



ROY COOPER  
*Governor*

MICHAEL S. REGAN  
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MICHAEL A. ABRACZINSKAS  
*Director*

XXXX, 2017

Mr. Steven Ingle  
Vice President of Engineering  
North Carolina Renewable Power - Lumberton, LLC  
2100 Southbridge Parkway, Suite 540  
Birmingham, AL 35209

SUBJECT: Air Quality Permit No. 05543T25  
Facility ID: 7800166  
North Carolina Renewable Power - Lumberton, LLC  
Lumberton, Robeson County, North Carolina  
Fee Class: Title V  
PSD Status: Minor

Dear Mr. Ingle:

In accordance with your completed Air Quality Permit Applications for renewal of your TV permit and your Acid Rain permit received January 24, 2017 and for numerous modifications received February 26, 2016, March 3, 2016, April 4, 2016, July 12, 2016, July 24, 2016 and October 13, 2016, we are forwarding herewith Air Quality Permit No. 05543T25 to North Carolina Renewable Power - Lumberton, LLC, 1866 Hestertown Road, Lumberton, 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 "ATTACHMENT 2" to this cover letter. 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 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 NCGS 143-215.108A(b) and received written approval from the Director of the Division of Air Quality to commence construction. Failure to receive an Air Quality Permit or written approval prior to commencing construction is a violation of NCGS 143-215.108A and may subject the Permittee to civil or criminal penalties as described in NCGS 143-215.114A and 143-215.114B.

Robeson County has triggered PSD Increment Tracking for PM<sub>10</sub> and SO<sub>2</sub>. This permitting action is not expected to consume nor expand any increments. Any increment changes associated with these modifications/renewals were addressed in the "Part 1" permit application (No. 7800166.15B) or the minor modification (7800166.16I).

This Air Quality Permit shall be effective from XXXXX, 2017 until XXXX, 2022, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein. Should you have any questions concerning this matter, please contact Betty Gatano, P.E., at 919-707-8736 or [betty.gatano@ncdenr.gov](mailto:betty.gatano@ncdenr.gov).

Sincerely yours,

William D. Willets, P.E., Chief, Permitting Section  
Division of Air Quality, NCDEQ

Enclosure

c: Heather Ceron, EPA Region 4  
Fayetteville Regional Office  
Central Files  
Connie Horne (cover letter only)

ATTACHMENT to Permit No. 05543T25

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

Source ID Nos.	Emission Source Description
IES-1 <b>GACT ZZZZ</b>	one diesel fired 340 hp emergency fire pump
IES-2	one diesel fuel oil storage tank
IES-3	one fire pump fuel oil storage tank
IES-4	one solvent parts cleaner
IES-5	one turbine lube oil tank vent
IES-6	one cooling tower
IES-8	truck dumper No. 1 for receiving biomass fuel
IES-9	truck dumper No. 2 for receiving biomass fuel
IES-10	fuel storage piles
IES-11	fuel material handling including conveyors, front-end loader/dozer and other vehicular traffic in the fuel yard
IES-12	paved roads
IES-13	one sorbent silo
IES-14	one bottom and sifting ash bunker
IES-16	poultry litter storage warehouse
IES-20	poultry litter storage shed

1. Because an activity is insignificant does not mean that the activity is exempted from an applicable requirement or that the Permittee is exempted from demonstrating compliance with any applicable requirement.
2. When applicable, emissions from stationary source activities identified above shall be included in determining compliance with the permit requirements for toxic air pollutants under 15A NCAC 02D .1100 "Control of Toxic Air Pollutants" or 02Q .0711 "Emission Rates Requiring a Permit."
3. For additional information regarding the applicability of MACT or GACT see the DAQ page titled "Specific Permit Conditions Regulatory Guide." The link to this site is as follows: <http://deq.nc.gov/about/divisions/air-quality/air-quality-permits/specific-permit-conditions-regulatory-guide>

## Summary of Changes to the Permit

The following changes were made to the North Carolina Renewable Power - Lumberton, LLC, Air Permit No. 05543T24:

Previous Permit		New Permit		Description of Changes
Page No.	Section	Page No.	Section	
Cover and throughout	--	Cover and throughout	--	Updated all dates and permit revision numbers.
--	Insignificant Activities List	--	Insignificant Activities List	<ul style="list-style-type: none"> <li>Moved the diesel fired 340 hp emergency fire pump (ID No. IES-1) to the insignificant activities list. This emission source meets the definition of insignificant activity under 15A NCAC 02Q .0503(8).</li> <li>Added the poultry litter storage shed (ID No. IES-20).</li> </ul>
--	Table of Contents	--	Table of Contents	Added Section 2.3 for Schedule of Compliance and renumbered the Table of Contents accordingly.
3 – 4	Section 1.0 Equipment List	3	Section 1.0 Equipment List	<ul style="list-style-type: none"> <li>Added page numbers.</li> <li>Moved the diesel fired 340 hp emergency fire pump (ID No. IES-1) to the insignificant activities list. This emission source meets the definition of insignificant activity under 15A NCAC 02Q .0503(8).</li> <li>Updated description of the multiclones (ID Nos. CD-1A2 and CD-1B2). The previous multiclones were replaced with upgraded multiclones having a higher control efficiency. The identification number remains the same.</li> <li>Removed fly ash silo (ID No. ES-3) with associated binvent filter (ID No. CD-3). During a compliance inspection, it was discovered that the Permittee had removed the binvent and replaced it with a damper that opens when the fly ash silo over pressurizes.</li> <li>Removed two fuel bunkers (ID Nos. ES-2A and ES-2B) and associated bagfilters (ID Nos. CD-2A and CD-2B).</li> <li>Removed bottom ash silo (ID No. ES-4) and associated binvent filter (ID No. CD-4).</li> <li>Removed two ash vacuum system pumps (ID Nos. ES-5A and ES-5B) and associated control devices (ID Nos. CD-5A through CD-5E).</li> <li>Removed wood biomass unloading/storage and transfer (ID No. ES-6).</li> <li>Corrected the capacity of the ammonia tank (ID No. ES-15) to 10,000 gallons.</li> <li>Removed foot note requiring submittal of a Part 2 permit application. This requirement was fulfilled with the submittal of Permit Application No. 7800166.16F.</li> </ul>

Previous Permit		New Permit		Description of Changes
Page No.	Section	Page No.	Section	
5 – 6	2.1 A – Regulations Table	4 – 5	2.1 A – Regulations Table	<ul style="list-style-type: none"> <li>Added reference to Schedule of Compliance, which is provided in Section 2.3.</li> <li>Removed reference to 15A NCAC 02D .1806. Per SL 2017-108, the Permittee is exempt from this regulation.</li> </ul>
6	2.1 A.1.d	--	--	Removed requirement to monitor pressure drop across the bagfilters (ID Nos. CD-1A and CD-1B) and renumbered permit accordingly.
6	2.1 A.1.e	5	2.1 A.1.d	Updated recordkeeping requirements to remove reference to pressure drop across the bagfilters (ID Nos. CD-1A and CD-1B)
7	2.1 A.3.c through e	5	2.1 A.3.c through e	<ul style="list-style-type: none"> <li>Added date initial performance testing was conducted.</li> <li>Added requirements for additional testing when the percentage of poultry litter firing exceeds 50%, 70% and 90% of total heat input to the boilers (ID Nos. ES-1A and ES-1B).</li> </ul>
8	2.1 A.3.f	6	2.1 A.3.f	Added date the notification was submitted.
9	2.1 A.4.b	7	2.1 A.4.b	Updated the testing condition to eliminate required testing. This requirement was met with testing conducted in December 2015.
9	2.1 A.4.c	8	2.1 A.4.c	Updated permit condition to specify no monitoring, recordkeeping, or reporting is required.
9	2.1 A.4.d	--	--	Removed permit condition specifying that no reporting is required.
9	2.1 A.5	8	2.1 A.5	Added data averaging period to CAM Plan.
10 – 13	2.1 A.6	9 – 11	2.1 A.6	Updated the permit condition for 40 CFR Part 63, Subpart JJJJJ, “National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers,” with most current language.
14	2.1 A.7.a	12	2.1 A.7.a	Removed footnote requiring Permittee to establish SB3 BACT limit for SO2. This requirement was fulfilled with the submittal of permit Application No. 7800166.16D.
14	2.1 A.7.b	12	2.1 A.7.b	Updated the testing condition to eliminate required testing. This requirement was met with testing conducted in December 2015.
14	2.1 A.7.c and d.	--	--	<ul style="list-style-type: none"> <li>Removed condition requiring Permittee to establish SB3 BACT limit for SO2. This requirement was fulfilled with the submittal of permit Application No. 7800166.16D.</li> <li>Renumbered the permit accordingly.</li> </ul>
14	2.1 A.7.e	12	2.1 A.7.c	Revised the monitoring requirements for monitoring NOx and SO2 using continuous emissions monitoring (CEM) systems.
16 - 18	2.1 B	--	--	<ul style="list-style-type: none"> <li>Deleted the entire permit condition because all the subject emission sources have been removed from the permit.</li> <li>Renumbered permit accordingly.</li> </ul>

