



NORTH CAROLINA
Environmental Quality

ROY COOPER
Governor

ELIZABETH S. BISER
Secretary

MICHAEL ABRACZINSKAS
Director

DRAFT

Mr. James Corriher
General Manager II
Duke Energy Progress, LLC - L.V. Sutton Electric Plant
801 Sutton Steam Plant Road
Wilmington, NC 28401-8357

SUBJECT: Air Quality Permit No. 01318T35
Facility ID: 6500036
Duke Energy Progress, LLC - L.V. Sutton Electric Plant
Wilmington, North Carolina
New Hanover County
Fee Class: Title V
PSD Class: Major

Dear Mr. Corriher:

In accordance with your completed Air Quality Permit Applications for a 15A NCAC 02Q .0501(c)(1) significant permit modification received September 16, 2021, we are forwarding herewith Air Quality Permit No. 01318T35 to Duke Energy Progress, LLC - L.V. Sutton Electric Plant, Wilmington, New Hanover County, North Carolina authorizing the construction and operation of the emission source(s) and associated air pollution control device(s) specified herein. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant per 15A North Carolina Administrative Code 02Q .0503(8) have been listed for informational purposes as an "ATTACHMENT." Please note the requirements for the annual compliance certification are contained in General Condition P in Section 3. The current owner is responsible for submitting a compliance certification for the entire year regardless of who owned the facility during the year.

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

If any parts, requirements, or limitations contained in this Air Quality Permit are unacceptable to you, you have the right to request a formal adjudicatory hearing within 30 days following receipt of this permit, identifying the specific issues to be contested. This hearing request must be in the form of a written petition, conforming to NCGS (North Carolina General Statutes) 150B-23, and filed with both the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, North Carolina 27699-6714 and the Division of Air Quality, Permitting Section, 1641 Mail Service Center, Raleigh, North Carolina



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

27699-1641. The form for requesting a formal adjudicatory hearing may be obtained upon request from the Office of Administrative Hearings. Please note that this permit will be stayed in its entirety upon receipt of the request for a hearing. Unless a request for a hearing is made pursuant to NCGS 150B-23, this Air Quality Permit shall be final and binding 30 days after issuance.

You may request modification of your Air Quality Permit through informal means pursuant to NCGS 150B-22. This request must be submitted in writing to the Director and must identify the specific provisions or issues for which the modification is sought. Please note that this Air Quality Permit will become final and binding regardless of a request for informal modification unless a request for a hearing is also made under NCGS 150B-23.

The construction of new air pollution emission source(s) and associated air pollution control device(s), or modifications to the emission source(s) and air pollution control device(s) described in this permit must be covered under an Air Quality Permit issued by the Division of Air Quality prior to construction unless the Permittee has fulfilled the requirements of GS 143-215-108A(b) and received written approval from the Director of the Division of Air Quality to commence construction. Failure to receive an Air Quality Permit or written approval prior to commencing construction is a violation of GS 143-215.108A and may subject the Permittee to civil or criminal penalties as described in GS 143-215.114A and 143-215.114B.

New Hanover County has triggered increment tracking under PSD for PM-10, SO₂ and NO_x. However, this permit modification does not consume or expand increments for any pollutants.

This Air Quality Permit shall be effective from _____ until July 31, 2024, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein.

The changes made to the permit are summarized in the attachment to this letter. Should you have any questions concerning this matter, please contact Edward L. Martin, P.E., at (919) 707-8739.

Sincerely yours,

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

Enclosure

c: Michael Sparks, EPA Region 4 (Permit and Review)
Connie Horne (cover page only)
Wilmington Regional Office
Central Files

Attachment

The following changes were made to the Duke Energy Progress, LLC – L.V. Sutton Electric Plant Air Permit No. 01318T34:

Old Page	Old Section	New Page	New Section	Description of Changes
Cover				Amended permit numbers and dates.
Insignificant Activities List				Removed “MACT DDDDD” identifier for I79, I80 and I81.
3-4	1, table of permitted emission sources	3-4	1, table of permitted emission sources	Removed “MACT YYYY” identifier for Turbine 1A, Turbine 1B, Turbine 4 and Turbine 5. Removed “MACT DDDDD” identifier for AB1, DPH1 and DPH2.
5	2.1 A, regulation table	5	2.1 A, regulation table	Removed 15A NCAC 02D .1111 MACT (40 CFR Part 63 Subpart YYYY)
8	2.1 A.4	8	2.1 A.4	Removed and reserved.
8	2.1 A.5	8	2.1 A.5	Removed “Federal-Enforceable Only.”
9	2.1 B, regulation table	8	2.1 B, regulation table	Removed 15A NCAC 02D .1111 (40 CFR Part 63, Subpart DDDDD)
10-12	2.1 B.5	9	2.1 B.5	Removed and reserved.
13	2.1 C, regulation table	9	2.1 C, regulation table	Removed 15A NCAC 02D .1111 (40 CFR Part 63, Subpart DDDDD)
14-16	2.1 C.4	10	2.1 C.4	Removed and reserved.
19	2.1 F, regulation table	14	2.1 F, regulation table	Removed 15A NCAC 02D .1111 MACT (40 CFR Part 63 Subpart YYYY)
22	2.1 F.3	17	2.1 F.3	Removed and reserved.
34-43	3.0	29-37	3.0	Updated general conditions to version 5.5, 08/25/2020.

Insignificant Activities per 15A NCAC 02Q .0503(8)

Emission Source I.D.	Emission Source Description
I67	Site-wide fugitives from ash handling, parking lots, and unpaved roads
I72	one 19 kW propane fired emergency backup generator engine and associated propane storage tank MACT ZZZZ¹
I74	Turbine 1A and Turbine 1B No. 2 fuel oil fixed-roof storage tanks with atmospheric vents (2) - 1.52 million gallons capacity each
I75	two No. 2 Fuel Oil Storage Tanks – 1000 gallons each
I76	Monofill
I77	Ash handling to support monofill
I78	Diesel-fired 110 kW back-up pump engine for landfill leachate system. NSPS III and MACT ZZZZ¹
I79	one 1.25 million Btu per hour Fast Start Gas Heater
I80	one 3.5 million Btu per hour Combined Cycle Gas Heater
I81	one 3.5 million Btu per hour Combined Cycle Gas Heater

1. Because an activity is insignificant does not mean that the activity is exempted from an applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement.
2. When applicable, emissions from stationary source activities identified above shall be included in determining compliance with the permit requirements for toxic air pollutants under 15A NCAC 02D .1100 “Control of Toxic Air Pollutants” or 02Q .0711 “Emission Rates Requiring a Permit”.
3. For additional information regarding the applicability of GACT see the DAQ page titled “The Regulatory Guide for Insignificant Activities/Permits Exempt Activities”. The link to this site is as follows: <http://daq.state.nc.us/permits/insig/>



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

AIR QUALITY PERMIT

Permit No.	Replaces Permit No.	Effective Date	Expiration Date
01318T35	01318T34		July 31, 2024

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

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

Permittee: Duke Energy Progress, LLC –
L.V. Sutton Electric Plant

Facility ID: 6500036

Facility Site Location: 801 Sutton Steam Plant Road
City, County, State, Zip: Wilmington, New Hanover County, NC 28401

Mailing Address: 801 Sutton Steam Plant Road
City, State, Zip: Wilmington, NC 28401

