mmBtu}} \end{aligned}$$

In permit 01318T28 issued on April 11, 2012, there is a requirement stating: “Upon completion of the construction of and placement into service of turbine Nos. 3 and 4 in combined cycle mode the permittee shall permanently cease operation of the three coal-fired generating units.” Turbines 3 and 4 are now Turbines 1A and 1B and the three coal-fired generating units were Boilers 1, 2 and 3. The rule states 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. Therefore, since Turbines 1A and 1B were constructed in conjunction with the removal of Boilers 1, 2 and 3, the heat input of the three boilers shall no longer be considered in the determination of the allowable emission limit of the Turbines 1A and 1B.

Therefore, the emission limit for the affected sources to which this regulation now applies is based on the following sources:

<u>Source</u>	<u>Heat Input (mmBtu/hr)</u>
Turbine 1A	453*
Turbine 1B	453*
AB1	85
DPH1	2.5
<u>DPH2</u>	<u>2.5</u>
Total	996

\*When duct burners are operating in the heat recovery units.

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

$$\begin{aligned} \text{Therefore, } E &= 1.090 Q^{-0.2594} \\ &= 1.090 (996)^{-0.2594} \\ &= \mathbf{0.18 \text{ lb/mmBtu}} \end{aligned}$$

Emission Limit

Emissions of particulate matter discharged from the sources shown above into the atmosphere shall not exceed 0.18 pounds per million Btu heat input when duct burners are operating in heat recovery unit.

Monitoring/Recordkeeping/Reporting

No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas in these sources (duct burners only).

The applicability of this regulation has not changed as part of this renewal processing. However, the emission limit has been revised as shown above. Continued compliance with this regulation is expected.

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

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

Monitoring/Recordkeeping/Reporting

No monitoring/recordkeeping/reporting is required for visible emissions from the firing of natural gas and No. 2 fuel oil in these sources.

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 .0524: NEW SOURCE PERFORMANCE STANDARDS

New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart KKKK, including Subpart A "General Provisions." Subpart KKKK applies to combustion turbines with heat input at full load equal or greater than 10 million Btu/hr that commenced construction, modification, or reconstruction after February 18, 2005. Turbines 1A and 1B were added to permit 01318T25 on December 30, 2010. This subpart also applies to emissions from the associated heat recovery steam generators (HRSGs) with duct burners, and the HRSGs and duct burners are exempt from the requirements of NSPS Subpart Da, Db or Dc.

DEP uses a continuous emission monitoring system (CEMS) for NOx as an option allowed by Subpart KKKK. Therefore, only an initial performance test was required for NOx and subsequent annual performance testing is not required. The performance evaluation of the CEMS was conducted as part of the initial performance testing, which has been completed.

Emission Limits

The turbines will fire both fuel oil and natural gas. NOx emissions (except during startup, shutdowns, and malfunction) from each combustion shall not exceed the following as shown in Table 1 of 40 CFR 60 Subpart KKKK.

Fuel Type	Operating Conditions*	NOx Limit at 15 percent O <sub>2</sub>	Duct Firing Allowed?
Natural Gas	75 percent of peak load or higher	15 ppm	Yes
	when operating at less than 75 percent of peak load or operating at less than 0°F	96 ppm	Yes
No. 2 Fuel Oil	75 percent of peak load or higher	42 ppm	No
	when operating at less than 75 percent of peak load or operating at less than 0°F	96 ppm	No

\* peak load defined as the design capacity at ISO conditions

SO<sub>2</sub> emissions (except during startup, shutdowns, and malfunction) from the combustion turbines shall not exceed 0.060 lb/million Btu heat input (fuel sulfur content limit).

Monitoring/Recordkeeping

The Permittee shall operate and maintain the combustion turbines, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown and malfunction in accordance with §60.4333. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524, specifically with requirements of 40 CFR 60.11(d), if the Permittee, to the extent practicable, does not maintain and operate combustion turbines including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions, at all times including periods of startup, shutdown, and malfunction.

The Permittee shall install, certify, maintain and operate a NOx continuous emissions monitoring system (CEMS) on each combined-cycle and simple-cycle turbine stack or ductwork as described in §60.4340(b), to demonstrate compliance with the applicable NOx emission limit. Excess emissions are based on a 30-day rolling average for combined-cycle operation and on a 4-hour rolling average for simple-cycle operation, and shall be determined in accordance with §60.4345 and §60.4350. For operating periods during which multiple emissions standards apply, the applicable standard is the

average of the applicable standards during each hour. For hours with multiple emissions standards, the applicable limit for that hour is determined based on the condition that corresponded to the highest emissions standard in accordance with §60.4380(b)(3). If the NO<sub>x</sub> CEMS does not comply with the requirements of §60.4340(b) and §60.4345, or the NO<sub>x</sub> emissions (except during startup, shutdowns, and malfunction) exceeds the applicable NO<sub>x</sub> emission limit, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

For natural gas, the Permittee shall demonstrate compliance with the applicable SO<sub>2</sub> emission limit by using representative fuel sampling data showing that the sulfur content of the fuel does not exceed 0.060 lb SO<sub>2</sub>/million Btu in accordance with §60.4365(b). For natural gas, the Permittee shall provide at a minimum the amount of data in Section 2.3.1.4 or 2.3.2.4 of Appendix D to Part 75. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524, if the Permittee does not make the above demonstration for natural gas, if the demonstrations indicate that the sulfur content of natural gas exceeds 0.060 lb SO<sub>2</sub>/million Btu, if the SO<sub>2</sub> emissions (excluding the emissions during startup, shutdown, and malfunction) from the combustion turbines exceeds the applicable emission limit, or if these records are not maintained.