Previous Permit		New Permit		Description of Changes
Page No.	Section	Page No.	Section	
19	2.1 C	--	--	<ul style="list-style-type: none"> <li>Removed Section 2.1 C because the non-CISWI subject wood unloading/storage and transfer (ID No. ES-6) is duplicative to fuel storage piles and material handling (ID Nos. IES-10 and IES-11).</li> <li>Renumbered the permit accordingly.</li> </ul>
20	2.1 D	13	2.1 B	Corrected capacity of the aqueous ammonia storage tank (ID No. ES-15)
20	2.1 D – Regulations Table	13	2.1 B – Regulations Table	Removed reference to 15A NCAC 02D .1806. Per SL 2017-108, the Permittee is exempt from this regulation.
21 – 22	2.1 E	--	--	<ul style="list-style-type: none"> <li>Removed Section 2.1 E. The diesel fired emergency fire pump (ID No. ES-1) was moved to the insignificant activity list because it meets the definition under 15A NCAC 02Q .0503(8).</li> <li>Renumbered the permit accordingly.</li> </ul>
23	2.1 F	13	2.1 C	Added regulations table.
23	2.1 F.1.f	14	2.1 C.1.f	Specified that the capacity of the belt dryers could be modified via a 502(b)(10) notification.
23	2.1 F.1.g	14	2.1 C.1.g	Clarified that the belt dryers could be moved to the insignificant activities list via a 502(b)(10) notification.
23	2.1 F – Regulations Table	15	2.1 D – Regulations Table	Removed reference to 15A NCAC 02D .1806. Per SL 2017-108, the Permittee is exempt from this regulation.
24	2.1 G.3.c through e	17	2.1 D.3.c through e	Updated monitoring, recordkeeping, and reporting conditions for 15A NCAC 02D .0521 with most current permit language.
27	2.2 A.1.b.i	19	2.2 A.1.b	Revised emission factor for hydrogen chloride based on heat input for the boilers (ID Nos. ES-1A and ES-1B) of 215 million Btu/hr each.
--	--	19	2.2 A.1.b.i	Added permit condition specifying that initial testing was conducted on December 22, 2016, while firing 30% poultry litter.
--	--	19	2.2 A.1.b.ii	<ul style="list-style-type: none"> <li>Added requiring additional testing when the percentage of poultry litter firing exceeds 50%, 70% and 90% of total heat input to the boilers (ID Nos. ES-1A and ES-1B).</li> <li>Renumbered permit accordingly.</li> </ul>
27	2.2 A.1.b.i(E)	19	2.2 A.1.b.iii(D)	Updated permit condition to specify the dry sorbent injection systems (ID Nos. CD-1A4 and CD-1B4) are not required during source testing.
28	2.2 A.1.b.	20	2.2 A.1.b.iii(E)	Updated procedures for revising HCl and chlorine emission factors.
28	2.2 A.1.b	20	2.2 A.1.b.iv	Clarified and promoted noncompliance statement and renumbered permit condition accordingly
28	2.2 A.1.c through e	20	2.2 A.1.d through h	Revised monitoring and recordkeeping requirements for the dry sorbent injection system (ID Nos. CD-1A4 and CD-1B4) for clarification.

Previous Permit		New Permit		Description of Changes
Page No.	Section	Page No.	Section	
29	2.2 A.1.f	20	2.2 A.1.i	Specified that the highest emission factors from testing of poultry litter must be used in the calculation of emissions of HCl and chlorine.
--	--	21	2.2 A.1.j	Added a requirement to calculate and record facility-wide HAP emissions monthly.
30	2.2 A.2.f	22	2.2 A.2.f	Updated the CEM requirements for monitoring CO.
30	2.2 A.2.g	22	2.2 A.2.g	Updated the CEM requirements for monitoring NOx.
30	2.2 A.2.h	22	2.2 A.2.h	Updated the CEM requirements for monitoring SO2
--	--	23	2.2 A.2.i.	Added a requirement for volumetric monitoring for the boiler (ID No. ES-1A and ES-1B) exhaust.
30	2.2 A.3	--	--	<ul style="list-style-type: none"> <li>Removed permit condition for 15A NCAC 02D .1806. Per SL 2017-108, the Permittee is exempt from this regulation.</li> <li>Renumbered the permit accordingly.</li> </ul>
--	--	25	2.3	Added a schedule of compliance for boilers (ID Nos. ES-1A and ES-1B) to operate until they are in compliance with 15A NCAQC 02D .0530 and renumbered permit accordingly.
33	2.3	26	2.4	Updated dates for Acid Rain Permit.
35	2.5.2	26	2.6 B	Specified that 15A NCAC 02D .2400, Clean Air Interstate Rules, have expired.
36 – 46	3.0	27 – 37	3.0	Updated the General Conditions and the list of Acronyms with the most current version (Version 5.0 06/08/2017).



## AIR QUALITY PERMIT

Permit No.	Replaces Permit No.	Effective Date	Expiration Date
05543T25	05543T24	XXXX, 2017	XXXX, 2022

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

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

**Permittee:** **North Carolina Renewable Power –  
Lumberton, LLC**

**Facility ID:** **7800166**

**Facility Site Location:** **1866 Hestertown Road**  
**City, County, State, Zip:** **Lumberton, Robeson County, North Carolina 28358**

**Mailing Address:** **2100 Southbridge Parkway, Suite 540**  
**City, State, Zip:** **Birmingham, AL 32509**

**Application Number:** **7800166.16B, 7800166.16C, 7800166.16D, 7800166.16F,  
7800166.16G 780016.16H, 7800166.17A, 7800166.17B**

**Complete Application Date:** **February 26, 2016, March 3, 2016, April 4, 2016, July 12,  
2016, July 24, 2016, October 13, 2016, January 24, 2017,  
January 24, 2017**

**Primary SIC Code:** **4911**

**Division of Air Quality,  
Regional Office Address:** **Fayetteville Regional Office  
225 Green Street, Suite 714  
Fayetteville, North Carolina 28301**

Permit issued this the XXX<sup>th</sup> of XXXX, 2017

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William D. Willets, P.E., Chief, Permitting Section  
 By Authority of the Environmental Management Commission



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ATTACHMENT

List of Acronyms

Acid Rain Permit Application dated January 23, 2017

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

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

Page Nos.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
5, 18, 23, 24	ES-1A and ES-1B <b>CAM</b> <b>GA CT JJJJJ</b> <b>NSPS Db</b>	two non-CISWI subject wood*/poultry litter-fired steam/electric generating, boilers (215 million Btu per hour heat input each) including over-fire air systems	CD-1A3 and CD-1B*	two selective non-catalytic reduction systems (300 lbs/hr aqueous ammonia injection rate each)
			CD-1A2 and CD-1B2	two multiclones (20, 24-inch diameter tubes, each)
			CD-1A4 <sup>+</sup> and CD-1B4 <sup>+</sup>	two dry sorbent injection systems (50 lbs/hr sodium bicarbonate or sodium sesquicarbonate (trona) injection rate each)
			CD-1A and CD-1B	two bagfilters (each not to exceed 3.26:1 air-to-cloth ratio)
16	ES-15	one 10,000-gallon aqueous ammonia storage tank	None	N/A
17	ES-17, ES-18, ES-19, and ES-21 <sup>‡</sup>	Four biomass belt dryers, with maximum capacity of 6 tons per hour, each	None	N/A
23-32	ES-22 <sup>‡</sup>	One natural gas-fired drum dryer equipped with low NOx burners (33 tons per hour maximum drying capacity, 66.2 million BTU per hour maximum heat input capacity)	CD-6 <sup>‡</sup>	one multi-cyclone (10 tubes, each tube 60 inches in diameter)
			CD-7 <sup>‡</sup>	one natural gas-fired regenerative thermal oxidizer (1.0 million BTU per hour heat input capacity)

\* Commercial/Industrial Solid Waste Incineration

+ Dry sorbent injection systems may be operated intermittently as necessary to maintain compliance with the avoidance limit under 15A NCAC 02D .1111.