Application Number: 6500036.21A
Complete Application Date: September 16, 2021

Primary SIC Code: 4911
Division of Air Quality,
Regional Office Address: Wilmington Regional Office
127 Cardinal Drive Extension
Wilmington, NC 28405-3845

Permit issued this the ___ day of _____, 2021

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

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Acid Rain Permit Application dated September 13, 2018

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

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

Page No.	Emission Source LD. No.	Emission Source Description	Control Device LD. No.	Control Device Description
5 28 34	Turbine 1A Turbine 1B NSPS KKKK	<p>Two natural gas/No. 2 fuel oil-fired simple/combined-cycle internal combustion turbines, each equipped with dry low-NO_x 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</p> <p><u>Simple-cycle mode of operation:</u></p> <p>2,224 million Btu per hour nominally rated heat input rate each when firing natural gas</p> <p>2,153 million Btu per hour nominally rated heat input rate each when firing No. 2 fuel oil</p> <p><u>Combined-cycle mode of operation:</u></p> <p>2,264 million Btu per hour nominally rated heat input rate each and 453 million Btu per hour heat input rate (each duct burner) when firing natural gas</p> <p>2,153 million Btu per hour nominally rated heat input rate each with no duct burner firing when firing No. 2 fuel oil</p>	<p>Turb 1A SCR ** Turb 1B SCR **</p> <p>Turb 1A OxdnCat ** Turb 1B OxdnCat **</p>	<p>Selective Catalytic Reduction (applicable for combined-cycle mode of operation only)</p> <p>Oxidation Catalyst (applicable for combined-cycle mode of operation only)</p>
9	AB1 NSPS Dc	One natural gas-fired auxiliary boiler (85 million Btu per hour heat input rate)	N/A	N/A
13	DPH1 and DPH2	Two natural gas-fired dew point heaters (2.5 million Btu per hour heat input rate each)	N/A	N/A
16	FWP1 NSPS III MACT ZZZZ	One diesel-fired firewater pump engine (4.25 million Btu per hour heat input rate)	N/A	N/A
18	CTWR1	One multi-cell wet surface air cooler with drift eliminators (636,000 gallons per hour recirculation water flow rate)	N/A	N/A
18	CTWR2	One multi-package/multi-cell turbine inlet chiller with drift eliminators (595,200 gallons per hour recirculation water flow rate)	N/A	N/A
19 28 34	Turbine 4 Turbine 5 NSPS KKKK NSPS TTTT	Two natural gas/No. 2 fuel oil-fired simple-cycle internal combustion turbines	N/A	N/A

Page No.	Emission Source I.D. No.	Emission Source Description	Control Device I.D. No.	Control Device Description
24	BS1 BS2 NSPS III MACT ZZZZ	Two No. 2 fuel oil-fired 1,000 kW black start diesel engines	N/A	N/A

** Operated on an as-needed basis.

SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS

2.1- Emission Source(s) Specific Limitations and Conditions

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

- A. 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_x 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)**

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter	0.11 lb per million Btu each (when duct burners are operating in heat recovery units)	15A NCAC 02D .0503
visible emissions	20 percent opacity each	15A NCAC 02D .0521
nitrogen oxides	15 ppm at 15 percent O ₂ when firing natural gas 42 ppm at 15 percent O ₂ when firing fuel oil 96 ppm at 15 percent O ₂ when operating at less than 75 percent of peak load or operating at less than 0°F	15A NCAC 02D .0524 NSPS (40 CFR Part 60 Subpart KKKK)
sulfur dioxide	0.060 lb/million Btu heat input each	
nitrogen oxides sulfur dioxide	Cross State Air Pollution Rule permit requirements See Section 2.1 A.5	40 CFR Part 97, Subparts AAAAA and CCCCC
nitrogen oxides sulfur dioxide	Phase II Acid Rain Permit requirements (see Section 2.3)	15A NCAC 02Q .0402 (40 CFR 72)
various	see Section 2.2.B	15A NCAC 02Q .0317(a)(1) (PSD avoidance)

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

- a. Emissions of particulate matter from the combustion of natural gas that are discharged from these sources (duct burners only) into the atmosphere shall not exceed 0.11 pound per million Btu heat input. [15A NCAC 02D .0503(a)]

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

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

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

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

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

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

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

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

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

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

3. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS [40 CFR PART 60 SUBPART KKKK]

- a. The Permittee shall comply with all applicable provisions, including the requirements for emission standards, notification, testing, reporting, record keeping, and monitoring, contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards (NSPS)" as promulgated in 40 CFR Part 60 Subpart KKKK, including Subpart A "General Provisions." [15A NCAC 02D .0524]

Emission Limitations

- b. NOx emissions (except during startup, shutdowns, and malfunction) from each combustion turbine (ID Nos. Turbine 1A and Turbine 1B) shall not exceed the following: [§ 60.4320]

Fuel Type	Operating Conditions*	NOx Limit at 15 percent O ₂	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

- c. SO₂ 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). [§ 60.4330]

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

- d. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.A.3.b., the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

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

- e. 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.
- f. 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 NO_x 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_x CEMS does not comply with the requirements of §60.4340(b) and §60.4345, or the NO_x emissions (except during startup, shutdowns, and malfunction) exceeds the applicable NO_x emission limit, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

- g. i. For natural gas, the Permittee shall demonstrate compliance with the applicable SO₂ emission limit by using representative fuel sampling data showing that the sulfur content of the fuel does not exceed 0.060 lb SO₂/mmBtu 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 SO₂/mmBtu, if the SO₂ 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.
- ii. For fuel oil, the Permittee shall demonstrate compliance with the applicable SO₂ emission limit by using representative fuel sampling data showing that the sulfur content of the fuel does not exceed 0.060 lb SO₂/mmBtu 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 (i.e., flow proportional sampling, daily sampling, sampling from the unit's storage tank after each addition of fuel to the tank, or sampling each delivery prior to combining it with fuel oil already in the intended storage tank). The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524, if the Permittee does not make the above demonstration for fuel oil, if the demonstrations indicate that the sulfur content of fuel oil exceeds 0.060 lb SO₂/mmBtu, if the SO₂ 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.

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

- h. 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 30th day following the end of each 6-month period. [§60.4375(a), and §60.4395]
 - i. Excess emissions and monitor downtime for the NO_x CEMS are defined as follows: [§60.4380(b)]
 - (A) **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_x emission rate exceeds the applicable emission limit.
 - (B) **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_x and either CO₂ or O₂ concentration.
 - (C) 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. [§60.4380(b)(3)]
 - ii. Excess emissions and monitor downtime for fuel sulfur content monitoring are defined as follows: [§60.4385]
 - (A) 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.
 - (B) 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.

(C) 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.

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

4. Reserved

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

For the two combustion turbines (**ID Nos. Turbine 1A and Turbine 1B**), the Permittee shall comply with all applicable requirements of 40 CFR Part 97, Subpart AAAAA "TR NOx Annual Trading Program" and Subpart CCCCC "TR SO₂ Group 1 Trading Program".

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

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter	0.11 pound per million Btu heat input	15A NCAC 02D .0503
sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
visible emissions	20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent opacity if (i) no six-minute period exceeds 87 percent opacity, (ii) no more than one six-minute period exceeds 20 percent opacity in any hour, and (iii) no more than four six-minute periods exceed 20 percent opacity in any 24-hour period.	15A NCAC 02D .0521
none	recordkeeping	15A NCAC 02D .0524 (40 CFR 60 Subpart Dc)

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

- a. Emissions of particulate matter from the combustion of natural gas that are discharged from this source into the atmosphere shall not exceed 0.11 pounds per million Btu heat input. [15A NCAC 02D .0503(a)]

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

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

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

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

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

- a. 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. [15A NCAC 02D .0516]

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

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

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

- c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of natural gas in this source (ID No. AB1).