For fuel oil, the Permittee shall demonstrate compliance with the applicable SO<sub>2</sub> emission limit by using representative fuel sampling data showing that the sulfur content of the fuel does not exceed 0.060 lb SO<sub>2</sub>/million Btu in accordance with §60.4370(a). For fuel oil, the Permittee shall use one of the total sulfur sampling options and the associated sampling frequency described in sections 2.2.3, 2.2.4.1, 2.2.4.2, and 2.2.4.3 of Appendix D to Part 75).

#### Reporting

The Permittee shall submit reports of excess emissions and monitor downtime in accordance with §60.7(c). Excess emissions must be reported for all periods of operation, including startup, shutdown, and malfunctions. All reports required under §60.7(c) must be postmarked by the 30<sup>th</sup> day following the end of each 6-month period.

- a. Excess emissions and monitor downtime for the NO<sub>x</sub> CEMS are defined as follows:
  - i. Excess Emissions. To demonstrate compliance, an excess emission is any unit operating period in which the 30-day rolling average (for combined-cycle operation) or 4-hour rolling average (for simple-cycle operation) NO<sub>x</sub> emission rate exceeds the applicable emission limit.
  - ii. Monitor Downtime. To demonstrate compliance, a period of monitor downtime is any unit operating hour in which the data for any of the following parameters are either missing or invalid: NO<sub>x</sub> and either CO<sub>2</sub> or O<sub>2</sub> concentration.
  - iii. For operating periods (i.e., 4-hour rolling or 30-day rolling periods) during which multiple emissions standards apply, the applicable standard is the average of the applicable standards during each hour. For hours with multiple emissions standards (i.e., during fuel switches or hours with load changes across 75% peak load), the applicable limit for that hour is determined based on the condition that corresponded to the highest emissions standard.
- b. Excess emissions and monitor downtime for fuel sulfur content monitoring are defined as follows:
  - i. For samples of gaseous fuel, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the combustion turbine exceeds the applicable limit and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit.
  - ii. If the option to sample each delivery of fuel oil has been selected, the Permittee shall immediately switch to one of the other oil sampling options (i.e., daily sampling, flow proportional sampling, or sampling from the unit's storage tank) if the sulfur content of a delivery exceeds 0.05 weight percent. The Permittee shall continue to use one of the other sampling options until all of the oil from the delivery has been combusted, and the Permittee shall evaluate excess emissions according to §60.4385(a). When all of the fuel from the delivery has been burned, the Permittee may resume using the as-delivered sampling option.
  - iii. A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime ends on the date and hour of the next valid sample.

The Permittee shall submit semi-annual summary reports of monitoring and record keeping activities.

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

4. Cross State Air Pollution Rule Requirements (CSAPR) 40 CFR Part 97, Subparts AAAAA and CCCCC  
This regulation applies to turbines 1A, 1B, 4, and 5. The Permittee shall comply with all applicable requirements of 40 CFR Part 97, Subpart AAAAA "TR NO<sub>x</sub> Annual Trading Program" and Subpart CCCCC "TR SO<sub>2</sub> Group 1 Trading Program". Subparts AAAAA and CCCCC apply as shown in 40 CFR 97.404 and 97.604 respectively to any stationary, fossil-fuel-fired boiler or stationary, fossil-fuel-fired combustion turbine serving at any time, on or after January 1, 2005, a generator with nameplate capacity of more than 25 MWe producing electricity for sale. North Carolina is not subject to Subpart BBBBB "CSAPR NO<sub>x</sub> Ozone Season Trading Program."

CSAPR was added for Turbine 1A and Turbine 1B in permit 01318T34 on August 5, 2019, as shown in Section 3 above. It is being added for Turbine 4 and Turbine 5 as part of this permit renewal to replace the CAIR requirements which no longer apply as of January 1, 2015, and are being removed.

This rule replaced EPA's 2005 CAIR, following the direction of a 2008 court decision that required EPA to issue a replacement regulation. CSAPR implementation began on January 1, 2015.

This rule requires facilities in 27 states in the eastern half of the U.S. to improve air quality by reducing emissions of SO<sub>2</sub> and NO<sub>x</sub> from power plants that react in the atmosphere and contribute to the formation of fine particle pollution from upwind states that crosses state lines and contributes to smog and soot pollution in downwind states in order to help downwind areas attain fine particle and/or ozone NAAQS.

This is a Federal rule and compliance will be determined by the US EPA and third parties.

The applicability of this regulation for Turbines 1A and 1B has not changed as part of this renewal processing. Continued compliance with this regulation is expected. It is now being added for Turbines 4 and 5 and compliance is expected.

5. 15A NCAC 02Q .0402 ACID RAIN PERMITTING PROCEDURES (40 CFR Part 72)  
Turbines 1A, 1B, 4 and 5 are subject to this regulation. DEP submitted a renewal Acid Rain Permit Application, received January 18, 2024 (application 6500036.24B), 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 January 8, 2024, will become part of the Title V permit (as an attachment).

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

15A NCAC 02Q .0400 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. SO<sub>2</sub> allowances are not allocated by U.S. EPA for new units under 40 CFR Part 72; however, the sources must hold enough SO<sub>2</sub> allowances to cover their annual SO<sub>2</sub> emissions. These turbines are *new units* since they commenced commercial operation on or after November 15, 1990, in accordance with the definition in 40 CFR Part 72. There are no NO<sub>x</sub> emission limits for gas or oil-fired units; however, NO<sub>x</sub> emissions monitoring is required.

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 renewal Acid Rain Permit Application for Turbines 1A, 1B, 4 and 5 dated January 8, 2024, will be included in the Title V permit as attachment.

The applicability of this regulation for Turbines 1A and 1B has not changed as part of this renewal processing. Continued compliance with this regulation is expected.