‡ These emission sources and control devices (**ID Nos. ES-21, ES-22, CD-6, and CD-7**) are listed as a 15A NCAC 02Q .0501(c)(2) modification. The Permittee shall file a Title V Air Quality Permit Application on or before 12 months after commencing operation in accordance with General Condition NN.1. The permit shield described in General Condition R does not apply and compliance certification as described in General Condition P is not required

## SECTION 2- SPECIFIC LIMITATIONS AND CONDITIONS

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

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

- A. Two non-CISWI subject wood/poultry litter-fired boilers including over-fire air systems (ID Nos. ES-1A and ES-1B), and associated selective non-catalytic reduction systems (ID Nos. CD-1A3 and CD-1B3), multiclones (ID Nos. CD-1A2 and CD-1B2), dry sorbent injection systems (ID Nos. CD-1A4 and CD-1B4) and bagfilters (ID Nos. CD-1A and CD-1B)**

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	0.30 pounds per million Btu heat input	15A NCAC 02D .0504
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Particulate matter	Particulate matter emissions (filterable): 0.030 lb /million Btu heat input	15A NCAC 02D .0524 [40 CFR 60 Subpart Db]
Visible emissions	Visible emissions: 20 percent	
Carbon monoxide	When burning non-CISWI subject wood only Carbon monoxide: 0.45 lb/million Btu	15A NCAC 02D .0530
Sulfuric acid mist	Sulfuric acid mist: 0.011 lb/million Btu	
PM <sub>10</sub>	Compliance Assurance Monitoring	15A NCAC 02D .0614 [40 CFR 64]
Hazardous air pollutants	Work practice standards	15A NCAC 02D .1111 [40 CFR 63 Subpart JJJJJ]
PM/PM <sub>10</sub> PM <sub>2.5</sub> Sulfur dioxide Nitrogen oxides Volatile organic compounds Mercury	<b>State-enforceable only</b> When burning non-CISWI subject wood only See Section 2.1 A.7.a.	Senate Bill 3 (Session Law 2007-397)
PM/PM <sub>10</sub> PM <sub>2.5</sub> Sulfur dioxide Nitrogen oxides Volatile organic compounds Mercury	<b>State-enforceable only</b> When burning non-CISWI subject wood and poultry litter See Section 2.1 A.8	Senate Bill 3 (Session Law 2007-397)
Hazardous air pollutants	See Section 2.2 A.1.	15A NCAC 02Q .0317 [MACT Avoidance]
Nitrogen oxides Sulfur dioxide Carbon monoxide	See Section 2.2 A.2.	15A NCAC 02Q .0317 [PSD Avoidance]
Carbon monoxide	Schedule of Compliance See Section 2.3	15A NCAC 02D .0530
Sulfur dioxide Nitrogen oxides	Phase II Acid Rain Permit Requirements See Section 2.4	15A NCAC 02Q .0402

Regulated Pollutant	Limits/Standards	Applicable Regulation
Nitrogen oxides Sulfur dioxide	(Federally enforceable only) Cross State Air Pollution Rule [CSAPR] Requirements See Section 2.5.	40 CFR Part 97, Subparts AAAAA, BBBBB, and CCCCC

**1. 15A NCAC 02D .0504: PARTICULATES FROM WOOD BURNING INDIRECT HEAT EXCHANGERS**

- a. Emissions of particulate matter from the combustion of non-CISWI subject wood and/or poultry litter blend that are discharged from these sources into the atmosphere shall not exceed 0.30 pounds per million Btu heat input.

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

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0504.

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

- c. Particulate matter emissions from each boiler shall be controlled by a dedicated multiclone (**ID Nos. CD-1A2 and CD-1B2**) and bagfilter (**ID Nos. CD-1A and CD-1B**). To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement must include the following:
- i. a monthly external visual inspection of the system ductwork and material collection unit for leaks; and
  - ii. an annual (for each 12-month period following the initial inspection) internal inspection of the control devices' structural integrity.
- The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0504 if the ductwork, multiclones, and bagfilters are not inspected and maintained.

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

- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format), kept on site, and made available to an authorized DAQ representative upon request. The logbook shall record the following:
- i. the date and time of each recorded action;
  - ii. the results of each inspection;
  - iii. the results of any maintenance performed on the multiclones and bagfilters;
  - iv. any variance from manufacturer's recommendations, if any, and corrections made; and
  - v. any period of boiler down time shall be noted in the logbook.
- The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0504 if these records are not maintained.

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

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

**2. 15A NCAC 02D .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 A. 2. a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

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

- c. No monitoring, recordkeeping, or reporting is required for sulfur dioxide emissions from the firing of non-CISWI subject wood and/or poultry litter blend in these boilers.

**3. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS  
(40 CFR Part 60, Subpart Db)**

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 “New Source Performance Standards” (NSPS) as promulgated in 40 CFR Part 60, Subpart Db “Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units” including Subpart A “General Provisions.” [15A NCAC 02D .0524]

**Emission Standards** [40 CFR 60.43b and 60.44b]

- b. For these emission sources (**ID No. ES-1A and ES-1B**), the Permittee shall comply with the following emission standards:
- i. The Permittee shall not cause to be discharged into the atmosphere any gases that contain PM (filterable) in excess of 0.030 lb /million Btu heat input [40 CFR 60.43b(h)(1)].
  - ii. The Permittee shall not cause to be discharged into the atmosphere any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity [40 CFR 60.43b(f)].
  - iii. The PM and opacity standards apply at all times, except during periods of startup, shutdown, or malfunction [40 CFR 60.43b(g)].

**Testing** [15A NCAC 02Q .0508(f) and 40 CFR 60.46b]

- c. In accordance with 40 CFR 60.8, the Permittee conducted the initial performance test for PM emissions as specified in Section 2.1 A.3.c on December 22, 2016 while firing 30% poultry litter blend in boilers (**ID Nos. ES-1A and ES-1B**) [40 CFR 60.46b(d)].
- d. Under the provisions of North Carolina General Statute 143-215.108, the Permittee shall conduct subsequent performance tests for PM emissions within 60 days of the date that the percentage of poultry litter firing exceeds 50%, 70% and 90% of total heat input to the boilers (**ID Nos. ES-1A and ES-1B**). Testing shall be conducted following procedures and reference methods in 40 CFR 60.46b(d) (1) through (7) and in accordance with 15A NCAC 02D .2600. The Permittee shall conduct a retest within 30 days of the test date, if the PM emission limit in Section 2.1 A.3.b is exceeded.
- e. The Permittee shall be deemed in noncompliance with 02D .0524 if the testing requirements in Sections 2.1 A.3.c and d. are not met or if the PM emission limit in Section 2.1 A.3.b is exceeded.

**Notification Requirements** [40 CFR 60.49b (a)]

- f. As required by 40 CFR 60.49b, the Permittee notified the Regional Supervisor, DAQ, in writing on October 30, 2015, of the actual date of initial firing of poultry litter blend in the boilers, which occurred on October 16, 2015.

**Monitoring** [40 CFR 60.48b]

- g. The Permittee shall install, calibrate, maintain, and operate a continuous opacity monitoring systems (COMS) for measuring the opacity of emissions discharged to the atmosphere and record the output of the system. [40 CFR 60.48b(a)]
- h. The Permittee shall follow procedures under 40 CFR 60.13 for installation, evaluation, and operation of the COMS. The span value for the COMS shall be between 60 and 80 percent. [40 CFR 60.48b(e)]
- i. The Permittee shall be deemed in noncompliance with 02D .0524 if the monitoring requirements in Sections 2.1 A.3.g and h are not met or if the opacity standard in Section 2.1 A.3.b is exceeded.

**Recordkeeping** [40 CFR 60.49b]

- j. The Permittee shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for each fuel for the reporting period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month. [40 CFR 60.49b(d)(1)]
- k. The Permittee shall maintain records of opacity. [40 CFR 60.49b(f)]
- l. The Permittee shall maintain all records for a period of 2 years following the date of such record [40 CFR 60.49b(o)].
- m. The Permittee shall be deemed in noncompliance with 02D .0524 if the recordkeeping requirements under Sections 2.1 A.3 j through l are not met.

**Reporting** [40 CFR 60.46b, 15A NCAC 02Q .0508(f)]

- n. The Permittee shall submit excess emission reports for any excess emissions of opacity that occurred during the reporting period. Excess emissions are defined as all 6-minute periods during which the average opacity exceeds the opacity standards under 40 CFR 60.43b(f). The Permittee shall submit semiannual excess emissions and monitoring systems performance reports, postmarked on or before January 30 for the reporting period between July 1 and December 31 and postmarked on or before July 30 for the reporting period between January 1 through June 30. [40 CFR 60.49b(h), 40 CFR 60.49b(w)].
- o. The Permittee shall submit a summary report of the monitoring and recordkeeping activities, postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

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

When burning non-CISWI subject wood only

- a. The following Best Available Control Technology (BACT) limits shall not be exceeded:

Emission Source	Pollutants	Emission Limit*	Control Technology
Boilers (ID Nos. ES-1A and ES-1B)	Carbon monoxide	0.45 lb/million Btu [stack test: 3-run average]	good combustion control
	Sulfuric acid mist	0.011 lb/million Btu [stack test: 3-run average]	use of low sulfur wood

\* BACT emission limits shall apply to each source (ID Nos. ES-1A and ES-1B) and at all times except during the following: Emissions resulting from start-up, shutdown or malfunction above those given in Section 2.1 A.4.a are permitted provided that optimal operational practices are adhered to and periods of excess emissions are minimized.

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

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

- c. No monitoring, recordkeeping, or reporting shall be required for emissions of CO and sulfuric acid mist from boilers (**ID Nos. ES-1A and ES-1B**).

**5. 15A NCAC 02D .0614: COMPLIANCE ASSURANCE MONITORING**

- a. The Permittee shall ensure that PM10 emitted from the two boilers (**ID Nos. ES-1A and ES-1B**) are controlled by two multiclones (**ID Nos. CD-1A2 and CD-1B2**) and two bagfilters (**ID Nos. CD-1A and CD-1B**).