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

- a. 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. [15A NCAC 02D .0521(d)]

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

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

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

- c. No monitoring/recordkeeping/reporting is required for visible emissions from this source.

4. 15A NCAC 02D.0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60 SUBPART Dc)

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

- a. The Permittee shall submit notification of the date of construction and actual startup in accordance with §60.48c(a) and §60.7.
- b. 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 Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these records are not maintained.

5. Reserved

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

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter	0.11 pound per million Btu heat input	15A NCAC 02D .0503
sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
visible emissions	20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent opacity if (i) no six-minute period exceeds 87 percent opacity, (ii) no more than one six-minute period exceeds 20 percent opacity in any hour, and (iii) no more than four six-minute periods exceed 20 percent opacity in any 24-hour period.	15A NCAC 02D .0521

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

- a. Emissions of particulate matter from the combustion of natural gas that are discharged from these sources into the atmosphere shall not exceed 0.11 pounds per million Btu heat input each. [15A NCAC 02D .0503(a)]

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

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

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

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

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

- a. 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. [15A NCAC 02D .0516]

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

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

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

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

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

- a. 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. [15A NCAC 02D .0521(d)]

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

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

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

- c. No monitoring/recordkeeping/reporting is required for visible emissions from these sources.

4. Reserved

D. One diesel-fired fire water pump engine (ID No. FWP1)

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
visible emissions	20 percent opacity (except during startup, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period	15A NCAC 02D .0521
nitrogen oxides VOCs carbon monoxide particulates	as defined in specific conditions	15A NCAC 02D .0524 NSPS (40 CFR Part 60 Subpart III)
HAPs	initial notification requirements	15A NCAC 02D .1111 MACT 40 CFR 63 Subpart ZZZZ

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

- a. 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. [15A NCAC 02D .0516]

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

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.D.1.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

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

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

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

- a. Visible emissions from this source shall not be more than **20 percent opacity** (except during startup, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. [15A NCAC 02D .0521(d)]

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

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

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

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

3. 15A NCAC 02D.0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60 SUBPART III)

- a. 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 III, including Subpart A "General Provisions." [15A NCAC 02D .0524]

- b. The following emission limits shall not be exceeded [15A NCAC 02D .0524, §60.4202(a) and §60.4205(c)]:

AFFECTED SOURCE	POLLUTANT	EMISSION LIMIT (g/hp-hr)
Diesel-fired firewater pump (ID No. FWP1) [§60.4205(c)]	nitrogen oxides + VOCs	3.0
	carbon monoxide	2.6
	PM	0.15

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

- c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limits given in Section 2.1.D.3.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

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

- d. For operation after October 1, 2010, the engine must use diesel fuel with sulfur content of less than 15 ppm (40CFR80.510(b)). [§60.4207]
- e. The engine must be equipped with a non-resettable hour meter prior to startup. [§60.4209]
- f. The manufacturer must certify the engine in accordance with procedures in 40CFR89 and test the engine as required by that rule. [§60.4210]
- g. The owner or operator must operate and maintain the engines in accordance with the manufacturer's written instructions. The owner or operator may only change those engine settings that are permitted by the manufacturer. The owner or operator shall also meet the requirements of 40 CFR 89, 94 and/or 1068 as applicable. [§60.4211(a)]
- h. Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. The Permittee may petition the administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. 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. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in this section, is prohibited. [§60.4211(f)]
- i. No initial notification is required for an emergency use engine. Starting with the model years in Table 5 to NSPS Subpart III, 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 nonresettable hour meter. The Permittee shall record the time of operation of the engine and the reason the engine was in operation during that time. [§60.4214(b)]
- j. If any of the above monitoring/recordkeeping requirements in this section are not met, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524. [40 CFR 60.8 and 60.45]

4. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (MACT – 40 CFR PART 63 SUBPART ZZZZ)

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

The Permittee shall meet the initial notification requirements of §63.6645(e) and (f) for the diesel-fired firewater pump engine (ID No. FWP1). This notification must be submitted not later than 120 days after the source becomes subject to Subpart ZZZZ and shall include the information required in §63.9(b)(2)(i) through (v), and

an applicability determination statement that the source has no additional requirements under this subpart and explain the basis of the exclusion. The Permittee shall comply with the recordkeeping requirements of §63.10(b)(3) and keep a record of the applicability determination on site at the source for a period of 5 years after the determination. If the initial notification requirements of §63.6645(d) are not met or the Permittee does not comply with the recordkeeping requirements of §63.10(b)(3), the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111. This source is exempt from the General Provisions (40 CFR Part 63, Subpart A) and from any other provisions of Subpart ZZZZ.

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)

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter	$E = 4.10 \times P^{0.67}$ for $P \leq 30$ tons/hr or $E = 55.0 \times P^{0.11} - 40$ for $P > 30$ tons/hr where: E = allowable emission rate in pounds per hour P = process weight rate in tons per hour	15A NCAC 02D .0515

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

- a. Emissions of particulate matter from this source shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 02D .0515(a)]

$$E = 4.10 \times P^{0.67} \quad \text{for } P \leq 30 \text{ tons per hour}$$

or

$$E = 55.0 \times P^{0.11} - 40 \quad \text{for } P > 30 \text{ tons per hour}$$

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

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

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

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

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

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

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

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
visible emissions	20 percent opacity each	15A NCAC 02D .0521
nitrogen oxides	25 ppm at 15 percent O ₂ when firing natural gas 74 ppm at 15 percent O ₂ when firing fuel oil 96 ppm at 15 percent O ₂ when operating at less than 75 percent of peak load or operating at less than 0°F	15A NCAC 02D .0524 NSPS (40 CFR Part 60 Subpart KKKK)
sulfur dioxide	0.060 lb/million Btu heat input each	
nitrogen oxides sulfur dioxide	Clean Air Interstate Rule (CAIR) permit requirements	15A NCAC 02D .2400
nitrogen oxides sulfur dioxide	Phase II Acid Rain Permit Requirements	15A NCAC 02Q .0402 (40 CFR 72)
nitrogen oxides sulfur dioxide particulate matter PM-10 PM-2.5 carbon monoxide VOCs sulfuric acid lead	see Section 2.2.B	15A NCAC 02Q .0317(a)(1) (PSD avoidance)
carbon dioxide	120 lb CO ₂ /million Btu heat input	15A NCAC 02D .0524 NSPS (40 CFR Part 60, Subpart TTTT)

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

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

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

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

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

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

2. 15A NCAC 02D.0524: NEW SOURCE PERFORMANCE STANDARDS [40 CFR PART 60 SUBPART KKKK]

- a. The Permittee shall comply with all applicable provisions, including the requirements for emissions standards, notification, testing, reporting, record keeping, and monitoring, contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards (NSPS)" as promulgated in 40 CFR Part 60 Subpart KKKK, including Subpart A "General Provisions." [15A NCAC 02D .0524]

Emission Limitations

- b. NOx emissions (except during startup, shutdowns, and malfunction) from each combustion turbine (ID Nos. Turbine 4 and Turbine 5) shall not exceed the following: [§60.4320]

Fuel Type	Operating Conditions*	NOx Limit at 15 percent O₂
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

- c. SO₂ 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). [§60.4330]

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

- d. i. The Permittee shall demonstrate compliance with the NOx emission limits in Section 2.1.F.2.b above by conducting an initial performance test as required by §60.8 and §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)¹ 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 §60.4405) as part of the initial performance test. Subsequent annual performance testing is not required in accordance with §60.4340, except as specified in Section 2.1.F.2.d.ii below.
- ii. 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 NOx emission limits in Section 2.1.F.2.b above 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 Section 2.1.F.2.d.i above, 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 NOx emission limits in Section 2.1.F.2.b. above by conducting a performance test within 60 days after achieving the peak load after installation of the leased components, in accordance with Section 2.1.F.2.d.i. above, using the existing certified NOx CEMS.