**State-enforceable only**

6. 15A NCAC 02D .1425: NOX SIP CALL BUDGET

This recently adopted regulation, effective May 1, 2022, applies to turbines 1A, 1B, 4, and 5 and is being added during this renewal. The owner or operator of an EGU or large non-EGU as defined in 15A NCAC 02D .1401, meaning a stationary fossil fuel fired boiler or combustion turbine with a maximum heat input greater than 250 million Btu/hr, shall 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. The NOx emissions in this report shall be determined in accordance with 40 CFR Part 75 Subpart H.

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.

7. 15A NCAC 02Q .0317(a)(1) (PSD avoidance)

Turbines 1A, 1B, 4, and 5 are subject to a PSD avoidance condition which was added in permit 01318T33, issued on December 5, 2017, for these sources which were added in permit 01318T32 on April 18, 2016.

Emission Limitations

In order to avoid applicability of 15A NCAC 02D .0530(g), the combined emissions of nitrogen oxides, sulfur dioxide, particulate matter, PM-10, PM-2.5, carbon monoxide, VOCs, sulfuric acid and lead from these sources (ID Nos. Turbine 1A, Turbine 1B, Turbine 4 and Turbine 5) shall not exceed the limits shown in Section 2.2 B.1.a of the permit.

Monitoring/Recordkeeping

The Permittee shall keep records of the monthly emissions from each source (ID Nos. Turbine 1A, Turbine 1B, Turbine 4 and Turbine 5), in a logbook (written or in electronic format).

Reporting

The Permittee shall submit a semi-annual summary report of emissions of the above pollutants from each source and the total for all sources based on the calculations (tons per rolling consecutive 12-month period). The emissions must be calculated for each of the 12-month periods over the previous 17 months.

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

**B. One natural gas-fired auxiliary boiler (ID No. AB1)**

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

See Section 5.A.1 above.

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

Emissions of sulfur dioxide from this source shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Monitoring/Recordkeeping/Reporting

No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of natural gas in this source.

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

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 except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period.

Monitoring/Recordkeeping/Reporting

No monitoring/recordkeeping/reporting is required for visible emissions from the firing of natural gas in this source.

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 .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60 SUBPART Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units)

In accordance with 40 CFR 60.40c(a), subpart Dc applies to each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989, and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/h)) or less, but greater than or equal to 2.9 MW (10 MMBtu/h). This auxiliary boiler was first permitted in permit 01318T25 on December 30, 2010, and has a heat input capacity of 85 MMBtu/h.

Compliance

Since the auxiliary boiler burns only pipeline-quality natural gas, the NSPS Subpart Dc emissions standards are not applicable. Therefore, the auxiliary boiler will only be subject to the recordkeeping and reporting requirements of 40 CFR 60.48c(a), (g) and (i).

Recordkeeping/Reporting

The Permittee shall submit notification of the date of construction and actual startup in accordance with 40 CFR 60.48c(a) and 40 CFR 60.7.

The Permittee shall record and maintain records of the amount of fuel burned during each calendar month. Such records shall be maintained on site at the source for a period of two years following the date of such record.

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

**C. Two natural gas-fired dew point heaters (ID Nos. DPH1 and DPH2)**

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

See Section 5.A.1 above.

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

Emissions of sulfur dioxide from these sources shall not exceed 2.3 pounds per million Btu heat input each. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Monitoring/Recordkeeping/Reporting

No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of natural gas in these sources.

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

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 except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period.

Monitoring/Recordkeeping/Reporting

No monitoring/recordkeeping/reporting is required for visible emissions from the firing of natural gas in these sources.

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

**D. One diesel-fired firewater pump engine (ID No. FWP1)**

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

Emissions of sulfur dioxide from this source shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Monitoring/Recordkeeping/Reporting

No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of No. 2 fuel oil in this source.

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

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 except that six-minute periods

averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period.

Monitoring/Recordkeeping/Reporting

No monitoring/recordkeeping/reporting is required for visible emissions from the firing of natural gas in these sources.

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 .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60 SUBPART IIII - - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines)

Subpart IIII (promulgated July 11, 2006) applies to several categories of compression ignition (CI) engines. The firewater pump was first permitted in permit 01318T25 on December 30, 2010, and has a rating of 4.25 million Btu per hour heat input rate (1670 HP) and is therefore subject to Subpart IIII. This engine is classified as emergency stationary internal combustion engine as defined in §60.4219.

The emergency firewater pump engine has a displacement of less than 30 liters per cylinder. This source must meet the requirements in §60.4205(c) of the standard as shown in Table 4 of the standard.

Emission Limits

The following emission limits apply:

AFFECTED SOURCE	POLLUTANT	EMISSION LIMIT (g/hp-hr)
Diesel-fired firewater pump (ID No. FWP1) [40 CFR 60.4205(c)]	nitrogen oxides + VOCs	4.8
	carbon monoxide	2.6
	PM	0.15

Compliance

The engine must be operated and maintained according to the manufacturer’s written instructions or procedures. Engines for 2007 or later must comply with the standard by assuring that the engine purchased is certified to meet the applicable emissions standards and must install and configure the engine according to the manufacturer’s specifications. The manufacturer must certify the engines in accordance with procedures in 40CFR89 and test the engine as required by that rule. The engines must be equipped with a non-resettable hour meter prior to startup.

For operation after October 1, 2010, the engines must use diesel fuel with sulfur less than 15 ppm as per 40 CFR 80.510(b).

An emergency engine may be operated for maintenance and readiness checks for up to 100 hours per year in accordance with the NSPS requirements. Operation during an actual emergency is not subject to a limit on hours. Emergency stationary ICE may operate up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing.

No initial notification is required for an emergency use engine. Starting with the model years in Table 5 to NSPS Subpart IIII, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the Permittee shall keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The Permittee shall record the time of operation of the engine and the reason the engine was in operation during that time.

The applicability of this regulation has not changed as part of this renewal processing. However, the emission limits have been changed as shown in Table 4 of the standard for the increase in maximum engine power from  $175 \leq \text{HP} < 300$  to  $\text{HP} > 750$ . Continued compliance with this regulation is expected.

4. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (MACT – 40 CFR PART 63 SUBPART ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (RICE))

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This facility is an area source of HAP emissions. The firewater pump was first permitted in permit 01318T25 on December 30, 2010. In accordance with 40 CFR 63.6590(a)(2)(iii), a stationary RICE located at an area source of HAP emissions is new if it commenced construction on or after June 12, 2006.

For stationary RICE subject to regulations under 40 CFR Part 60, a new stationary RICE located at an area source of HAP must meet the requirements of this subpart by meeting the requirements of 40 CFR Part 60 Subpart IIII for compression ignition engines, in accordance with 40 CFR 63.6590(c)(1). No further requirements apply for such engines under this subpart.

This regulation has been changed to apply to RICE subject to regulations under 40 CFR Part 60 located at an area source of HAP rather than at a major source of HAP as part of this renewal processing. Continued compliance with this regulation is expected.

**E. One multi-cell wet surface air cooler with drift eliminators (ID No. CTWR1) and one multi-package/multi-cell turbine inlet chiller with drift eliminators (ID No. CTWR2)**

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

Emission Limit

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

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

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

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

Monitoring/Recordkeeping/Reporting

No monitoring/recordkeeping/reporting is required for particulate matter emissions from this source.

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

**F. Two natural gas/No. 2 fuel oil-fired simple-cycle internal combustion turbines (ID Nos. Turbine 4 and Turbine 5)**

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

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

Monitoring/Recordkeeping/Reporting

No monitoring/recordkeeping/reporting is required for visible emissions from the firing of natural gas and No. 2 fuel oil in 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 KKKK - Standards of Performance for Stationary Combustion Turbines)

Subpart KKKK applies to combustion turbines with heat input at full load equal or greater than 10 million Btu/hr that commenced construction, modification, or reconstruction after February 18, 2005. These turbines were added to the permit in 01318T32 issued on April 18, 2016, and are rated at 548.6 million Btu/hr each when firing natural gas and 493.9 million Btu/hr each when firing No. 2 fuel oil. Therefore, Turbine 4 and Turbine 5 are subject to this regulation.

DEP uses a continuous emission monitoring system (CEMS) for NOx as an option allowed by Subpart KKKK. Therefore, only an initial performance test was required for NOx and subsequent annual performance testing is not required. The performance evaluation of the CEMS was conducted as part of the initial performance testing, which has been completed.

Emission Limits

The turbines will fire both fuel oil and natural gas. Emission limits (except during startup, shutdowns, and malfunction) for NOx shall not exceed the following as shown in Table 1 of 40 CFR 60 Subpart KKKK.

Fuel Type	Operating Conditions*	NOx Limit at 15 percent O <sub>2</sub>
Natural Gas	75 percent of peak load or higher	25 ppm
	when operating at less than 75 percent of peak load or operating at less than 0°F	96 ppm
No. 2 Fuel Oil	75 percent of peak load or higher	74 ppm
	when operating at less than 75 percent of peak load or operating at less than 0°F	96 ppm

\* peak load defined as the design capacity at ISO conditions

SO<sub>2</sub> emissions (except during startup, shutdowns, and malfunction) from the combustion turbines shall not exceed 0.060 lb/million Btu heat input (fuel sulfur content limit).

Testing

The Permittee shall demonstrate compliance with the above NOx emission limits by conducting an initial performance test as required by 40 CFR 60.8 and 40 CFR 60.4400, in accordance with General Condition JJ within 60 days after achieving the peak load, but not later than 180 days after initial startup (initial firing) for the first combustion turbine (ID Nos. Turbine 4 or Turbine 5) to operate. A separate test shall be conducted both when firing natural gas and No. 2 fuel oil. The performance tests must be done at any load condition within plus or minus 25 percent of 100 percent of peak load. Three separate test runs must be conducted for each performance test with a minimum time of 20 minutes per run and the ambient temperature for each test run shall be above 0°F. The performance evaluation of the CEMS may either be conducted separately or (as described in 40 CFR 60.4405) as part of the initial performance test. Subsequent annual performance testing is not required in accordance with 40 CFR 60.4340, except as specified below when original components are replaced with leased components. [The initial performance test was completed on August 10, 2017]

DEP requested the following language be added to permit 01318T34 on August 5, 2019 to reflect the intent of NCDAQ's guidance that the performance testing be repeated upon return of the original engine parts.

Performance testing when original components are replaced with leased components

When original components of the turbine(s) are replaced with leased components from the manufacturer to allow for maintenance, the Permittee shall demonstrate compliance with the above NOx emission limits by conducting a performance test while firing the primary fuel within 60 days after achieving the peak load after re-installation of the original components, in accordance with the above testing, using the existing certified NOx CEMS.

The Permittee shall submit the following notifications when leased components are used:

- a. The date of first startup when operating with the leased components postmarked no later than 30 days after such date.
- b. The date the original components are re-installed postmarked no later than 30 days after such date.
- c. The date of first startup after re-installation of the original components postmarked within 15 days after such date.

If operation with the leased components in operation exceeds 60 days, the Permittee shall demonstrate compliance with the above NOx emission limits by conducting a performance test within 60 days after achieving the peak load after installation of the leased components.

Monitoring/Recordkeeping

The Permittee shall operate and maintain the combustion turbines, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown and malfunction in accordance with 40 CFR 60.4333.

The Permittee shall install, certify, maintain and operate a NOx continuous emissions monitoring system (CEMS) on each turbine stack or ductwork as described in §60.4340(b), to demonstrate compliance with the applicable NOx emission limit. Excess emissions are based on a 4-hour rolling average, and shall be determined in accordance with 40 CFR 60.4345 and 40 CFR 60.4350. For operating periods during which multiple emissions standards apply, the applicable standard is the average of the applicable standards during each hour. For hours with multiple emissions standards, the applicable limit for that hour is determined based on the condition that corresponded to the highest emissions standard in accordance with 40 CFR 60.4380(b)(3).