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

- b. The Permittee shall comply with the monitoring approach as included in the following table:

<b>Indicator</b>	<b>Opacity</b>
[64.6(c)(1)(i)]	
Measurement Approach [64.6(c)(1)(ii)]	Opacity is indicated by a continuous opacity monitors (COMS)
Indicator Range [64.6(c)(2)]	An excursion is defined as a 3-hour block average value of opacity greater than 12 percent.
Quality Improvement Plan (QIP) Threshold [64.8]	Four excursion, as defined above, within any 6-month period.
QA/QC Practices and Criteria [64.3(b)(3)]	The COMS shall be calibrated, maintained and operated according to 40 CFR 60, Appendix B, Performance Specification 1 and Appendix F, Procedure 3.
Monitoring Frequency [64.3(b)(4)]	Opacity is continuously monitored while bagfilters ( <b>ID Nos. CD-1A and CD-1B</b> ) are in operation.
Data Averaging Period [64.3(b)(4)]	3-hour block average of 6-minute averages starting at midnight each day. (Total of eight 3-hour block periods)

- c. For any excursion, the Permittee shall initiate an inspection of the control equipment and/or the COMS and initiate the repairs as necessary. The following corrective actions shall be taken as soon as practical:
- Identify cause of excursion.
  - Initiate actions to correct the cause of any excursions identified in step i above. Repair equipment that is not operating properly.
  - Initiate work order for baghouse inspection and repair as needed for any equipment that cannot be repaired during operation.
  - Document nature and cause of excursions in operations log.
  - Improve preventative maintenance procedures as necessary in accordance with CAM QIP (if one exists).
  - Provide notification to DAQ in accordance with reporting requirements in the Section 2.1 A.5.e below.
- If the above monitoring and recordkeeping is not performed, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0614.
- d. The Permittee shall retain records of recorded COMS data, each excursion report, and each corrective action taken. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0614 if these records are not retained.

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

- e. The Permittee shall submit a summary report of all monitoring 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. The report shall also include the following information, as applicable:

- i. company name, address and facility ID number,
- ii. a statement by a responsible official with that official's name, title, and signature, certifying the accuracy of the content of the report,
- iii. the date of report and beginning and ending dates of the reporting period,
- iv. a statement that there were no excursions outside of the allowable operating parameter limits during the reporting period (as applicable), and that no continuous opacity monitoring system (COMS) was inoperative, inactive, malfunctioning, out-of-control, repaired, or adjusted. Or for each exceedance of an allowable operating parameter that occurs, the compliance report must contain:
  - (A) the total operating time of the source during the reporting period,
  - (B) information on the number, duration, and cause of exceedances (including unknown cause), if applicable, and the corrective action taken and
  - (C) information on the number, duration, and cause (including unknown cause, if applicable) for COMS downtime incidents, other than downtime associated with zero and span and other daily calibration checks.
  - (D) a description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

**6. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY  
(40 CFR Part 63, Subpart JJJJJ)**

**Applicability** [40 CFR 63.11193, 63.11194(a)(1), (b), 63.11200(b)]

- a. For these emission sources (existing boilers in the biomass subcategory; **ID Nos. ES-1A and ES-1B**), the Permittee shall comply with all applicable provisions, including the notification, testing, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .1111, "Maximum Achievable Control Technology" as promulgated in 40 CFR Part 63, Subpart JJJJJ, "National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers," including Subpart A "General Provisions."

**Definitions and Nomenclature**

- b. For the purposes of this permit condition, the definitions and nomenclature contained in 40 CFR 63.11237 shall apply.

**General Provisions** [40 CFR 63.11235]

- c. The Permittee shall comply with the General Provisions as applicable pursuant to Table 8 of 40 CFR 63 Subpart JJJJJ.

**Compliance Dates** [40 CFR 63.11196, 40 CFR 63.11210]

- d. The boilers (**ID Nos. ES-1A and ES-1B**) did not operated between the effective date of 40 CFR 63 Subpart JJJJJ and the compliance date of March 21, 2014. In accordance with 40 CFR 63.11210(k)(2), the Permittee shall complete the initial performance tune-up, no later than 30 days after the re-start of the affected boiler on solid fossil fuel, biomass, or liquid fuel. The Permittee met this requirement for boiler ES-1A on September 24, 2015 and for boiler ES-1B on September 18, 2015. [40 CFR 63.11196(a)(1), 63.11210(c) and (k)(2)]
- e. The Permittee shall comply with the energy assessment requirement no later than March 21, 2014. This assessment was performed for boilers (**ID Nos. ES-1A and 1B**) on April 17, 2014. [40 CFR 63.11196(a)(3)]

**Notification of Compliance Status** [40 CFR 63.11225]

- f. The Permittee shall submit a Notification of Compliance Status no later than January 22, 2016, which is 120 days after completion of the initial tune-ups pursuant to 40 CFR 63.11225(a)(4). The Permittee met this requirement on April 26, 2016.



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

- g. At all times the Permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the Permittee to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.11205(a)] The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these requirements are not met.

**Performance Tune-up Requirements** [15A NCAC 02Q .0508(b)]

- h. The Permittee shall conduct an initial tune-up of the boiler and subsequent tune-ups biennially.
  - i. Each biennial tune-up shall be conducted no more than 25 months after the previous tune-up.
  - ii. The Permittee shall conduct the tune-ups while burning the type of fuel (or fuels in the case of boilers that routinely burn two types of fuels at the same time) that provided the majority of the heat input to the boiler over the 12 months prior to the tune-up.
  - iii. The tune-ups shall be conducted according to the following procedures:
    - (A) As applicable, inspect the burner, and clean or replace any components of the burner as necessary. (The Permittee may delay the burner inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection.
    - (B) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available.
    - (C) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly. (The Permittee may delay the inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection.
    - (D) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any nitrogen oxide requirement to which the unit is subject.
    - (E) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.
    - (F) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of startup.

[40 CFR 63.11201(b), Table 2, 40 CFR 63.11223(a), (b)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these requirements in this paragraph are not met.

**Energy Assessment Requirements** [15A NCAC 02Q .0508(b)]

- i. The Permittee shall conduct a one-time energy assessment performed by a qualified energy assessor. This assessment was performed for boilers (**ID Nos. ES-1A and 1B**) on April 17, 2014. [40 CFR 63.11201(b), Table 2]

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

- j. The Permittee shall maintain the following records:
  - i. As required in 40 CFR 63.10(b)(2)(xiv), the Permittee shall keep a copy of each notification and report that was submitted to comply with this rule and all documentation supporting any Notification of Compliance Status that was submitted.

- ii. The Permittee shall keep the following records to document conformance with the performance tune-ups:
  - (A) Records must identify each boiler, the date of tune-up, the procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned.
  - (B) The concentrations of CO in the effluent stream in parts per million, by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler.
  - (C) A description of any corrective actions taken as a part of the tune-up of the boiler.
  - (D) The type and amount of fuel used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.
- iii. The Permittee shall keep a copy of each boiler energy assessment report.
- iv. Records of the occurrence and duration of each malfunction of the boiler or of the associated air pollution control and monitoring equipment.
- v. Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in Section 2.1 A.6.g, including corrective actions to restore the malfunctioning boiler, air pollution control, or monitoring equipment to its normal or usual manner of operation.
- vi. For operating units that combust non-hazardous secondary materials that have been determined not to be solid waste pursuant to 40 CFR 241.3(b)(1), the Permittee shall keep a record which documents how the secondary material meets each of the legitimacy criteria under 40 CFR 241.3(d)(1). If the Permittee combusts a fuel that has been processed from a discarded non-hazardous secondary material pursuant to 40 CFR 241.3(b)(4), the Permittee must keep records as to how the operations that produced the fuel satisfies the definition of processing in 40 CFR 241.2 and each of the legitimacy criteria in 40 CFR 241.3(d)(1). If the fuel received a non-waste determination pursuant to the petition process submitted under 40 CFR 241.3(c), the Permittee must keep a record that documents how the fuel satisfies the requirements of the petition process. For operating units that combust non-hazardous secondary materials as fuel per 40 CFR 241.4, the Permittee must keep records documenting that the material is a listed non-waste under 40 CFR 241.4(a).  
[40 CFR 63.11225(c), 63.11223(b)(6)]
- k. The records must be in a form suitable and readily available for expeditious review. The Permittee shall keep each record for 5 years following the date of each recorded action. The Permittee shall keep each record on-site or be accessible from a central location by computer or other means that instantly provide access at the site for at least 2 years after the date of each recorded action. The Permittee may keep the records off site for the remaining 3 years. [40 CFR 63.11225(d)]
- l. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in Sections 2.1 A.6.j and k are not met.

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

- m. The reporting requirements of 40 CFR 63.11225(b) shall be met by complying with General Condition P of Section 3 of this permit.

**State-enforceable only****7. SENATE BILL 3 (Session Law 2007-397)**When burning non-CISWI subject wood only

- a. The following Best Available Control Technology (BACT) limits shall not be exceeded:

EMISSION SOURCE	POLLUTANT	EMISSION LIMITS*	CONTROL TECHNOLOGY
Boilers (ID Nos. ES-1A and ES-1B)	PM/PM <sub>10</sub>	0.036 lb/million Btu (both filterable and condensable) [stack test: 3-run average]	multiclone and bagfilter
	PM <sub>2.5</sub>	0.011 lb/million Btu (both filterable and condensable [organic and inorganic including sulfuric acid mist]) [stack test: 3-run average]	multiclone and bagfilter
	Sulfur dioxide	0.025 lb/million Btu [CEM: 30-day rolling average]	use of low sulfur wood
	Nitrogen oxides	0.125 lb/million Btu [CEM: 30-day rolling average]	selective non-catalytic reduction
	Volatile organic compounds	0.03 lb/million Btu [stack test: 3-run average]	good combustion control
	Mercury	5 x 10 <sup>-6</sup> lb/million Btu [stack test: 3-run average]	bagfilter

\* BACT emission limits shall apply to each source (ID Nos. ES-1A and ES-1B) and at all times except during the following: Emissions resulting from start-up, shutdown or malfunction above those given in Section 2.1 A.7.a above are permitted provided that optimal operational practices are adhered to and periods of excess emissions are minimized.