If the above testing is not conducted, the notifications are not made, or test results are above the limit given in Section 2.1.F.2.b, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

¹ DAQ is requiring initial performance test or repeat performance test on only one of the two identical combustion turbines. This requirement is contingent upon performance test results of the tested turbine showing that the test results are not more than 70% of the standard.

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

- e. 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.
- f. The Permittee shall install, certify, maintain and operate a NO_x continuous emissions monitoring system (CEMS) on each turbine stack or ductwork as described in § 60.4340(b), to demonstrate compliance with the applicable NO_x emission limit. Excess emissions are based on a 4-hour rolling average, 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).
- g.
 - i. For natural gas, the Permittee shall demonstrate compliance with the applicable SO₂ emission limit by using representative fuel sampling data showing that the sulfur content of the fuel does not exceed 0.060 lb SO₂/mmBtu 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.
 - ii. For fuel oil, the Permittee shall demonstrate compliance with the applicable SO₂ emission limit by using representative fuel sampling data showing that the sulfur content of the fuel does not exceed 0.060 lb SO₂/mmBtu in accordance with § 60.4365(b) and § 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 (i.e., flow proportional sampling, daily sampling, sampling from the unit's storage tank after each addition of fuel to the tank, or sampling each delivery prior to combining it with fuel oil already in the intended storage tank).
- h. If any of the above monitoring/recordkeeping requirements in this section are not met, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524. [40 CFR 60.8 and 60.45]

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

- i. 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. [§ 60.7(a)(1)]
- j. The Permittee shall submit a notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date. [§ 60.7(a)(3)]
- k. 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.
- l. The Permittee shall submit a written report of the results of each performance test required in § 60.4340(a) before the close of business on the 60th day following the completion of the performance test. [§ 60.4375(b)]
- m. 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 30th day following the end of each 6-month period. [§ 60.4375(a), and § 60.4395]
 - i. Excess emissions and monitor downtime for the NO_x CEMS are defined as follows: [§ 60.4380(b)]
 - (A) **Excess Emissions**. To demonstrate compliance, an excess emission is any unit operating period in which the 4-hour rolling average NO_x emission rate exceeds the applicable emission limit.
 - (B) **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_x and either CO₂ or O₂ concentration.
 - (C) 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. [§ 60.4380(b)(3)]
 - ii. Excess emissions and monitor downtime for fuel sulfur content monitoring are defined as follows: [§ 60.4385]
 - (A) 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.

- (B) If the option to sample each delivery of fuel oil has been selected, the Permittee shall immediately switch to one of the other oils 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.
- (C) 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.
- n. The Permittee shall submit a summary report of monitoring and record keeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

3. Reserved

4. 15A NCAC 02D.0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60 SUBPART TTTT)

Applicability [§60.5509(a)]

- a. The Permittee shall comply with all applicable provisions, including the requirements for emission standards, notification, testing, reporting, record keeping, and monitoring, contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards (NSPS)" as promulgated in 40 CFR Part 60 Subpart TTTT "Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units", including Subpart A "General Provisions."

Definitions and Nomenclature [15A NCAC 02Q .0308(a)]

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

40 CFR 60 Subpart A General Provisions [15A NCAC 02Q .0508(f)]

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

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

- d. The Permittee shall submit the following notifications:
 - i. A notification of the date construction of the affected facility is commenced postmarked no later than 30 days after such date. This was completed on May 27, 2016. [§60.7(a)(1)]
 - ii. A notification of the actual date of initial startup of the affected facility postmarked within 15 days after such date. This was completed on June 28, 2017. [§60.7(a)(3)]
 - iii. Notifications specified in §75.61 as applicable. [§60.5550(b)]

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

- e. The Permittee shall not discharge from the affected EGU any gases that contain CO₂ in excess of 120 lb CO₂/million Btu of heat input. [§60.5520(a) and Table 2 to Subpart TTTT]

Recordkeeping² [15A NCAC 02Q .0508(f)]

- f. The Permittee shall keep purchase records of natural gas and No. 2 fuel oil. [§§60.5520(d)(1) and 60.5535(a)]
- g. The Permittee shall follow the applicable recordkeeping requirements and maintain records as required under 40 CFR 75 Subpart F. [§60.5560(b)(1)]
- h. The Permittee shall keep records as follows:

² Duke Energy will maintain records of the electrical output on an annual basis for each turbine to document qualification as a 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.

- i. Records shall be in a form suitable and readily available for expeditious review.
- ii. Each record shall be maintained for 3 years after the date of conclusion of each compliance period.
- iii. 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. Records that are accessible from a central location by a computer or other means that instantly provide access at the site meet this requirement. Records may be maintained off site for the remaining year(s) as required. [§60.5565]

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

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
visible emissions	20 percent opacity (except during startup, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period	15A NCAC 02D .0521
nitrogen oxides VOCs carbon monoxide particulates	As defined in specific conditions	15A NCAC 02D .0524 NSPS (40 CFR Part 60 Subpart IIII)
HAPs	Notification Requirements	15A NCAC 02D .1111 MACT 40 CFR 63 Subpart ZZZZ

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

- a. Emissions of sulfur dioxide from these sources 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. [15A NCAC 02D .0516]

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

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.G.1.a., the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

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

- c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of No. 2 fuel oil in these sources.

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

- a. Visible emissions from these sources shall not be more than **20 percent opacity** (except during startup, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. [15A NCAC 02D .0521(d)]

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

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

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

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

3. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60, SUBPART III)

- a. 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 III, including Subpart A "General Provisions." [15A NCAC 02D .0524]
- b. The following emission limits shall not be exceeded [15A NCAC 02D .0524, §60.4202(a)(2)]:

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

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

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

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

- d. For operation after October 1, 2010, the engine must use diesel fuel with sulfur content of less than 15 ppm (40CFR80.510(b)). [§60.4207]
- e. The engines must be equipped with a non-resettable hour meter prior to startup. [§60.4209(a)]
- f. The manufacturer must certify the engines in accordance with procedures in 40CFR89 and test the engine as required by that rule. [§60.4210]
- g. The owner or operator must operate and maintain the engine in accordance with the manufacturer's emissions-related written instructions. The owner or operator may only change those emissions-related settings that are permitted by the manufacturer. The owner or operator shall meet the requirements of 40 CFR 89, 94 and/or 1068 as applicable. [§60.4211(a)]
- h. The owner or operator must demonstrate compliance with the emission standards by assuring that the emergency generator engine purchased is certified to meet the applicable emissions standards for the same model year and maximum engine power; and the engine must be installed and configured according to the manufacturer's emission-related specifications. [§60.4211(c)]
- i. Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, or the insurance company associated with the engine.

Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. The Permittee may petition the administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year.

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.