For natural gas, the Permittee shall demonstrate compliance with the applicable SO<sub>2</sub> emission limit by using representative fuel sampling data showing that the sulfur content of the fuel does not exceed 0.060 lb SO<sub>2</sub>/million Btu in accordance with 40 CFR 60.4365(b). For natural gas, the Permittee shall provide at a minimum the amount of data in Section 2.3.1.4 or 2.3.2.4 of Appendix D to Part 75.

For fuel oil, the Permittee shall demonstrate compliance with the applicable SO<sub>2</sub> emission limit by using representative fuel sampling data showing that the sulfur content of the fuel does not exceed 0.060 lb SO<sub>2</sub>/million Btu in accordance with 40 CFR 60.4365(b) and 40 CFR 60.4370(a). For fuel oil, the Permittee shall use one of the total sulfur sampling options and the associated sampling frequency described in sections 2.2.3, 2.2.4.1, 2.2.4.2, and 2.2.4.3 of Appendix D to Part 75.

Reporting

The Permittee shall submit a notification of the date construction of an affected facility is commenced postmarked no later than 30 days after such date. [This notification was made on May 27, 2016]

The Permittee shall submit a notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date. [This notification was made on June 28, 2017]

The Permittee shall submit a notification of the date upon which demonstration of the CEMS performance commences in accordance with §60.13(c). Notification shall be postmarked not less than 30 days prior to such date. [This notification was made on August 5, 2017]

The Permittee shall submit a written report of the results of each performance test required in 40 CFR 60.4340(a) before the close of business on the 60th day following the completion of the performance test.

The Permittee shall submit reports of excess emissions and monitor downtime in accordance with 40 CFR 60.7(c). Excess emissions must be reported for all periods of operation, including startup, shutdown, and malfunctions. All reports required under §60.7(c) must be postmarked by the 30<sup>th</sup> day following the end of each 6-month period.

- a. Excess emissions and monitor downtime for the NO<sub>x</sub> CEMS are defined as follows: [§60.4380(b)]
  - i. Excess Emissions. To demonstrate compliance, an excess emission is any unit operating period in which the 4-hour rolling average NO<sub>x</sub> emission rate exceeds the applicable emission limit.
  - ii. Monitor Downtime. To demonstrate compliance, a period of monitor downtime is any unit operating hour in which the data for any of the following parameters are either missing or invalid: NO<sub>x</sub> and either CO<sub>2</sub> or O<sub>2</sub> concentration.
  - iii. For operating periods (i.e., 4-hour rolling periods) during which multiple emissions standards apply, the applicable standard is the average of the applicable standards during each hour. For hours with multiple emissions standards (i.e., during fuel switches or hours with load changes across 75% peak load), the applicable limit for that hour is determined based on the condition that corresponded to the highest emissions standard.
- b. Excess emissions and monitor downtime for fuel sulfur content monitoring are defined as follows:
  - i. For samples of gaseous fuel and for oil samples obtained using daily sampling, flow proportional sampling, or sampling from the unit's storage tank, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the combustion turbine exceeds the applicable limit and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit.
  - ii. If the option to sample each delivery of fuel oil has been selected, the Permittee shall immediately switch to one of the other oil sampling options (i.e., daily sampling, flow proportional sampling, or sampling from the unit's storage tank) if the sulfur content of a delivery exceeds 0.05 weight percent. The Permittee shall continue to use one of the other sampling options until all of the oil from the delivery has been combusted, and the Permittee shall evaluate excess emissions according to 40 CFR 60.4385(a). When all of the fuel from the delivery has been burned, the Permittee may resume using the as-delivered sampling option.
  - iii. A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime ends on the date and hour of the next valid sample.

The Permittee shall submit semi-annual summary reports of monitoring and record keeping activities.

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

3. Cross State Air Pollution Rule Requirements (40 CFR Part 97, Subparts AAAAA and CCCCC)  
See Section 5.A.4 above.
4. 15A NCAC 02Q .0402 ACID RAIN PERMITTING PROCEDURES (40 CFR Part 72) Phase II Acid Rain Permit Requirements  
See Section 5.A.6 above.

5. 15A NCAC 02Q .0317: AVOIDANCE CONDITION for:  
15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION  
See Section 5.A.7 above.
6. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60  
SUBPART TTTT - Standards of Performance for Greenhouse Gas Emissions for Electric Generating  
Units

NSPS Subpart TTTT was added for Turbines 4 and 5 in permit 01318T34 issued August 5, 2019, as noted above in Section 3 above. Subpart TTTT establishes emission standards for new stationary combustion turbines for the control of greenhouse gases. These turbines are rated at 548.6 million Btu/hr each when firing natural gas and 493.9 million Btu/hr each when firing No. 2 fuel oil.

As specified in §60.5509(a) of this subpart, except as provided for in §60.5509(b), the GHG standards included in this subpart apply to any steam generating unit, IGCC, or stationary combustion turbine; all of which are designated as electric generating units (EGUs); that commenced construction after January 8, 2014 or commenced reconstruction after June 18, 2014 that meets the applicability conditions in paragraphs (a)(1) and (a)(2) of this section as follows:

- (a)(1) Has a base load rating greater than 250 million Btu/hr of fossil fuel (either alone or in combination with any other fuel); and
- (a)(2) Serves a generator or generators capable of selling greater than 25 MW of electricity to a utility power distribution system.

As turbines 4 and 5 were first permitted on April 18, 2016 in permit 01318T32, and each have a base load rating greater than 250 million Btu/hr of fossil fuel and serve generators capable of selling greater than 25 MW of electricity, these units are subject to this regulation.