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

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

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

- c. The Permittee shall monitor NO<sub>x</sub> and SO<sub>2</sub> emissions from boilers (ID Nos. ES-1A and ES-1B) using continuous emissions monitoring (CEM) systems that meet the requirements of 40 CFR Part 75, except that unbiased values may be used and no missing data substitution procedures are required. The 30-day rolling average shall be calculated by summing all the valid hourly averages in the 30-day period and the sum shall be divided by the number of valid hourly averages. The minimum number of data points, equally spaced, required to determine a valid hour value shall be determined by 40 CFR Part 75. For the purposes of determining 30-day rolling average, the Permittee shall not use data collected during periods of startup, shutdown, or malfunction. Startup shall end when either one or both of the two boilers exhausting into a common stack exceeds 30,000 klb/hr steam load. If both boilers are in operation, startup ends when either boiler exceeds 30,000 klb/hr steam load. Shutdown shall begin when either one or both of the two boilers exhausting into a common stack falls below 30,000 klb/hr steam load. If both boilers are in operation, shutdown begins when both boilers drop below 30,000 klb/hr steam load.
- d. Monitoring/recordkeeping requirements for PM emissions from boilers (ID Nos. ES-1A and ES-1B) in Sections 2.1 A.1. c and d above shall be sufficient to ensure compliance with PM/PM<sub>10</sub>, PM<sub>2.5</sub> and Hg BACT under Senate Bill 3 (Session Law 2007-397).
- e. No monitoring/recordkeeping shall be required for VOC emissions from boilers (ID Nos. ES-1A and ES-1B).

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

- f. Reporting requirement for PM emissions from boilers (**ID Nos. ES-1A and ES-1B**) in Section 2.1 A.1.f above shall be sufficient to ensure compliance with PM/PM<sub>10</sub>, PM<sub>2.5</sub> and Hg BACT under Senate Bill 3 (Session Law 2007-397).
- g. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. All instances of deviations from the requirements of this permit must be clearly identified.

**State-enforceable only****8. NCGS 62-133.8 RENEWABLE ENERGY AND EFFICIENCY PORTFOLIO STANDARD (REPS)**

Under the provisions of a Renewable Energy and Energy Efficiency Portfolio Standard (REPS), the Permittee will be categorized as a new renewable energy facility that delivers electric power to an electric power supplier. NCGS 62-133.8(g) requires biomass combustion processes at a new renewable energy facility to meet Best Available Control Technology (BACT). The Permittee submitted a BACT analysis to the Division of Air Quality on March 19, 2015 for firing any percentage of poultry litter and non-CISWI subject wood in boilers (**ID Nos. ES-1A and ES-1B**). Upon determination of BACT, the Division will reopen the permit for inclusion of BACT conditions.

**B. One 10,000-gallon aqueous ammonia storage tank (ID No. ES-15)**

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Toxic Air Pollutants	<b>State-enforceable only</b> 0.99 lb/hr of ammonia	15A NCAC 02D .1100

**State-enforceable only****1. 15A NCAC 02D .1100 CONTROL OF TOXIC AIR POLLUTANTS**

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

Emission Sources	Pollutants	Emission Rates
Aqueous Ammonia Storage Tank ( <b>ID No. ES-15</b> )	Ammonia	0.99 lb/hr

**Testing** [15A NCAC 02D .1105]

- b. No testing is required.

**Monitoring/Recordkeeping/Reporting** [15A NCAC 02D .1105]

- c. No monitoring, recordkeeping, or reporting is required for compliance with 15A NCAC 02D .1100.

**C. Four biomass belt dryers, with maximum capacity of 6 tons per hour, each (ID Nos. ES-17, ES-18, ES-19, and ES-21)**

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous Air Pollutants	Source testing to establish emission rate	NCGS 143-215.108
Volatile Organic Compounds	Source testing to establish emission rate	NCGS 143-215.108

**1. NCGS 143-215.108: CONTROL OF SOURCES OF AIR POLLUTION; PERMITS REQUIRED**

- a. Under the provisions of North Carolina General Statute 143-215.108 and in accordance with 15A NCAC 02D .0605, the Permittee shall conduct source testing to quantify the emissions of volatile organic compounds (VOC) and hazardous air pollutants (HAP) from the biomass belt dryers (**ID Nos. ES-17, ES-18, ES-19, and ES-21**).

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

- b. The Permittee shall perform such testing in accordance with 15A NCAC 02D .2600.
- c. At least 45 days prior to performing any required emissions testing, the Permittee must submit a testing protocol to the Regional Supervisor, DAQ for review and approval. All testing protocols must be approved by the DAQ prior to performing such tests.
- d. To afford the Regional Supervisor, DAQ, the opportunity to have an observer present, the Permittee shall provide the Regional Office, in writing, at least 15 days notice of any required performance test(s).
- e. The emission tests shall be conducted no later than 180 days after the initial startup of the affected sources. During the source test, the Permittee shall determine the VOC emission rate in accordance with a DAQ-approved test method.
- f. The Permittee shall be responsible for ensuring, within the limits of practicality, that the equipment or process being tested is operated at or near its maximum normal production rate or at a lesser rate if specified by the Director or his delegate. If the maximum normal production rate observed during testing exceeds 6 tons per hour, the Permittee may submit a notification for a Section 502(b)(10) change in accordance with 15A NCAC 02Q .0523 to modify the capacity of the belt dryers.
- g. Based on the testing results, if the potential emission rate of VOC is five tons per year or less and the potential emission rate of HAP is less than 1,000 pounds per year, the biomass belt dryers (**ID Nos. ES-17, ES-18, ES-19, and ES-21**) are considered "Insignificant activities because of size or production rate," as defined under 15A NCAC 02Q .0503(8). Upon approval of the emission source test by DAQ, the Permittee may submit a notification for a Section 502(b)(10) change in accordance with 15A NCAC 02Q .0523 to move these emission sources to the insignificant activities list, if applicable.

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

- h. The test results must be submitted to the Regional Supervisor, DAQ, in accordance with the approved procedure of the Environmental Management Commission within 60 days of testing.
- i. Two copies of the test results must be submitted to the Regional Supervisor, DAQ, in accordance with the approved procedures of the Environmental Management Commission, not later than 30 days after sample collection.

**2. 15A NCAC 02Q .0504: OPTION FOR OBTAINING CONSTRUCTION AND OPERATION PERMIT**

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

- a. For completion of the two-step significant modification process pursuant to 15A NCAC 02Q .0501(c)(2) or (d)(2), the Permittee shall file an amended application following the procedures of Section 15A NCAC 02Q .0500 within one year from the date of beginning operation of this source (**ID No ES-21**).

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

- b. The Permittee shall notify the Regional Office in writing of the date of beginning operation of this source (**ID No ES-21**), postmarked no later than 30 days after such date.

**D. One natural gas-fired drum dryer (ID No. ES-22) equipped with low NO<sub>x</sub> burners, and a multi-cyclone (ID No. CD-6) in series with a regenerative thermal oxidizer (ID No. CD-7)**

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 per hour $E = 55.0 \times P^{0.11} - 40$ for $P > 30$ tons per hour  Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Sulfur dioxide	2.3 pound per million Btu heat input	15A NCAC 02D .0516
Visible emissions	20 percent opacity	15A NCAC 02D .0521
Volatile organic compounds and Particulate matter	Operate control devices at all times; Perform regular maintenance of control devices. See Section 2.1 A.4.	15A NCAC 02Q .0317 [PSD avoidance]
n/a	Complete the .0501(c)(2) 2-step application	15A NCAC 02Q .0504
Hazardous air pollutants	Facility-wide emission limits. See Section 2.2 A.1.	15A NCAC 02Q .0317 [MACT avoidance]
Carbon monoxide, Sulfur dioxide, and Nitrogen dioxides	Facility-wide emission limits. See Section 2.2 A.2.	15A NCAC 02Q .0317 [PSD avoidance]
Toxic air pollutants	<b>State-enforceable only</b> See Section 2.2 A.3	15A NCAC 02Q .0711

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

- a. Emissions of particulate matter from this source (**ID No. ES-22**) shall not exceed an allowable emission rate as calculated by the following equations:

$$\begin{aligned} \text{For } P \leq 30 \text{ tons per hour: } & E = 4.10 \times P^{0.67} \\ \text{For } P > 30 \text{ tons per hour: } & E = 55.0 \times P^{0.11} - 40 \end{aligned}$$

Where:

E = allowable emission rate in pounds per hour

P = process weight in tons per hour

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

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

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

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

- c. Particulate matter emissions from these emission sources shall be controlled by the multi-cyclone (**ID No. CD-5**) as described above. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturers. In addition to the manufacturer's inspection and

maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include a monthly external inspection of the ductwork and cyclones noting the structural integrity. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the control devices are not inspected and maintained.