The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in this section, is prohibited. [§60.4211(f)]

- j. 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. [§60.4214(b)]
- k. If any of the above monitoring/recordkeeping requirements in this section are not met, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524. [40 CFR 60.8 and 60.45]

4. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (MACT – 40 CFR PART 63 SUBPART ZZZZ)

- a. **Notification and Recordkeeping** [15A NCAC 02Q .0508(f)]
The Permittee shall meet the initial notification requirements of §63.6645(a)(3) and (f) for the black start emergency generators (ID Nos. BS1 and BS2). This notification must be submitted not later than 120 days after the source becomes subject to Subpart ZZZZ and shall include an applicability determination statement that the source has no additional requirements under this subpart and explain the basis of the exclusion. The Permittee shall comply with the recordkeeping requirements of §63.10(b)(3) and keep a record of the applicability determination on site at the source for a period of 5 years after the determination. This source is exempt from the General Provisions (40 CFR Part 60, Subpart A) and from any other provisions of Subpart ZZZZ.

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

A. Facility-wide Toxics Demonstration

STATE-ONLY REQUIREMENT

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

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

Emission Source	Toxic Air Pollutant	Emission Limit		
		(lb/yr)	(lb/day)	(lb/hr)
Monofill (I76)	arsenic	1.28E+00		
	beryllium	2.16E+00		
	cadmium	4.78E-01		
	chromic acid		7.39E-02	
	manganese		1.77E+01	
	mercury		9.40E-02	
	nickel		3.61E+01	
Ash handling to support monofill (I77)	arsenic	4.09E-01		
	beryllium	6.50E-01		
	cadmium	1.47E-01		
	chromic acid		1.05E-03	
	manganese		2.78E-01	
	mercury		1.23E-03	
	nickel		5.27E-01	

Monitoring/Recordkeeping/Reporting

- b. No monitoring, recordkeeping or reporting is required since the coal-fired electric utility boilers (ID Nos. Unit 1 Boiler, Unit 2 Boiler and Unit 3 Boiler) have been retired.

STATE-ONLY REQUIREMENT

2. 15A NCAC 02Q .0711: FACILITY-WIDE TOXIC PERMIT EMISSION RATES DEMONSTRATION

- a. As of December 5, 2017 emissions of toxic air pollutants have been demonstrated on a facility-wide basis (excluding those sources exempt under 15A NCAC 02Q .0702 "Exemptions") that each of the toxic air pollutants (TAPs) emitted from all sources at the facility are either below its respective toxic permit emission rates (TPER) listed in 15A NCAC 02Q .0711 - "Emission Rates Requiring a Permit" or the TAPs are in compliance with 15A NCAC 02D .1100 "Control of Toxic Air Pollutants" as described elsewhere in this permit.
- b. The facility shall be operated and maintained in such a manner that any new, existing or increased actual emissions of any TAP listed in 15A NCAC 02Q .0711 or in this permit from all sources at the facility (excluding those sources exempt under 15A NCAC 02Q .0702 "Exemptions"), including fugitive emissions and emission sources not otherwise required to have a permit, will not exceed its respective TPER listed in 15A NCAC 02Q .0711 without first obtaining an air permit to construct or operate.
- c. PRIOR to exceeding any of the TPERs listed in 15A NCAC 02Q .0711, the Permittee shall be responsible

for obtaining an air permit to emit TAPs and for demonstrating compliance with the requirements of 15A NCAC 02D .1100 "Control of Toxic Air Pollutants".

- d. The Permittee shall maintain at the facility records of operational information sufficient for demonstrating to the Division of Air Quality staff that actual TAPs are less than the rate listed in 15A NCAC 02Q .0711.
- e. The TPER table listed below is provided to assist the Permittee in determining when an air permit is required pursuant to 15A NCAC 02Q .0711 and may not represent all TAPs being emitted from the facility. This table will be updated at such time as the permit is either modified or renewed.

Pollutant	TPER Limitations			
	Carcinogens (lb/yr)	Chronic Toxicants (lb/day)	Acute Systemic Toxicants (lb/hr)	Acute Irritants (lb/hr)
acetaldehyde				28.43
acrolein				0.08
benzo(a)pyrene	3.044			
hexane		46.3		
toluene		197.96		58.97
xylene		113.7		68.44

- B. 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_x 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)**

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

- 1. 15A NCAC 02Q.0317: AVOIDANCE CONDITION for 15A NCAC 02D.0530: PREVENTION OF SIGNIFICANT DETERIORATION**

Emission Limitations

- a. 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 following limits .

Regulated Pollutant	Limits/Standards (tons per year)	Applicable Regulation
nitrogen oxides	5,583.97	15A NCAC 02Q.0317(a)(1) (PSD avoidance)
sulfur dioxide	20,861.00	
particulate matter	1,144.86	
PM-10	834.99	
PM-2.5	453.06	
carbon monoxide	671.99	
VOCs	74.75	
sulfuric acid	44.96	
lead	0.88	

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

- b. 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). The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530(g) if these records are not kept or if any of the above limits are exceeded. Emissions shall be determined as follows:

$$Total\ Emissions = \sum Turbine\ 1A + Turbine\ 1B + Turbine\ 4 + Turbine\ 5$$

Nitrogen Oxides

For Turbine 1A, Turbine 1B, Turbine 4 and Turbine 5, emissions of nitrogen oxides shall be determined using a continuous emissions monitoring (CEM) system meeting the requirements of 15A NCAC 02D .0613 - 40 CFR Part 60 Appendix B "Performance Specifications" and Appendix F "Quality Assurance Procedures." If the owner or operator has installed a nitrogen oxides CEMS to meet the requirements of 40 CFR Part 75 and is continuing to meet the ongoing requirements of 40 CFR Part 75, that CEMS may be used to meet the requirements of this section, and used to calculate total nitrogen oxide emissions in accordance with the following equation. Data reported to meet the requirements of this section shall include data substituted using the missing data procedures in subpart D of 40 CFR Part 75 and may be bias adjusted according to the procedures of 40 CFR Part 75.

$$Total\ Emissions\ (NO_x) = Turbine\ 1A\ CEMS + Turbine\ 1B\ CEMS + Turbine\ 4\ CEMS + Turbine\ 5\ CEMS$$

$$\leq 5,583.97 \frac{tons}{12\ months}$$

Sulfur Dioxide

Emissions of sulfur dioxide shall be determined in accordance with the following equation.

Total Emissions (SO₂) =

$$\begin{aligned} & \left(\frac{0.00152 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu SC - oil, Turbine 1A}}{12 \text{ months}} + \frac{\text{mmBtu SC - oil, Turbine 1B}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) + \\ & \left(\frac{0.0006 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu SC - gas, Turbine 1A}}{12 \text{ months}} + \frac{\text{mmBtu SC - gas, Turbine 1B}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) + \\ & \left(\frac{0.00152 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu CC - oil, Turbine 1A}}{12 \text{ months}} + \frac{\text{mmBtu CC - oil, Turbine 1B}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) + \\ & \left(\frac{0.0006 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu CC - gas, Turbine 1A}}{12 \text{ months}} + \frac{\text{mmBtu CC - gas, Turbine 1B}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) + \\ & \left(\frac{0.00152 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu - oil, Turbine 4}}{12 \text{ months}} + \frac{\text{mmBtu - oil, Turbine 5}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) + \\ & \left(\frac{0.00557 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu - gas, Turbine 4}}{12 \text{ months}} + \frac{\text{mmBtu - gas, Turbine 5}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) \\ & \leq 20,861.00 \frac{\text{tons}}{12 \text{ months}} \end{aligned}$$

where:

- mmBtuSC-oil* = heat input for last 12 month period when burning fuel oil in simple-cycle mode
- mmBtuSC-gas* = heat input for last 12 month period when burning natural gas in simple-cycle mode
- mmBtuCC-oil* = heat input for last 12 month period when burning fuel oil in combined-cycle mode
- mmBtuCC-gas* = heat input for last 12 month period when burning natural gas in combined-cycle mode

Particulate Matter

Emissions of particulate matter shall be determined in accordance with the following equation.