In accordance with §60.5520(a), for each affected EGU subject to this subpart, the affected EGU must not discharge any gases that contain CO<sub>2</sub> in excess of the applicable CO<sub>2</sub> emission standard specified in Table 1 (applies to steam generating units and integrated gasification combined cycle facilities) or Table 2 (applies to stationary combustion turbines) of this subpart, consistent with paragraphs (b), (c), and (d) of §60.5520, as applicable.

In §60.5520(d), stationary combustion turbines are subject to a heat input-based standard in Table 2 of this subpart that are only permitted to burn one or more uniform fuels, as described in §60.5520(d)(1), are only subject to the monitoring requirements in §60.5520(d)(1) as follows:

Stationary combustion turbines that are only permitted to burn fuels with a consistent chemical composition (*i.e.*, uniform fuels) that result in a consistent emission rate of 160 lb CO<sub>2</sub>/million Btu or less are not subject to any monitoring or reporting requirements under this subpart. These fuels include, but are not limited to, natural gas, methane, butane, butylene, ethane, ethylene, propane, naphtha, propylene, jet fuel kerosene, No. 1 fuel oil, No. 2 fuel oil, and biodiesel. Stationary combustion turbines qualifying under this paragraph are only required to maintain purchase records for permitted fuels.

Turbines 4 and 5 are permitted to burn either natural gas or No. 2 fuel oil, both of which are classified as uniform fuels. Therefore, per §60.5520(d)(1), the turbines are not subject to any monitoring or reporting requirements under subpart TTTT, and are only required to maintain purchase records for the permitted fuels.

Turbines 4 and 5 are subject to the CO<sub>2</sub> emission standards specified in Table 2 of the subpart as follows:

Newly constructed or reconstructed stationary combustion turbine that supplies its design efficiency or 50 percent, whichever is less, times its potential electric output or less as net-electric

sales on either a 12-operating month or a 3-year rolling average basis and combusts more than 90% natural gas on a heat input basis on a 12-operating-month rolling average basis.

Based on correspondence from the manufacturer, the design efficiency (electric plus useful thermal output) is 39.5 and 39 percent for Units 4 and 5, and the potential electrical output is 372,075 MWh/12 months and 384,383 MWh/12 months, respectively. Therefore, the turbines qualify under §60.5520(d)(1) as follows:

Unit 4: 39.5% \* 372,075 MWh/12-month Potential Electrical Output = 146,969 MWh/year  
Unit 5: 39% \* 384,383 MWh/12-month Potential Electrical Output = 149,909 MWh/year

DEP will maintain records of the electrical output on an annual basis for each turbine.

The following is a summary of the requirements for these sources under NSPS Subpart TTTT:

#### Notifications

The Permittee shall submit the following notifications:

- a. A notification of the date construction of the affected facility is commenced postmarked no later than 30 days after such date.
- b. A notification of the actual date of initial startup of the affected facility postmarked within 15 days after such date.
- c. Notifications specified in §75.61 as applicable.

#### Emission Limitations

The Permittee shall not discharge from the affected EGU any gases that contain CO<sub>2</sub> in excess of 120 lb CO<sub>2</sub>/million Btu of heat input.

#### Recordkeeping Requirements

The Permittee shall keep purchase records of natural gas and No. 2 fuel oil.

The Permittee shall follow the applicable recordkeeping requirements and maintain records as required under 40 CFR 75 Subpart F.

The Permittee shall keep records as follows:

- a. Records shall be in a form suitable and readily available for expeditious review.
- b. Each record shall be maintained for 3 years after the date of conclusion of each compliance period.
- c. Each record shall be maintained on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §60.7.

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

#### **State-enforceable only**

7. 15A NCAC 02D .1425: NOX SIP CALL BUDGET  
See Section 5.A.6 above

#### **G. Two No. 2 fuel oil-fired 1,000 kW black start diesel engines (ID Nos. BS1 and BS2)**

1. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES  
Emissions of sulfur dioxide from this source shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

#### Monitoring/Recordkeeping/Reporting

No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of No. 2 fuel oil in this source.

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

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 except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period.

Monitoring/Recordkeeping/Reporting

No monitoring/recordkeeping/reporting is required for visible emissions from the firing of natural gas in these sources.

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 .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60 SUBPART III - - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines)

Subpart III (promulgated July 11, 2006) applies to several categories of compression ignition (CI) engines. The black start diesel engines were first permitted in permit 01318T32 on April 18, 2016, and have a rating of 1,000 kW (1,341 hp). These RICE are subject to Subpart III since construction commenced after July 11, 2005, and were manufactured after April 1, 2006, in accordance with §60.4200(a)(2). These engines are classified as emergency stationary internal combustion engine as defined in §60.4219. These 12-cylinder emergency engines have a total displacement of 30.5 liters and therefore have a displacement of less than 10 liters per cylinder.

Emission Limits

The following emission limits apply:

AFFECTED SOURCE	POLLUTANT	EMISSION LIMIT (g/hp-hr)
black start diesel engines (ID Nos. BS1 and BS2)	nitrogen oxides + VOCs	4.8
	carbon monoxide	2.6
	PM	0.15

Compliance

The engine must be operated and maintained according to the manufacturer’s written instructions or procedures. Engines for 2007 or later must comply with the standard by assuring that the engine purchased is certified to meet the applicable emissions standards and must install and configure the engine according to the manufacturer’s specifications. The manufacturer must certify the engines in accordance with procedures in 40CFR89 and test the engine as required by that rule. The engines must be equipped with a non-resettable hour meter prior to startup.

For operation after October 1, 2010, the engines must use diesel fuel with sulfur less than 15 ppm as per 40 CFR 80.510(b).

An emergency engine may be operated for maintenance and readiness checks for up to 100 hours per year in accordance with the NSPS requirements. Operation during an actual emergency is not subject to a limit on hours. Emergency stationary ICE may operate up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing.

