

ROY COOPER
Governor

ELIZABETH S. BISER
Secretary

MICHAEL ABRACZINSKAS
Director



January 20, 2022

Mr. George Handler
Plant Manager
Enviva Pellets Sampson, LLC
5 Connector Road, US 117
Faison, NC 28341

SUBJECT: Air Quality Permit No. 10386T06
Facility ID: 8200152
Enviva Pellets Sampson, LLC
Faison, North Carolina
Sampson County
Fee Class: Title V
PSD Status: Major

Dear Mr. Handler:

In accordance with your completed Air Quality Permit Application for a first time Title V permit received September 29, 2017 and as amended on October 2, 2020, we are forwarding herewith Air Quality Permit No. 10386T06 to Enviva Pellets Sampson, LLC, 5 Connector Road, US 117, Faison, North Carolina, authorizing the construction and operation, of the emission source(s) and associated air pollution control device(s) specified herein. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant per 15A North Carolina Administrative Code 02Q .0503(8) have been listed for informational purposes as an "ATTACHMENT."

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.



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

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.

Sampson County has triggered increment tracking under PSD for PM10, PM2.5, and NOx. This modification will result in an increase in 0.28 pounds per hour of NOx and a decrease of 0.087 pounds per hour of PM10 and PM2.5.

This Air Quality Permit shall be effective from January 20, 2022 until December 31, 2026, 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.

Sincerely yours,

A handwritten signature in blue ink, appearing to read "Mark J. Cuilla".

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

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

ATTACHMENT to Permit No. 10386T06

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

Emission Source ID No.	Emission Source Description
IES-GWH ⁴ PSD BACT	Green wood handling and sizing operations
IES-BARKHOG ⁴ PSD BACT	Bark hog
IES-TK-1 ⁴ PSD BACT	Diesel fuel storage tank (up to 2,500 gallon capacity)
IES-TK-2 ⁴ PSD BACT	Diesel fuel storage tank (up to 1,000 gallon capacity)
IES-TK-3 ⁴ PSD BACT	Diesel fuel storage tank (up to 2,500 gallon capacity)
IES-GWSP-1 through IES-GWSP-4 ⁴ PSD BACT	Four (4) green wood storage piles
IES-BFSP-1 and IES-BFSP-2 ⁴ PSD BACT	Two (2) bark fuel storage piles
IES-DEBARK-1 ⁴ PSD BACT	Debarker, partially enclosed
IES-CHIP-1 ⁴ PSD BACT	Log chipping
IES-DRYSHAVE ⁴ PSD BACT	Dry shaving material handling
IES-BFB ⁴ PSD BACT	Bark fuel bin
IES-PAVEDROADS ^{a4} PSD BACT	Paved roads
IES-EG ^{4, 5} NSPS III MACT ZZZZ	689 hp diesel-fired emergency generator
IES-FWP ^{4, 5} NSPS III MACT ZZZZ	131 hp diesel-fired fire water pump
IES-ADD	Additive storage and handling
IES-DDB-1 and IES-DDB-2	Two (2) natural gas/propane-fired duct burners, 2.5 million Btu per hour, each
IES-EB01 and IES-EB02	Two (2) electric boilers
IES-PV-1 and IES-PV-2	Two (2) propane vaporizers

1. Because an activity is insignificant does not mean that the activity is exempted from an applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement.
2. When applicable, emissions from stationary source activities identified above shall be included in determining compliance with the permit requirements for toxic air pollutants under 15A NCAC 02D .1100 "Control of Toxic Air Pollutants" or 02Q .0711 "Emission Rates Requiring a Permit".
3. For additional information regarding the applicability of 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>.
4. Upon installation and operation of all control devices specified in Section 1.0 of this permit, the Permittee will no longer be subject to 15A NCAC 02D .0530, Prevention of Significant Deterioration.
5. Upon installation and operation of all control devices specified in Section 1.0 of this permit, the Permittee will no longer be subject to 15A NCAC 02D .1112, 112(g) Case-by-Case Maximum Achievable Control Technology.

Summary of Changes to Permit

The following changes were made to Enviva Pellets Sampson, LLC, Sampson, NC., Air Permit No. 10386R05.