Total Emissions (PM) =

$$\begin{aligned} & \left(\frac{0.0231 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu SC} - \text{oil, Turbine 1A}}{12 \text{ months}} + \frac{\text{mmBtu SC} - \text{oil, Turbine 1B}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) + \\ & \left(\frac{0.0091 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu SC} - \text{gas, Turbine 1A}}{12 \text{ months}} + \frac{\text{mmBtu SC} - \text{gas, Turbine 1B}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) + \\ & \left(\frac{0.0244 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu CC} - \text{oil, Turbine 1A}}{12 \text{ months}} + \frac{\text{mmBtu CC} - \text{oil, Turbine 1B}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) + \\ & \left(\frac{0.0094 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu CC} - \text{gas, Turbine 1A}}{12 \text{ months}} + \frac{\text{mmBtu CC} - \text{gas, Turbine 1B}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) + \\ & \left(\frac{0.0595 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu} - \text{oil, Turbine 4}}{12 \text{ months}} + \frac{\text{mmBtu} - \text{oil, Turbine 5}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) + \\ & \left(\frac{0.0195 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu} - \text{gas, Turbine 4}}{12 \text{ months}} + \frac{\text{mmBtu} - \text{gas, Turbine 5}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) \leq 1,144.86 \frac{\text{tons}}{12 \text{ months}} \end{aligned}$$

PM-10

Emissions of PM-10 shall be determined in accordance with the following equation.

Total Emissions (PM -10) =

$$\begin{aligned} & \left(\frac{0.0231 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu SC} - \text{oil, Turbine 1A}}{12 \text{ months}} + \frac{\text{mmBtu SC} - \text{oil, Turbine 1B}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) + \\ & \left(\frac{0.0091 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu SC} - \text{gas, Turbine 1A}}{12 \text{ months}} + \frac{\text{mmBtu SC} - \text{gas, Turbine 1B}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) + \\ & \left(\frac{0.0244 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu CC} - \text{oil, Turbine 1A}}{12 \text{ months}} + \frac{\text{mmBtu CC} - \text{oil, Turbine 1B}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) + \\ & \left(\frac{0.0094 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu CC} - \text{gas, Turbine 1A}}{12 \text{ months}} + \frac{\text{mmBtu CC} - \text{gas, Turbine 1B}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) + \\ & \left(\frac{0.0595 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu} - \text{oil, Turbine 4}}{12 \text{ months}} + \frac{\text{mmBtu} - \text{oil, Turbine 5}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) + \\ & \left(\frac{0.0195 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu} - \text{gas, Turbine 4}}{12 \text{ months}} + \frac{\text{mmBtu} - \text{gas, Turbine 5}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) \leq 834.99 \frac{\text{tons}}{12 \text{ months}} \end{aligned}$$

PM-2.5

Emissions of PM-2.5 shall be determined in accordance with the following equation.

Total Emissions (PM – 2.5) =

$$\begin{aligned} & \left(\frac{0.0231 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu SC – oil, Turbine 1A}}{12 \text{ months}} + \frac{\text{mmBtu SC – oil, Turbine 1B}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) + \\ & \left(\frac{0.0091 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu SC – gas, Turbine 1A}}{12 \text{ months}} + \frac{\text{mmBtu SC – gas, Turbine 1B}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) + \\ & \left(\frac{0.0244 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu CC – oil, Turbine 1A}}{12 \text{ months}} + \frac{\text{mmBtu CC – oil, Turbine 1B}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) + \\ & \left(\frac{0.0094 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu CC – gas, Turbine 1A}}{12 \text{ months}} + \frac{\text{mmBtu CC – gas, Turbine 1B}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) + \\ & \left(\frac{0.0595 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu – oil, Turbine 4}}{12 \text{ months}} + \frac{\text{mmBtu – oil, Turbine 5}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) + \\ & \left(\frac{0.0195 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu – gas, Turbine 4}}{12 \text{ months}} + \frac{\text{mmBtu – gas, Turbine 5}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) \leq 453.06 \frac{\text{tons}}{12 \text{ months}} \end{aligned}$$

Carbon Monoxide

Emissions of carbon monoxide shall be determined in accordance with the following equation:

Total Emissions (CO) = Turbine 1A CEMS + Turbine 1B CEMS + Turbine 4 CEMS + Turbine 5 CEMS

$$\leq 671.99 \frac{\text{tons}}{12 \text{ months}}$$

The CO CEMS shall meet the requirements of 15A NCAC 02D .0613 except that:

- i. A Cylinder Gas Audit (CGA) shall be conducted at least once each QA operating quarter on each simple-cycle stack CO CEMS and each combined-cycle stack CO CEMS in accordance with 40 CFR Part 75, Appendix B, § 2.2.1 instead of once every calendar quarter. A QA operating quarter for each CO CEMS is defined as a calendar quarter in which the unit operates at least 168 unit operating hours (in simple-cycle or combined-cycle mode), and a unit operating hour is a clock hour during which a unit combusts any fuel, either for part of the hour or for the entire hour. Regardless of the number of hours of operation, at a minimum, a CGA shall be conducted at least once every four calendar quarters on each CO CEMS consistent with the requirements in 40 CFR Part 75, Appendix B, § 2.2.3(f).
- ii. A Relative Accuracy Test Audit (RATA) shall be conducted once every four successive QA operating quarters (as defined above) in accordance with 40 CFR Part 75, Appendix B, § 2.3.1.2 instead of once every four calendar quarters. Regardless of the number of hours of operation, at a minimum, a RATA shall be conducted at least once every eight calendar quarters on each CO CEMS consistent with the requirements in 40 CFR Part 75, Appendix B, § 2.3.1.1(a). The frequency timeline for the RATAs shall begin with the last RATA conducted prior to July 16, 2014.
- iii. All grace period provisions from Part 75, Appendix B, § 2.2.4 and, § 2.3.3 apply.

VOCs

Emissions of VOCs shall be determined in accordance with the following equation.

Total Emissions (VOCs) =

$$\begin{aligned} & \left(\frac{0.00085 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu SC - oil, Turbine 1A}}{12 \text{ months}} + \frac{\text{mmBtu SC - oil, Turbine 1B}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) + \\ & \left(\frac{0.00077 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu SC - gas, Turbine 1A}}{12 \text{ months}} + \frac{\text{mmBtu SC - gas, Turbine 1B}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) + \\ & \left(\frac{0.0004 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu CC - oil, Turbine 1A}}{12 \text{ months}} + \frac{\text{mmBtu CC - oil, Turbine 1B}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) + \\ & \left(\frac{0.0004 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu CC - gas, Turbine 1A}}{12 \text{ months}} + \frac{\text{mmBtu CC - gas, Turbine 1B}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) + \\ & \left(\frac{0.0172 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu - oil, Turbine 4}}{12 \text{ months}} + \frac{\text{mmBtu - oil, Turbine 5}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) + \\ & \left(\frac{0.0184 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu - gas, Turbine 4}}{12 \text{ months}} + \frac{\text{mmBtu - gas, Turbine 5}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) \leq 74.75 \frac{\text{tons}}{12 \text{ months}} \end{aligned}$$

Sulfuric Acid

Emissions of sulfuric acid shall be determined in accordance with the following equation.