No initial notification is required for an emergency use engine. Starting with the model years in Table 5 to NSPS Subpart IIII, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the Permittee shall keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The Permittee shall record the time of operation of the engine and the reason the engine was in operation during that time.

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 .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (MACT – 40 CFR PART 63 SUBPART ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (RICE))

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This facility is an area source of HAP emissions. The black start diesel engines were first permitted in permit 01318T32 on April 18, 2016. In accordance with 40 CFR 63.6590(a)(2)(iii), a stationary RICE located at an area source of HAP emissions is new if it commenced construction on or after June 12, 2006.

For stationary RICE subject to regulations under 40 CFR Part 60, a new stationary RICE located at an area source of HAP must meet the requirements of this subpart by meeting the requirements of 40 CFR Part 60 Subpart IIII for compression ignition engines, in accordance with 40 CFR 63.6590(c)(1). No further requirements apply for such engines under this subpart.

This regulation has been changed to apply to RICE subject to regulations under 40 CFR Part 60 located at an area source of HAP rather than at a major source of HAP as part of this renewal processing. Continued compliance with this regulation is expected.

## 6. **Facility Wide Air Toxics**

### **State-enforceable only**

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

##### Facility-wide Toxics Demonstration

During this renewal, the toxic emission rates are being placed in the permit (Section 2.2 A.1.a) as a result of the most recent modeling demonstration dated May 16, 2016, for the Fast Start Project modification to add new emission sources (two new fast start simple cycle turbines (Turbines 4 and 5 (previously 3 and 4)) and two new black start engines (BS1 and BS2)) in Permit No. 01318T32. The addition of these new sources triggered a facility-wide modeling analysis for the increase in toxic emissions and/or any new toxic not previously emitted as required by 15A NCAC 02D .1100. This equipment was added in permit 01318T32 with a state-only requirement for DEP to submit a complete permit application no later than September 1, 2016, that includes a toxics demonstration. All sources at the facility (including insignificant activities), excluding sources exempt from evaluation in 15A NCAC 02Q .0702, emitting toxic air pollutants, were to be included in the evaluation. The modeling was then addressed in the review for permit No. 01318T33 as summarized below. The modeling analysis was reviewed by Nancy Jones, AQAB, (see memo to Ed Martin dated June 15, 2016) and all toxics were found to be below their acceptable ambient levels (AALs) at the levels shown in the memo.

The demonstration included the following emission sources in permit 01318T32:

- Two simple/combined-cycle turbines (Turbine 1A and 1B)
- Three simple-cycle turbines (Turbine 1 IC, 2A IC, and 2B IC) [no longer in permit]
- Two dew point heaters (DPH1 and DPH2)
- Two black start engines (1CTBS and 2CTBS) [no longer in permit]
- Auxiliary boiler (AB1)
- Diesel fire pump (FWP1)
- Two simple-cycle turbines (Turbine 4 and Turbine 5)
- Two black start engines (BS1 and BS2).

Also,

- Two new insignificant activities were added in permit No. 01318T33: a monofill for ash (I76) and ash handling to support the monofill (I77). [no longer in permit]

Results for the baseline analysis are shown in Table 1 with the percent of the AAL resulting from the modeled maximum concentrations.

Table 1 – Summary of Baseline Modeling Analysis

Compound	Year	Averaging Period	Maximum Concentration ( $\mu\text{g}/\text{m}^3$ )	AAL ( $\mu\text{g}/\text{m}^3$ )	Percent of AAL (%)
Arsenic	2011	Annual	8.23E-04	0.0021	39.17
Benzene	2010	Annual	2.71E-03	0.12	2.26
Beryllium	2011	Annual	1.84E-04	0.0041	4.49
1, 3 - Butadiene	2011	Annual	4.15E-04	0.44	0.09
Cadmium	2011	Annual	1.50E-04	0.0055	2.72
Chromium VI	2010	24 hour	7.70E-02	0.62	12.41
Formaldehyde	2011	1 hour	5.56E-01	150	0.37
Manganese	2010	24 hour	2.13E-01	31	0.69
Mercury	2013	24 hour	4.88E-04	0.6	0.08
Nickel	2010	24 hour	1.00E-02	6	0.17
Sulfuric Acid	2014	24 hour	1.72E-01	12	1.4
	2014	1 hour	8.17E-01	100	0.8

Based on the resulting concentrations from the baseline potential model run (Table 1), the emission rates for all sources were then increased to an optimized rate resulting in ambient maximum concentrations that are at 98% of the AAL to ensure a margin of compliance. The resulting maximum concentrations for the optimized analysis are shown in Table 2 below.

Table 2 – Summary of Optimized Modeling Analysis

Compound	Year	Averaging Period	Percent of AAL Baseline (%)	Percent of AAL Optimized (%)	Maximum Concentration (µg/m <sup>3</sup> )
Arsenic	2011	Annual	39.17	98	2.06E-03
Benzene	2010	Annual	2.26	98	1.18E-01
Beryllium	2011	Annual	4.49	98	4.02E-03
1, 3 - Butadiene	2011	Annual	0.09	98	4.31E-01
Cadmium	2011	Annual	2.72	98	5.39E-03
Chromium VI	2010	24 hour	12.41	98	6.08E-01
Formaldehyde	2011	1 hour	0.37	98	1.47E+02
Manganese	2010	24 hour	0.69	98	3.04E+01
Mercury	2013	24 hour	0.08	98	5.88E-01
Nickel	2010	24 hour	0.17	98	5.88E+00
Sulfuric Acid	2014	24 hour	1.4	98	9.80E+01
	2014	1 hour	0.8	98	1.18E+01

From these maximum facility-wide concentrations, the individual permit emission limits for all sources were determined based on increasing the baseline rates from the baseline percent of the AAL to the optimized percent of the AAL for each pollutant which the source emits.