Pages	Section	Description of Changes
Cover and throughout	--	Updated all dates and permit revision numbers.
Insignificant activities	--	<ul style="list-style-type: none"> • Moved additive storage and handling (ID No. IES-ADD). • Added two propane vaporizers (ID Nos. IES-PV-1 and IES-PV-2).
3 and 4	1.0 Equipment List	<ul style="list-style-type: none"> • Moved additive storage and handling (ID No. IES-ADD) to the insignificant activities list. • Removed the hammermill area (ID No. ES-HMA) and pellet cooler LP fines relay system (ID No. ES-PCLP) and associated baghouse (ID No. CD-PCLP-BH). • Removed pellet sampling transfer bin (ID No. ES-PSTB) and associated baghouse (ID No. CD-PSTB-BH).
Throughout permit	2.1 and 2.2	Replaced reference to “15A NCAC 02Q .0308(a)” with “15A NCAC 02Q .0508(f)” for all monitoring, recordkeeping, and reporting requirements throughout the permit.
5	2.1 A	Restructured this section by moving emission sources (ID Nos. ES-DWH, ES-HM-1 through ES-HM-8, ES-HMC, ES-PCHP, ES-PMFS, ES-CLR-1 through ES-CLR-6, ES-FPH, ES-PB-1 through ES-PB-4, ES-PL-1 and ES-PL-2) to other sections of the permit.
6	2.1 A.1.b	Updated the testing requirement with the most current permitting language.
6	2.1 A.1.c	Clarified the testing requirements. Additional testing will be required when the dry hammermills are rerouted to the dryer furnace and WESP, in series with the RTO.
6 and 7	2.1 A.1.d through g	Added Title V noncompliance statements for 15A NCAC 02D .0515.
8	2.1 A.2	Added the furnace/dryer bypass (ID No. ES-F/DBYPASS) to 15A NCAC 02D .0516. No monitoring, recordkeeping, or reporting requirements are necessary to show compliance with this regulation.
8	2.1 A.2.b	<ul style="list-style-type: none"> • Removed requirement under 15A NCAC 02D .0516 specifying that the maximum content of diesel fuel fired in the wood-fired direct heat drying system (ID No. ES-DRYER) not exceed 0.5 percent by weight. This requirement is no longer necessary because federal fuel standards limit sulfur in fuel to 15 ppm (aka ultra-low sulfur diesel (ULSD)). • Renumbered permit conditions accordingly.
8	2.1 A.2.b (new numbering)	Updated the testing requirement with the most current permitting language.
8	2.1 A.3.b	Updated the testing requirement with the most current permitting language.
8 and 9	2.1 A.3.c through e	Added Title V noncompliance statements for 15A NCAC 02D .0515.
--	2.1 A.4 (old numbering)	Moved Section 2.1 A.4 for requirements under 15A NCAC 02D .1112 to Section 2.2. A.3.
9 – 12	2.1 B	Created Section 2.1 B. for dry wood hammermills (ID Nos. ES-HM-1 through ES-HM-8) and dried wood handling and conveying operations (ID Nos. ES-DWH and ES-HMC) from equipment previously listed Section 2.1 A.