Total Emissions (Sulfuric Acid) =

$$\begin{aligned} & \left(\frac{0.000232 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu SC - oil, Turbine 1A}}{12 \text{ months}} + \frac{\text{mmBtu SC - oil, Turbine 1B}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) + \\ & \left(\frac{0.0000857 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu SC - gas, Turbine 1A}}{12 \text{ months}} + \frac{\text{mmBtu SC - gas, Turbine 1B}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) + \\ & \left(\frac{0.00107 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu CC - oil, Turbine 1A}}{12 \text{ months}} + \frac{\text{mmBtu CC - oil, Turbine 1B}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) + \\ & \left(\frac{0.000394 \text{ lb}}{\text{mmBtu}} \right) \left(\frac{\text{mmBtu CC - gas, Turbine 1A}}{12 \text{ months}} + \frac{\text{mmBtu CC - gas, Turbine 1B}}{12 \text{ months}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right) \leq 44.96 \frac{\text{tons}}{12 \text{ months}} \end{aligned}$$

Lead

No monitoring is required for lead.

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

- c. The Permittee shall submit a semi-annual summary report, acceptable to the Regional Air Quality Supervisor, of emissions of the above pollutants from each source (ID Nos. Turbine 1A, Turbine 1B, Turbine 4 and Turbine 5) and the total for all sources based on the calculations above (tons per rolling consecutive 12-month period) postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. The emissions must be calculated for each of the 12-month periods over the previous 17 months. The first report is due no earlier than 13 months after commencement of commercial operation and need not include 17 months of data.

2.3- Phase II Acid Rain Permit Requirements

ORIS code: 2713

A. Statement of Basis

Statutory and Regulatory Authorities: In accordance with the provisions of Article 21B of Chapter 143, General Statutes of North Carolina as amended and Titles IV and V of the Clean Air Act, the Department of Environment and Natural Resources, Division of Air Quality issues this permit pursuant to Title 15A North Carolina Administrative Codes, Subchapter 02Q .0400 and 02Q .0500, and other applicable Laws.

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

Turbine 1A Turbine 1B Turbine 4 Turbine 5	SO ₂ allowances	SO ₂ allowances are not allocated by U.S. EPA for new units under 40 CFR part 72.
	NO _x limit	Does not apply for gas or oil-fired units.

C. Comments, Notes and Justifications

None.

D. Phase II Permit Application and Phase II NO_x Compliance Plan (attached)

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

Acid Rain Permit Application dated September 13, 2018

SECTION 3 - GENERAL CONDITIONS (version 5.5, 08/25/2020)

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

A. **General Provisions** [NCGS 143-215 and 15A NCAC 02Q .0508(i)(16)]

1. Terms not otherwise defined in this permit shall have the meaning assigned to such terms as defined in 15A NCAC 02D and 02Q.
2. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are binding and enforceable pursuant to NCGS 143-215.114A and 143-215.114B, including assessment of civil and/or criminal penalties. Any unauthorized deviation from the conditions of this permit may constitute grounds for revocation and/or enforcement action by the DAQ.
3. This permit is not a waiver of or approval of any other Department permits that may be required for other aspects of the facility which are not addressed in this permit.
4. This permit does not relieve the Permittee from liability for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted facility, or from penalties therefore, nor does it allow the Permittee to cause pollution in contravention of state laws or rules, unless specifically authorized by an order from the North Carolina Environmental Management Commission.
5. Except as identified as state-only requirements in this permit, all terms and conditions contained herein shall be enforceable by the DAQ, the EPA, and citizens of the United States as defined in the Federal Clean Air Act.
6. Any stationary source of air pollution shall not be operated, maintained, or modified without the appropriate and valid permits issued by the DAQ, unless the source is exempted by rule. The DAQ may issue a permit only after it receives reasonable assurance that the installation will not cause air pollution in violation of any of the applicable requirements. A permitted installation may only be operated, maintained, constructed, expanded, or modified in a manner that is consistent with the terms of this permit.

B. **Permit Availability** [15A NCAC 02Q .0507(k) and .0508(i)(9)(B)]

The Permittee shall have available at the facility a copy of this permit and shall retain for the duration of the permit term one complete copy of the application and any information submitted in support of the application package. The permit and application shall be made available to an authorized representative of Department of Environmental Quality upon request.

C. **Severability Clause** [15A NCAC 02Q .0508(i)(2)]

In the event of an administrative challenge to a final and binding permit in which a condition is held to be invalid, the provisions in this permit are severable so that all requirements contained in the permit, except those held to be invalid, shall remain valid and must be complied with.

D. **Submissions** [15A NCAC 02Q .0507(e) and 02Q .0508(i)(16)]

Except as otherwise specified herein, two copies of all documents, reports, test data, monitoring data, notifications, request for renewal, and any other information required by this permit shall be submitted to the appropriate Regional Office. Refer to the Regional Office address on the cover page of this permit. For continuous emissions monitoring systems (CEMS) reports, continuous opacity monitoring systems (COMS) reports, quality assurance (QA)/quality control (QC) reports, acid rain CEM certification reports, and NOx budget CEM certification reports, one copy shall be sent to the appropriate Regional Office and one copy shall be sent to:

Supervisor, Stationary Source Compliance
North Carolina Division of Air Quality
1641 Mail Service Center
Raleigh, NC 27699-1641

All submittals shall include the facility name and Facility ID number (refer to the cover page of this permit).

E. **Duty to Comply** [15A NCAC 02Q .0508(i)(3)]

The Permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Noncompliance with any permit condition except conditions identified as state-only requirements constitutes a violation of the Federal Clean Air Act. Noncompliance with any permit condition is grounds for

enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

F. **Circumvention** - STATE ENFORCEABLE ONLY

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

G. **Permit Modifications**

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

H. **Changes Not Requiring Permit Modifications**

1. Reporting Requirements
Any of the following that would result in new or increased emissions from the emission source(s) listed in Section 1 must be reported to the Regional Supervisor, DAQ:
 - a. changes in the information submitted in the application;
 - b. changes that modify equipment or processes; or
 - c. changes in the quantity or quality of materials processed.

If appropriate, modifications to the permit may then be made by the DAQ to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause a violation of the emission limitations specified herein.

2. Section 502(b)(10) Changes [15A NCAC 02Q .0523(a)]
 - a. "Section 502(b)(10) changes" means changes that contravene an express permit term or condition. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
 - b. The Permittee may make Section 502(b)(10) changes without having the permit revised if:
 - i. the changes are not a modification under Title I of the Federal Clean Air Act;
 - ii. the changes do not cause the allowable emissions under the permit to be exceeded;
 - iii. the Permittee notifies the Director and EPA with written notification at least seven days before the change is made; and
 - iv. the Permittee shall attach the notice to the relevant permit.
 - c. The written notification shall include:
 - i. a description of the change;
 - ii. the date on which the change will occur;
 - iii. any change in emissions; and
 - iv. any permit term or condition that is no longer applicable as a result of the change.
 - d. Section 502(b)(10) changes shall be made in the permit the next time that the permit is revised or renewed, whichever comes first.
3. Off Permit Changes [15A NCAC 02Q .0523(b)]
The Permittee may make changes in the operation or emissions without revising the permit if:

- a. the change affects only insignificant activities and the activities remain insignificant after the change; or
 - b. the change is not covered under any applicable requirement.
4. Emissions Trading [15A NCAC 02Q .0523(c)]
To the extent that emissions trading is allowed under 15A NCAC 02D, including subsequently adopted maximum achievable control technology standards, emissions trading shall be allowed without permit revision pursuant to 15A NCAC 02Q .0523(c).