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

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

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

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

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

- a. Emissions of sulfur dioxide, when burning natural gas in this source (**ID No. ES-22**), shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

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

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limits given in Section 2.1 D.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 burning of natural gas in this source (**ID No. ES-22**).

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

- a. Visible emissions from this source (**ID No. ES-22**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

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

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

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

- c. i. To ensure compliance, once a week the Permittee shall observe the emission points of this source (**ID No. ES-22**) for any visible emissions above normal. The weekly observation must be made for each week of the calendar year period to ensure compliance with this requirement. If visible emissions from this source are observed to be above normal, the Permittee shall either:
  - (A) take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
  - (B) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 D.3.a above.
- ii. The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if:
  - (A) the above-normal emissions are not corrected per c.i.(A) above;
  - (B) the demonstration in c.i.(B) above cannot be made;
  - (C) the weekly observations are not conducted per c.i above; or

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

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. the date and time of each recorded action;
  - ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
  - iii. the results of any corrective actions performed.The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

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

- e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.1 D.3.c and d above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**4. 15A NCAC 02D .0611: MONITORING EMISSIONS FROM OTHER SOURCES**

- a. Emissions of particulate matter (PM) and volatile organic compounds (VOC) from the drum dryer shall (**ID No. ES-22**) be controlled at all times the drum dryer is operating, as described in the Permitted Emission Source List in Section 1.

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

- b. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate the VOC destruction efficiency of the regenerative thermal oxidizer (**ID No. CD-6**) above by testing the drum dryer (**ID No. ES-22**). Details of the emissions testing and reporting requirements can be found in General Condition JJ. The testing shall be conducted within 180 days of the initial startup of the drum dryer, or a different date if approved by DAQ.
- c. If additional emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ.
- d. If the Permittee does not perform the required testing as specified in Sections 2.1 D.4.b and c, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0611.

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

- e. To ensure compliance, the Permittee shall install, operate, and maintain a continuous parameter monitoring system (CPMS) to measure and record the operating temperature of the oxidizer (**ID No.**



- CD-7).** The CPMS shall be installed and operated based on manufacturer's specifications.
- f. The Permittee shall maintain the minimum operating temperature (3-hour rolling average) within the oxidizer (**ID No. CD-7**) while this emission source (**ID No. ES-22**) is operating.
    - i. The minimum operating temperature is 1,500 °F, or
    - ii. The Permittee may establish a different minimum operating temperature during testing of the oxidizer.
  - g. To ensure compliance, the Permittee shall perform inspections and perform maintenance on the oxidizer (**ID No. CD-7**) as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include an annual (for each 12-month period following the initial inspection) internal inspection of the oxidizer and all associated ductwork.
  - h. If the required monitoring activities are not performed as specified in Section 2.1 D.4.e through g, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0611.

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

- i. The Permittee shall, once per month, calculate the VOC emissions from this source (**ID No. ES-22**) for the previous operating month and the running 12-month total ending on that month.
- j. The results of internal inspections, maintenance, and monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. the date and time of each recorded action;
  - ii. the results of each inspection;
  - iii. the results of any maintenance performed on the oxidizer;
  - iv. any variance from manufacturer's recommendations, if any, and corrections made; and
  - v. a record of temperature measurements produced by the CPMS.

If the required records are not kept, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0611.

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

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

**5. 15A NCAC 02Q .0504: OPTION FOR OBTAINING CONSTRUCTION AND OPERATION PERMIT**

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

- a. For completion of the two-step significant modification process pursuant to 15A NCAC 02Q .0501(c)(2) or (d)(2), the Permittee shall file an amended application following the procedures of Section 15A NCAC 02Q .0500 within one year from the date of beginning operation of these sources (**ID Nos. ES-22, CD-6, and CD-7**).

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

- b. The Permittee shall notify the Regional Office in writing of the date of beginning operation of these sources (**ID Nos. ES-22, CD-6, and CD-7**), postmarked no later than 30 days after such date.

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

### A. Facility-wide

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous air pollutants	Less than 10 tons of any single HAP and 25 tons of combined HAP per consecutive 12-month period	15A NCAC 02Q .0317 [MACT Avoidance]
Carbon monoxide	Less than 250 tons of CO per consecutive 12-month period	15A NCAC 02Q .0317 [PSD Avoidance]
Nitrogen dioxide	Less than 250 tons of NO <sub>x</sub> per consecutive 12-month period	
Sulfur dioxide	Less than 250 tons of SO <sub>2</sub> per consecutive 12-month period	

#### 1. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS for 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

- a. In order to avoid applicability of this regulation, the total hazardous air pollutant (HAP) emissions from the facility shall be less than 10 tons of any single HAP and 25 tons of combined HAP per consecutive 12-month period. [15A NCAC 02Q .0317]

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

- b. *Boiler Testing*: Under the provisions of North Carolina General Statute 143-215.108, the Permittee shall test the following emissions sources to establish site specific emission factors for demonstrating compliance with the emission limits in Section 2.2 A.1.a above:

Affected Sources	Pollutant	Reference Emission Factor (pounds per million Btu)	Test Method <sup>1</sup>
Boilers ( <b>ID Nos. ES-1A and ES-1B</b> )	Hydrogen Chloride (HCl)	5.31E-3	DAQ Approved Method
	Chlorine	1.8E-3	

<sup>1</sup> Test method will be determined by DAQ approved testing protocol.

- i. Under the provisions of North Carolina General Statute 143-215.108, the Permittee conducted an initial performance test for HCl and chlorine emissions on December 22, 2016 while firing 30% poultry litter blend in boilers (**ID Nos. ES-1A and ES-1B**).
- ii. Under the provisions of North Carolina General Statute 143-215.108, the Permittee shall conduct subsequent performance tests for HCl and chlorine emissions within 60 days of the date that the percentage of poultry litter firing exceeds 50%, 70% and 90% of total heat input to the boilers (**ID Nos. ES-1A and ES-1B**). The Permittee shall conduct a retest within 30 days of the test date, if the reference emission factors in 2.2 A.1.b are exceeded.
- iii. Testing of the boilers shall be conducted as specified below:
  - (A) At least 45 days prior to performing any required emissions testing, the Permittee shall submit two copies of a testing protocol to the Regional Supervisor, DAQ, for review and approval. All testing protocols must be approved by the DAQ prior to performing such tests.
  - (B) To afford the Regional Supervisor, DAQ, the opportunity to have an observer present, the Permittee shall provide the Regional Office, in WRITING, at least 15 days notice of any required performance test(s).
  - (C) Two copies of the final air emission test report shall be submitted to the Regional Supervisor, DAQ, not later than 60 days after sample collection.
  - (D) If the Permittee is required to operate the dry sorbent injection system (**ID Nos. CD-1A4 and CD-1B4**) to ensure compliance with emission limitations in Section 2.2 A.1.a, the Permittee shall establish the minimum or maximum parameter values during testing that indicate proper operation of the control devices.

- (E) Upon completion and approval of testing as specified in Section 2.2 A.1.b.ii, the emission factors in Section 2.2 A.1.b shall be revised with the highest HCl and chlorine emission factors measured during the testing series.
- iv. If the source tests are not performed in accordance with Sections 2.2 A.1.b.ii or b.iii or if the emission factors of HCl and chlorine exceed the reference emission factors in 2.2 A.1.b, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111.
- c. *Dryer testing*: Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the HAP emission limits above by testing the emission rate of formaldehyde and methanol from the drum dryer (**ID No. ES-22**). Details of the emissions testing and reporting requirements can be found in General Condition JJ. The testing shall be conducted within 180 days of the initial startup of the drum dryer, or a different date if approved by DAQ. If the emission testing is not performed as specified in this paragraph, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111.

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

- d. Emissions from the boilers (**ID Nos. ES-1A and ES-1B**) are required to be controlled by the dry sorbent injection systems (**ID Nos. CD-1A4 and CD-1B4**), only as necessary to achieve compliance with the HAP emission limitations in Section 2.2 A.1.a above. To ensure compliance, the Permittee shall perform inspections and perform maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include an annual (for each 12-month period following the initial inspection) inspection of the dry reagent injection systems, including inspection of the injection nozzles, pumping systems, and associated controls. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if dry sorbent injection systems are not inspected and maintained.
- e. The results of internal inspections and maintenance of the dry sorbent injection systems (**ID Nos. CD-1A4 and CD-1B4**) shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- the date and time of each recorded action;
  - the results of each inspection;
  - the results of any maintenance performed on the injection systems; and
  - any variance from manufacturer's recommendations, if any, and corrections made.
- The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these records are not maintained.
- f. To ensure proper control efficiency of the dry sorbent injection systems, the Permittee shall install, operate, and maintain continuous parameter monitoring systems (CPMS) for monitoring the dry sorbent injection rates. The Permittee shall continuously monitor and record the dry sorbent injection rates when the dry sorbent injection systems (**ID Nos. CD-1A4 and CD-1B4**) are in operation. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the CPMS are not installed or the dry sorbent injection rates are not monitored and the records are not maintained.
- g. HAP emissions from the drum dryer (**ID No. ES-22**) shall be controlled by the oxidizer (**ID No. CD-7**). To ensure compliance, the Permittee shall operate and perform maintenance on the oxidizer as required by Sections 2.1 E.4.e and f above and conduct associated recordkeeping as required by Section 2.1 E.4.h above. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the monitoring and recordkeeping requirements are not met.
- h. To ensure proper control efficiency of the oxidizer (**ID No. CD-7**), the Permittee shall operate a CPMS and maintain an operating temperature as required by Sections 2.1 E.4.d and e. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the required monitor is not installed, the oxidizer temperature is not monitored or maintained, or the records are not maintained.
- i. The Permittee shall calculate emissions of HCl and chlorine from the boilers (**ID Nos. ES-1A and ES-1B**) at the end of each month and shall record the emissions monthly in a logbook, in accordance with the following formulas:

Emissions of Hydrogen Chloride

HCl Emissions (tons/month) =  $EF_{HCl}$  (lb/mm Btu of fuel) \* [non-CISWI subject wood usage (lb/month) \*  $HHV_{wood}$  (Btu/ lb wood) + poultry litter usage (lb/month) \*  $HHV_{poultry\ litter}$  (Btu/lb poultry litter)] \* (mm Btu/1E6 Btu) \* (ton /2000 lbs)

Emissions of Chlorine

Cl Emissions (tons/month) =  $EF_{Cl}$  (lb/mm Btu of fuel) \* [non-CISWI subject wood usage (lb/month) \*  $HHV_{wood}$  (Btu/ lb wood) + poultry litter usage (lb/month) \*  $HHV_{poultry\ litter}$  (Btu/lb poultry litter)] \* (mm Btu/1E6 Btu) \* (ton /2000 lbs)

Where:

- $EF_{HCl}$  = 5.31E-3 lb / mm Btu, as provided in Permit Application No. 7800116.16G. Upon completion and approval of testing as specified in Section 2.2 A.1.b.iii, the Permittee shall use the highest HCl emission factor measured during the testing series in this equation to calculate HCl emissions.
- $EF_{Cl}$  = 1.8E-3 lb / mm Btu, as provided in Permit Application No. 7800116.15B. Upon completion and approval of testing as specified in Section 2.2 A.1.b.iii, the Permittee shall use the highest chlorine emission factor measured during the testing series in this equation to calculate chlorine emissions.
- $HHV_{wood}$  = 4,730 Btu / lb of wood as reported in the wood fuel specifications from Biomass Energy Lab, as provided by the Permittee. The Permittee may request to revise the air quality permit to update the heating values, if necessary.
- $HHV_{poultry\ litter}$  = 4,435 Btu / lb of poultry as provided by in DAQ's Non-Hazardous Secondary Material Determination for Poultry Power USA, dated March 8, 2013. The Permittee may request to revise the air quality permit to update the heating values, if necessary.

If the required calculations are not conduct or if the records are not maintained in a logbook (written or electronic format), the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111. If the emissions of either HCl or chlorine exceed 10 tons for any consecutive 12-month period, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111.

- j. The Permittee shall calculate and record in a logbook (written or electronic format) the monthly and consecutive 12-month total for facility-wide HAP emissions. If the facility-wide emissions of any single HAP exceed 10 tons for any consecutive 12-month period or if the facility-wide emissions of all HAPs combined exceed 25 tons for any consecutive 12-month period, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111.
- k. The Permittee shall keep a record of the applicability determination on site at the source for a period of five years after the determination, or until the source becomes an affected source. The determination shall include the analysis demonstrating why the Permittee believes the source is unaffected pursuant to 40 CFR Part 63.10(b)(3). The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the records are not maintained.

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

1. The Permittee shall submit a semiannual summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following:
  - i. The monthly HCl and chlorine emissions from the boilers (**ID Nos. ES-1A and ES-1B**) for the previous 17 months. The emissions must be calculated for each of the 12-month periods over the previous 17 months.
  - ii. The facility-wide total HAP emissions for the previous 17 months. The emissions must be calculated for each of the 12-month periods over the previous 17 months.
  - iii. All instances of deviations from the requirements of this permit must be clearly identified.

**2. 15A NCAC 02Q. 0317: AVOIDANCE CONDITIONS****for 15A NCAC 02D. 0530: PREVENTION OF SIGNIFICANT DETERIORATION**

- a. To comply with this permit and avoid the applicability of 15A NCAC 02D .0530 “Prevention of Significant Deterioration”, facility-wide sources shall discharge into the atmosphere less than 250 tons of CO per consecutive 12-month period.
- b. To comply with this permit and avoid the applicability of 15A NCAC 02D .0530 “Prevention of Significant Deterioration”, facility-wide sources shall discharge into the atmosphere less than 250 tons of NO<sub>x</sub> per consecutive 12-month period.
- c. To comply with this permit and avoid the applicability of 15A NCAC 02D .0530 “Prevention of Significant Deterioration”, facility-wide sources shall discharge into the atmosphere less than 250 tons of SO<sub>2</sub> per consecutive 12-month period.

**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 limits given in Sections 2.2 A.2.a through c, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

- e. The Permittee shall fire no more than 500 gallons of No. 2 fuel oil in the boilers (**ID Nos. ES-1A and ES-1B**) during a consecutive 12-month period. The Permittee shall only fire No. 2 fuel oil during periods of start-up of the boilers and shall generate no electricity while firing No. 2 fuel oil in the boilers. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if these requirements are not met.
- f. To ensure compliance with the emission limit in Section 2.2.A.2.a above, the Permittee shall install and certify a continuous emission monitoring (CEM) system to measure CO emissions from the boilers. The CO CEMS shall be installed on the common stack and certified in accordance with Performance Specifications 4 and 6, Appendix A, 40 CFR Part 60. Each CO CEMS shall be meet the ongoing QA/QC requirements specified in Procedure 1, Appendix F, 40 CFR Part 60.
  - i. Except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and cylinder gas audits), monitor continuously (or collect data at all required intervals) at all time that the affected source is operating.
  - ii. The CO CEMS data shall be reduced as specified in 40 CFR 60.13(h)(2).
  - iii. Whenever hourly CO emission data is missing, the Permittee shall substitute 98.9 lbs/hr.
  - iv. The CO CEMS monitor downtime shall not exceed 5.0 percent of the operating time in a calendar quarter, as calculated by the following equation for Percent Monitor Downtime (%MD):

$$\%MD = \left( \frac{\text{TotalMonitorDowntime}}{\text{TotalSourceOperatingTime}^*} \right) \times 100$$

If the Permittee does not comply with these requirements, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

- g. To ensure compliance with the emission limit in Section 2.2.A.2.b above, the Permittee shall monitor NO<sub>x</sub> emissions from the boilers (**ID Nos. ES-1A and ES-1B**) using a CEMS that meets the requirements of 40 CFR Part 75, except that unbiased data may be used (missing data shall be filled in accordance with 40 CFR 75). If the NO<sub>x</sub> CEMS does not comply with these requirements, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.
- h. To ensure compliance with the emission limit in Section 2.2.A.2.c above, the Permittee shall monitor SO<sub>2</sub> emissions from the boilers (**ID Nos. ES-1A and ES-1B**) using a CEMS that meets the requirements of 40 CFR Part 75, except that unbiased data may be used (missing data shall be filled in accordance with 40 CFR 75). If the SO<sub>2</sub> CEMS does not comply with these requirements, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

- i. The Permittee shall monitor volumetric flow from the boilers (**ID Nos. ES-1A and ES-1B**) using a flow monitor that meets the requirements of 40 CFR Part 75, except that unbiased data may be used (missing data shall be filled in accordance with 40 CFR 75). If the volumetric flow meter does not comply with these requirements, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

- j. The Permittee shall record the following in logbook (written or electronic) in reference to No. 2 fuel oil usage:
  - i. The date and time of each startup when No 2. fuel oil was fired in the boilers.
  - ii. The amount in gallons of No. 2 fuel oil used during startup.The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the records are not maintained or the fuel usage exceeds the limit in Section 2.2 A.2 e.
- k. The Permittee shall calculate and record the monthly and the 12-month rolling totals of CO emissions, as determined by the CO CEMS. If the CO emissions on a consecutive 12-month basis exceed the emissions limit in Section 2.2 A.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.
- l. The Permittee shall calculate and record the monthly and the 12-month rolling totals of NO<sub>x</sub> emissions, as determined by the NO<sub>x</sub> CEMS. If the NO<sub>x</sub> emissions on a consecutive 12-month basis exceed the emissions limit in Section 2.2 A.2.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.
- m. The Permittee shall calculate and record the monthly and the 12-month rolling totals of SO<sub>2</sub> emissions, as determined by the SO<sub>2</sub> CEMS. If the SO<sub>2</sub> emissions on a consecutive 12-month basis exceed the emissions limit in Section 2.2 A.2.c above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

- n. The Permittee shall submit a semiannual summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following:
  - i. The monthly CO, NO<sub>x</sub>, and SO<sub>2</sub> emissions for the previous 17 months on a facility-wide basis. The emissions must be calculated for each of the 12-month periods over the previous 17 months.
  - ii. All instances of deviations from the requirements of this permit must be clearly identified.