Pages	Section	Description of Changes
10	2.1 B.1.b	Updated the testing requirement with the most current permitting language.
10 and 11	2.1 B.1.d, e, and f	Added Title V noncompliance statements for 15A NCAC 02D .0515.
11	2.1 B.2.b	Updated the testing requirement with the most current permitting language.
11 and 12	2.1 B.2.c and d	Added Title V noncompliance statements for 15A NCAC 02D .0521.
12 – 16	2.1 C	Created Section 2.1 C. for emission sources associated with the pellet mills and pellet coolers and finishing area (ID Nos. ES-CLR-1 through ES-CLR-5, ES-PMFS, ES-PCHP, ES-PB-1 through ES-PB-4, ES-PL-1 and ES-PL-2) from equipment previously listed Section 2.1 A.
13	2.1 C.1.b	Updated the testing requirement with the most current permitting language.
13	2.1 C.1.c	Clarified the testing requirements. Additional testing will be required when the regenerative catalytic oxidizer/regenerative thermal oxidizer (ID No. CD-RCO) is installed on the pellet presses and coolers (ID Nos. ES-CLR-1 through ES-CLR-6).
14	2.1 C.1.e, f, and g	Added Title V noncompliance statements for 15A NCAC 02D .0515.
15	2.1 C.2.b	Updated the testing requirement with the most current permitting language.
15	2.1 C.3.b	Updated the testing requirement with the most current permitting language.
15 and 16	2.1 C.3.c and d	Added Title V noncompliance statements for 15A NCAC 02D .0521.
17	2.2 A Regulations Table	Removed reference to the following rules because these are now listed in the General Conditions in Section 3.0. <ul style="list-style-type: none"> • 15A NCAC 02D .0535 • 15A NCAC 02D .0540 • 15A NCAC 02Q .0207 • 15A NCAC 02Q .0304
18	2.2 A.1.c	Removed BACT emission limits for the following emission sources, which have been removed from the permit: <ul style="list-style-type: none"> • Hammermill area (ID No. ES-HMA) and pellet cooler LP fines relay system (ID No. ES-PCLP) and associated baghouse (ID No. CD-PCLP-BH). • Pellet sampling transfer bin (ID No. ES-PSTB) and associated baghouse (ID No. CD-PSTB-BH).
--	2.2 A.1.g (old numbering)	This requirement was met with the submittal of Air Permit Application 8200152.20B on June 11, 2020. Therefore, the permit condition was removed, and the permit conditions were renumbered.
--	2.2 A.1.h and i (old numbering)	The requirement to reroute the exhaust from the green hammermills (ID Nos. ES-GHM-1 through ES-GHM-3) to the wet electrostatic precipitator (ID No. CD-WESP) and the regenerative thermal oxidizer (ID No. CD-RTO) has been met. Therefore, these permit conditions were removed, and the permit conditions were renumbered.
19 – 23	2.2 A.1.d, e, f and r	Added Title V noncompliance statements for 15A NCAC 02D .0530.
20	2.2 A.1.e.v	Removed requirement to conduct initial testing after issuance of Air Permit No. 10386R04. The Permittee completed the initial performance testing on December 16 through 20, 2019, with the exception of particulate matter emission testing from the dry hammermills (ID Nos. ES-HM-1 through ES-HM-8).

Pages	Section	Description of Changes
22	2.2 A.1.g (new numbering)	This permit condition was modified because the requirement to reroute the exhaust from the green hammermills (ID Nos. ES-GHM-1 through ES-GHM-3) to the wet electrostatic precipitator (ID No. CD-WESP) and the regenerative thermal oxidizer (ID No. CD-RTO) has been met.
22	2.2 A.1.n	Removed reference to “two fireboxes.” The regenerative thermal oxidizer (ID No. CD-RTO) is permitted for 45.2 million Btu per hour heat input, which is achieved with three fireboxes.
24 – 29	2.2 A.2.c, d, e, f, g, i and o	Added Title V noncompliance statements for 15A NCAC 02D .0530.
25	2.2 A.2.e.vii	Clarified the language regarding the timing of the initial performance test.
26 – 28	2.2 A.2.g	Updated constants used in avoidance equations.
28	2.2 A.2.j.i	Removed reference to “two fireboxes.” The regenerative thermal oxidizer (ID No. CD-RTO) is permitted for 45.2 million Btu per hour heat input, which is achieved with three fireboxes.
29 – 31	2.2 A.3 (new numbering)	<ul style="list-style-type: none"> • Moved requirements under 15A NCAC 02D .1112 from Section 2.1 A.4 to Section 2.2. A.3. • Renumbered permit conditions accordingly.
29	2.2 A.3.a	<ul style="list-style-type: none"> • Added statement indicating the section is enforceable only until all controls have been constructed and are operational to reduce facility-wide HAP emissions to below the major source thresholds. • Renumbered the permit conditions accordingly.
29 – 30	2.2 A.3.b	<ul style="list-style-type: none"> • Added language clarifying schedule for installation and operation of control devices for compliance with 15A NCAC 02D .1112. • Added Title V noncompliance statement for 15A NCAC 02D .1112.
30	2.2 A.3.c	Changed reference for initial testing to Section 2.2 A.4.c.ii through viii.
30 - 31	2.2 A.3.c and d	Added Title V noncompliance statements for 15A NCAC 02D .1112.
32	2.2 A.4.c.vii	Clarified the language regarding the timing of the initial performance test.
32	2.2 A.4.c, d, and i	Added Title V noncompliance statements for 15A NCAC 02D .1112.
--	2.2 A.6 (old numbering)	Removed permit condition for 15A NCAC 02D .0535 because this regulation is included in the General Conditions in Section 3.0.
--	2.2 A.7 (old numbering)	Removed permit condition for 15A NCAC 02D .0540 because this regulation is included in the General Conditions in Section 3.0.
--	2.2 A.9 (old numbering)	Removed permit condition for 15A NCAC 02Q .0207 because this regulation is included in the General Conditions in Section 3.0.
--	2.2 A.10 (old numbering)	Removed permit condition for 15A NCAC 02Q .0304 because this regulation is included in the General Conditions in Section 3.0.
38 – 47	Section 3	Updated the General Conditions to the most recent revision for Title V permits (V5.5 08/25/2020).
48	Attachment	Added the list of acronyms.