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

“Excess Emissions” - means an emission rate that exceeds any applicable emission limitation or standard allowed by any rule in Sections .0500, .0900, .1200, or .1400 of Subchapter 02D; or by a permit condition; or that exceeds an emission limit established in a permit issued under 15A NCAC 02Q .0700. (*Note: Definitions of excess emissions under 02D .1110 and 02D .1111 shall apply where defined by rule.*)

“Deviations” - for the purposes of this condition, any action or condition not in accordance with the terms and conditions of this permit including those attributable to upset conditions as well as excess emissions as defined above lasting less than four hours.

Excess Emissions

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

Permit Deviations

3. Pursuant to 15A NCAC 02Q .0508(f)(2), the Permittee shall report deviations from permit requirements (terms and conditions) as follows:
 - a. Notify the Regional Supervisor or Director of all other deviations from permit requirements not covered under 15A NCAC 02D .0535 quarterly. A written report to the Regional Supervisor shall include the probable cause of such deviation and any corrective actions or preventative actions taken. The responsible official shall certify all deviations from permit requirements.

I.B. Other Requirements under 15A NCAC 02D .0535

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

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

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

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

1. An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the facility, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the facility to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.
2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions specified in 3. below are met.
3. The affirmative defense of emergency shall be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that include information as follows:
 - a. an emergency occurred and the Permittee can identify the cause(s) of the emergency;
 - b. the permitted facility was at the time being properly operated;
 - c. during the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the standards or other requirements in the permit; and
 - d. the Permittee submitted notice of the emergency to the DAQ within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
5. This provision is in addition to any emergency or upset provision contained in any applicable requirement specified elsewhere herein.

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

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

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

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

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

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

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

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

- O. **Retention of Records** [15A NCAC 02Q .0508(f) and 02Q .0508 (l)]
The Permittee shall retain records of all required monitoring data and supporting information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring information, and copies of all reports required by the permit. These records shall be maintained in a form suitable and readily available for expeditious inspection and review. Any records required by the conditions of this permit shall be kept on site and made available to DAQ personnel for inspection upon request.
- P. **Compliance Certification** [15A NCAC 02Q .0508(n)]
The Permittee shall submit to the DAQ and the EPA (Air and EPCRA Enforcement Branch, EPA, Region 4, 61 Forsyth Street SW, Atlanta, GA 30303) postmarked on or before March 1 a compliance certification (for the preceding calendar year) by a responsible official with all federally-enforceable terms and conditions in the permit, including emissions limitations, standards, or work practices. It shall be the responsibility of the current owner to submit a compliance certification for the entire year regardless of who owned the facility during the year. The compliance certification shall comply with additional requirements as may be specified under Sections 114(a)(3) or 504(b) of the Federal Clean Air Act. The compliance certification shall specify:
1. the identification of each term or condition of the permit that is the basis of the certification;
 2. the compliance status (with the terms and conditions of the permit for the period covered by the certification);
 3. whether compliance was continuous or intermittent; and
 4. the method(s) used for determining the compliance status of the source during the certification period.
- Q. **Certification by Responsible Official** [15A NCAC 02Q .0520]
A responsible official shall certify the truth, accuracy, and completeness of any application form, report, or compliance certification required by this permit. All certifications shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- R. **Permit Shield for Applicable Requirements** [15A NCAC 02Q .0512]
1. Compliance with the terms and conditions of this permit shall be deemed compliance with applicable requirements, where such applicable requirements are included and specifically identified in the permit as of the date of permit issuance.
 2. A permit shield shall not alter or affect:
 - a. the power of the Commission, Secretary of the Department, or Governor under NCGS 143-215.3(a)(12), or EPA under Section 303 of the Federal Clean Air Act;
 - b. the liability of an owner or operator of a facility for any violation of applicable requirements prior to the effective date of the permit or at the time of permit issuance;
 - c. the applicable requirements under Title IV; or
 - d. the ability of the Director or the EPA under Section 114 of the Federal Clean Air Act to obtain information to determine compliance of the facility with its permit.
 3. A permit shield does not apply to any change made at a facility that does not require a permit or permit revision made under 15A NCAC 02Q .0523.
 4. A permit shield does not extend to minor permit modifications made under 15A NCAC 02Q .0515.
- S. **Termination, Modification, and Revocation of the Permit** [15A NCAC 02Q .0519]
The Director may terminate, modify, or revoke and reissue this permit if:
1. the information contained in the application or presented in support thereof is determined to be incorrect;
 2. the conditions under which the permit or permit renewal was granted have changed;
 3. violations of conditions contained in the permit have occurred;
 4. the EPA requests that the permit be revoked under 40 CFR 70.7(g) or 70.8(d); or
 5. the Director finds that termination, modification, or revocation and reissuance of the permit is necessary to carry out the purpose of NCGS Chapter 143, Article 21B.
- T. **Insignificant Activities** [15A NCAC 02Q .0503]
Because an emission source or activity is insignificant does not mean that the emission source or activity is exempted from any applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement. The Permittee shall have available at the facility at all

times and made available to an authorized representative upon request, documentation, including calculations, if necessary, to demonstrate that an emission source or activity is insignificant.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BB. **Financial Responsibility and Compliance History** [15A NCAC 02Q .0507(d)(3)]

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

CC. **Refrigerant Requirements (Stratospheric Ozone and Climate Protection)** [15A NCAC 02Q .0501(d)]

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

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

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

EE. **Prevention of Accidental Releases General Duty Clause - Section 112(r)(1)** – FEDERALLY-ENFORCEABLE ONLY

Although a risk management plan may not be required, if the Permittee produces, processes, handles, or stores any amount of a listed hazardous substance, the Permittee has a general duty to take such steps as are necessary to prevent the accidental release of such substance and to minimize the consequences of any release.

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

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

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

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

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

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

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

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

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

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

1. The owner or operator of the source shall arrange for air emission testing protocols to be provided to the Director prior to air pollution testing. Testing protocols are not required to be pre-approved by the Director

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

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

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

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

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

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

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

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

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

1. For modifications made pursuant to 15A NCAC 02Q .0501(b)(2), the Permittee shall file a Title V Air Quality Permit Application for the air emission source(s) and associated air pollution control device(s) on or before 12 months after commencing operation.
2. For modifications made pursuant to 15A NCAC 02Q .0501(c)(2), the Permittee shall not begin operation of the air emission source(s) and associated air pollution control device(s) until a Title V Air Quality Permit Application is filed and a construction and operation permit following the procedures of Section .0500 (except for Rule .0504 of this Section) is obtained.
3. For modifications made pursuant to 502(b)(10), in accordance with 15A NCAC 02Q .0523(a)(1)(C), the Permittee shall notify the Director and EPA (EPA - Air Planning Branch, 61 Forsyth Street SW, Atlanta, GA 30303) in writing at least seven days before the change is made. The written notification shall include:
 - a. a description of the change at the facility;
 - b. the date on which the change will occur;
 - c. any change in emissions; and
 - d. any permit term or condition that is no longer applicable as a result of the change.

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

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

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

ATTACHMENT

List of Acronyms

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