**State-enforceable only**

**3. 15A NCAC 02Q .0711: EMISSION RATES REQUIRING A PERMIT**

- a. For each of the toxic air pollutants (TAPs) listed below, the Permittee has made a demonstration that facility-wide actual emissions from non-exempt sources do not exceed the Toxic Permit Emission Rates (TPERs) listed in 15A NCAC 02Q .0711(a). The facility shall be operated and maintained in such a manner that emissions of any listed TAPs from the facility, including fugitive emissions, will not exceed TPERs listed in 15A NCAC 02Q .0711(a).
- b. A permit to emit any of the below listed TAPs shall be required for this facility if actual emissions from all non-exempt sources will become greater than the corresponding TPERs.
- c. Prior to exceeding any of these listed TPERs, the Permittee shall be responsible for obtaining a permit to emit TAPs and for demonstrating compliance with the requirements of 15A NCAC 02D .1100, Control of Toxic Air Pollutants.

- d. In accordance with the approved application<sup>1</sup>, the Permittee shall maintain records of operational information demonstrating that the TAP emissions do not exceed the TPERs as listed below:

TPERs Limitations				
Pollutant (CAS Number)	Carcinogens (pounds per year)	Chronic Toxicants (pounds per day)	Acute Systemic Toxicants (pounds per hour)	Acute Irritants (pounds per hour)
benzene (71-43-2)	8.1			
benzo(a)pyrene (50-32-8)	2.2			
formaldehyde (50-00-0)				0.04
hexane isomers (except n-hexane) (HEXANEISO)				92
toluene (108-88-3)		98		14.4

- e. When calculating the hourly emission rate of formaldehyde, the Permittee shall calculate the highest emission rate occurring during any 15-minute period and multiply that number by four. [15A NCAC 02Q .0711(c)]

**Monitoring/Recordkeeping/Reporting** [15A NCAC 02D .0605 and .0611]

- f. No monitoring/recordkeeping/reporting is required to demonstrate compliance for TAP emissions from this facility.

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<sup>1</sup> Application 7800166.16I, incorporated into the T24 permit.

## 2.3 - Schedule of Compliance

### A. Special Order of Consent (SOC 2017-001)

The CO emissions from the boilers (**ID Nos. ES-1A and ES-1B**) as determined by the CO CEMS exceeded 250 tons on a consecutive 12-month basis in September 2016. The Permittee anticipates this emission limit will be exceeded on an ongoing basis thereafter. Therefore, the Permittee is deemed in noncompliance with 15A NCAC 02D .0530, in accordance with Section 2.2 A.2.j above.

The Permittee and the NC Division of Air Quality have entered into a Special Order of Consent, SOC 2017-001, with an effective date of February 27, 2017, to address noncompliance with 15A NCAC 02D .0530. The SOC provides a schedule of compliance allowing the Permittee to operate until such time as the Permittee has returned to compliance with 15A NCAC 02D .0530. The SOC 2017-001 will expire upon issuance of the PSD permit to NCRP and the date the PSD permit becomes final and enforceable after all periods to appeal the issuance of the permit have expired and after all penalties accrued under SOC 2017-001 have been paid in full.

The schedule of compliance for the Permittee, as provided in SOC 2017-001 and as required in accordance with 40 CFR 70.5(c)(8) and 70.6(c)(3), is as follows:

1. The Permittee shall submit a PSD permit application for the North Carolina Renewable Power – Lumberton, LLC facility (Facility ID No. 7800166) no later than 30 days from the effective date of SOC 2017-001.
2. The Permittee shall submit (written or electronically) a CO emission report to the Regional Supervisor within 14 days of the end of each calendar month. The CO emission report shall contain the following:
  - a. A detailed description of boiler operations;
  - b. The amount and type of fuel combusted in the boilers;
  - c. Heat input calculations for each boiler; and
  - d. The peak rate of CO emissions (lb/million Btu and lb/hr), the total CO emissions (tons) for the month, and the consecutive 12-month total CO emissions (tons).
3. In accordance with 70.6(c)(3), the Permittee shall submit a semiannual progress report, acceptable to the Regional Air Quality Supervisor, 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 progress report shall contain the following:
  - a. Dates for achieving the activities, milestones, or compliance required in this schedule of compliance, and dates when such activities, milestones or compliance were achieved; and
  - b. An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.



## 2.4- Phase II Acid Rain Permit Requirements

**ORIS code: 10382**

**Effective: XXXX, 2017 until XXXX, 2022**

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

Source	Pollutant	Emission Limit
Unit 1 (ES-1A)	SO <sub>2</sub>	SO <sub>2</sub> allowances are not allocated by U.S. EPA for these units under 40 CFR Part 72.
Unit 2 (ES-1B)	NO <sub>x</sub>	Does not apply for units that are not subject to an Acid Rain emissions limitation or reduction requirement for SO <sub>2</sub> under Phase I or Phase II of the CAA as specified in 40 CFR 76.1(a).

### C. Acid Rain Permit Application (attached)

The permit applications submitted for this facility, as approved by the 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 January 23, 2017.

### Federal-Enforceable Only

## 2.5- Cross State Air Pollution Rules (CSAPR) Permit Requirements

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

## 2.6- Permit Shield for Non-Applicable Requirements

The Permittee is shielded from the following non-applicable requirements:

- The EPA's Clean Air Interstate Rules (CAIR) are not applicable to the two boilers (**ES-1A and ES-1B**), pursuant to 40 CFR 52.35(f) and 52.36(e). CAIR has been replaced by the Cross State Air Pollution Rule (CSAPR).
- The requirements of 15A NCAC 02D .2400, "Clean Air Interstate Rules" expired on February 1, 2016, and no longer apply to the two boilers (**ES-1A and ES-1B**).

[15A NCAC 02Q .0512(a)(1)(B)]

### **SECTION 3 - GENERAL CONDITIONS (version 5.0, 06/08/2017)**

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 nine 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 form as may be established by the Director. The accuracy of the report shall be certified by a responsible official of the facility.

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

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

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

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

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

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

BB. **Financial Responsibility and Compliance History** [15A NCAC 02Q .0507(d)(4)]

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(e)]

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, .0912, .1110, .1111, or .1415 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, 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 issued within 18 months after the applicable requirement is promulgated. No reopening is required if the effective date of the requirement is after the expiration of the permit term unless the term of the permit was extended pursuant to 15A NCAC 02Q .0513(c).
3. Except for the state-enforceable only portion of the permit, the procedures set out in 15A NCAC 02Q .0507, .0521, or .0522 shall be followed to reissue the permit. If the State-enforceable only portion of the permit is reopened, the procedures in 15A NCAC 02Q .0300 shall be followed. The proceedings shall affect only those parts of the permit for which cause to reopen exists.
4. The Director shall notify the Permittee at least 60 days in advance of the date that the permit is to be reopened, except in cases of imminent threat to public health or safety the notification period may be less than 60 days.
5. Within 90 days, or 180 days if the EPA extends the response period, after receiving notification from the EPA that a permit needs to be terminated, modified, or revoked and reissued, the Director shall send to the EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate.

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

The Permittee shall maintain a record of operation for permitted equipment noting whenever the equipment is taken from and placed into operation. During operation the monitoring recordkeeping and reporting requirements as prescribed by the permit shall be implemented within the monitoring period.

**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(c)(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(d)(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.

### List of Acronyms

<b>AOS</b>	Alternate Operating Scenario
<b>BACT</b>	Best Available Control Technology
<b>Btu</b>	British thermal unit
<b>CAA</b>	Clean Air Act
<b>CAIR</b>	Clean Air Interstate Rule
<b>CEM</b>	Continuous Emission Monitor
<b>CFR</b>	Code of Federal Regulations
<b>DAQ</b>	Division of Air Quality
<b>DEQ</b>	Department of Environmental Quality
<b>EMC</b>	Environmental Management Commission
<b>EPA</b>	Environmental Protection Agency
<b>FR</b>	Federal Register
<b>GACT</b>	Generally Available Control Technology
<b>HAP</b>	Hazardous Air Pollutant
<b>MACT</b>	Maximum Achievable Control Technology
<b>NAA</b>	Non-Attainment Area
<b>NCAC</b>	North Carolina Administrative Code
<b>NCGS</b>	North Carolina General Statutes
<b>NESHAP</b>	National Emission Standards for Hazardous Air Pollutants
<b>NO<sub>x</sub></b>	Nitrogen Oxides
<b>NSPS</b>	New Source Performance Standard
<b>OAH</b>	Office of Administrative Hearings
<b>PM</b>	Particulate Matter
<b>PM<sub>10</sub></b>	Particulate Matter with Nominal Aerodynamic Diameter of 10 Micrometers or Less
<b>POS</b>	Primary Operating Scenario
<b>PSD</b>	Prevention of Significant Deterioration
<b>RACT</b>	Reasonably Available Control Technology
<b>SIC</b>	Standard Industrial Classification
<b>SIP</b>	State Implementation Plan
<b>SO<sub>2</sub></b>	Sulfur Dioxide
<b>tpy</b>	Tons Per Year
<b>VOC</b>	Volatile Organic Compound

Attachment 2 to Air Quality Permit No. 05543T25  
North Carolina Renewable Power - Lumberton, LLC

**Acid Rain Permit Application**  
(Five pages)