Previously only I76 (monofill) and I77 (ash handling) were included in the permit toxic limits table because all other sources shown above were exempt from air permitting, pursuant to 02Q .0702(a)(27)(B) as being subject to a Part 63 MACT/GACT (e.g., Turbine 1A, Turbine 1B, AB1, DPH1, DPH2, FWP1, Turbine 4, Turbine 5, BS1, and BS2). Nevertheless, DEP included emissions for all such exempt sources in the modeling analysis. The facility became a minor source of HAPs in permit No. 01318T35 as discussed in Section 3 above. Therefore, all the above modeled sources that remain in the permit will now be included in the updated permit toxics condition in Section 2.2 A.1.a, except for FWP1, BS1, and BS2 since these sources are subject to the area source GACT.

#### Health Risk Assessment

This health risk assessment is being made as a result of four insignificant activities (I79, I80, I81 and I82) recently added to the permit but not included in the 2016 modeling. In order to avoid a lengthy toxic modeling demonstration at this time with those insignificant activities included, it can be shown that the negligible increase in emissions from these sources would be more than compensated for by the removal of sources no longer in the permit that were included in the modeling. The following analysis is made to ensure there is no unacceptable health risk until there is a requirement to perform detailed modeling at the next modification that triggers toxics modeling.

From the previous modeling in 2016, the pollutant with the greatest potential ambient concentration is arsenic at 39.17% of its AAL (from Table 1). The sources previously modeled that are no longer in the permit (Turbine 1 IC, Turbine 2A IC, Turbine 2B IC, black start engine 1CTBS, black start engine 2BCTBS, monofill I76, and ash handling to support monofill I77) emitted a PTE of more than 138 pounds per year of arsenic. For the insignificant activities that have been added to the permit and were not included in the most recent modeling (I79, I80, I81, and I82), the total PTE arsenic emissions is 0.01415 pounds per year. Therefore, the 138 pounds per year of arsenic that was in the modeling for sources that will no longer emit arsenic greatly exceeds the 0.01415 pounds per year for the sources that were not in the modeling; and therefore, there is not an unacceptable health risk, especially considering that the permit limits have been optimized to 98% of the AAL for all toxics.

#### **State-enforceable only**

##### 15A NCAC 02Q .0711: FACILITY-WIDE TOXIC PERMIT EMISSION RATES DEMONSTRATION

The Permittee has submitted a toxic air pollutant dispersion modeling analysis dated May 16, 2016, for the facility's toxic air pollutant emissions as listed in the above table. The modeling analysis was reviewed and

approved by the AQAB on June 15, 2016. 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.

## 7. Facility Emissions Review

The facility-wide potential emissions have not changed because of this TV permit renewal. Actual emissions for criteria pollutants and HAPs for the previous five years reporting periods are provided in the header of this permit review.

## 8. Public Notice/EPA and Affected State(s) Review

A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 02Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Consistent with 15A NCAC 02Q .0525, the EPA will have a concurrent 45-day review period. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 02Q .0522, a copy of each permit application, each proposed permit and each final permit shall be provided to EPA. Also pursuant to 02Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice provided to the public under 02Q .0521 above.

## 9. 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<sup>1</sup>. Moreover, per EPA, the removal of these provisions is also consistent with other recent EPA actions involving affirmative defenses<sup>2</sup> and will harmonize the EPA's treatment of affirmative defenses across different CAA programs.

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.

---

<sup>1</sup> NRDC v. EPA, 749 F.3d 1055 (D.C. Cir. 2014).

<sup>2</sup> 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, 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).

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)

This facility is subject to a CAM analysis as required for renewal of a Title V permit. The CAM rule applies to each pollutant specific emissions unit (PSEU) at major TV facilities that meets all three following criteria:

- The unit is subject to any (non-exempt: e.g., pre-November 15, 1990, Section 111 or Section 112 standard) emission limitation or standard for the applicable regulated pollutant.
- The unit uses any control device to achieve compliance with any such emission limitation or standard.
- The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source (i.e., 100 tons per year for criteria pollutants or 10/25 tons per year for HAPs).

Combustion turbines 1A and 1B employ selective catalytic oxidation (SCR) to control NO<sub>x</sub> emissions and use an oxidation catalyst to control CO emissions. Each turbine has potential pre-control emissions greater than the major source threshold (100 tons per year) for each pollutant. No other sources in the permit use control devices.

NO<sub>x</sub> emissions from these turbines are limited under NSPS Subpart KKKK and under PSD avoidance. Emissions are monitored using CEMS, which meets the CAM exemption in 02D .0614(b)(1)(F) for emission limitations or standards for which a permit issued pursuant to 15A NCAC 02Q .0500 specifies a continuous compliance determination method.

CO emissions from these turbines are limited under PSD avoidance. Emissions are monitored using CEMS, which also meets the CAM exemption in 02D .0614(b)(1)(F) for emission limitations or standards for which a permit issued pursuant to 15A NCAC 02Q .0500 specifies a continuous compliance determination method.

Therefore, CAM does not apply to any sources at the Sutton facility.

**10. Comments on the Draft Permit**

The draft permit and review were sent to Ashby Armistead at the Wilmington Regional Office, Sounetala Xayaveth at DEP, and Samir Parekh with SSCB on February 22, 2024, for review.

DEP Comments

The following comment was received in an email from Sounetala Xayaveth on February 28, 2024.

Changes to the following insignificant activities:

I67 – Remove “ash handling” in the description, ash handling no longer active

I76 – Remove I76, Monofill activity no longer active

I77 – Remove I77, Ash handling to support monofill no longer active

SSCB Comments

No comments were received.

Wilmington Regional Office Comments

In an email dated February 27, 2024, Ashby Armistead stated his last inspection was on 01/25/24 and the facility was in compliance. He had no comments on the draft permit.

**11. Recommendations**

TBD