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

AIR QUALITY PERMIT

Permit No.	Replaces Permit No.(s)	Effective Date	Expiration Date
10386T06	10386R05	January 20, 2022	December 31, 2026

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: **Enviva Pellets Sampson, LLC**
Facility ID: **8200152**

Facility Site Location: **5 Connector Road, US 117**
City, County, State, Zip: **Faison, Sampson County, North Carolina, 28341**

Mailing Address: **5 Connector Road, US 117**
City, State, Zip: **Faison, North Carolina, 28341**

Application Number: **8200152.17B**
Complete Application Date: **September 29, 2017 and as amended on October 2, 2020**
Primary SIC Code: **2499**

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

Permit issued this the 20th day of January, 2022.

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

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SECTION 3: GENERAL PERMIT CONDITIONS

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

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

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES-GHM-1, ES-GHM-2, ES-GHM-3 PSD BACT¹ 02D .1112 Case-by-Case MACT²	Three (3) green wood hammermills	CD-WESP CD-RTO	One wet electrostatic precipitator (29,904 square feet of collector plate area) in series with One natural gas/propane-fired regenerative thermal oxidizer (45.2 million Btu per hour heat input)
ES-DRYER PSD BACT¹ 02D .1112 Case-by-Case MACT²	Wood-fired direct heat drying system (250.4 million Btu per hour heat input) with integral transfer cyclones	CD-WESP CD-RTO	One wet electrostatic precipitator (29,904 square feet of collector plate area) in series with One natural gas/propane-fired regenerative thermal oxidizer (45.2 million Btu per hour heat input)
ES-F/DBYPASS PSD BACT¹	Furnace/dryer bypass, diesel startup ³	N/A	N/A
ES-DWH PSD BACT¹ 02D .1112 Case-by-Case MACT²	Dried wood handling operations	CD-DWH-BH-1 and CD-DWH-BH-2	Two (2) baghouses (377 square feet of filter area, each)
ES-HM-1 through ES-HM-8 PSD BACT¹ 02D .1112 Case-by-Case MACT²	Eight (8) dry hammermills with integral transfer cyclones	CD-HM-BH1 through CD-HM-BH8 ⁴ ES-DRYER furnace CD-WESP CD-RTO OR	Eight (8) baghouses (2,168 square feet of filter area each), in series with Direct heat, wood-fired dryer furnace (250.4 million Btu per hour maximum heat input) in series with One wet electrostatic precipitator (29,904 square feet of collector plate area) in series with One natural gas/propane-fired regenerative thermal oxidizer (45.2 million Btu per hour heat input) OR

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
(continued) ES-HM-1 through ES-HM-8 PSD BACT¹ 02D .1112 Case-by-Case MACT²	(continued) Eight (8) dry hammermills with integral transfer cyclones	(continued) CD-HM-BH1 through CD-HM-BH8 ⁴ CD-WESP CD-RTO	(continued) Eight (8) baghouses (2,168 square feet of filter area each), in series with One wet electrostatic precipitator (29,904 square feet of collector plate area) in series with One natural gas/propane-fired regenerative thermal oxidizer (45.2 million Btu per hour heat input)
ES-HMC PSD BACT¹	Hammermill conveying system	CD-HMC-BH	One baghouse (377 square feet of filter area)
ES-PMFS PSD BACT¹	Pellet mill feed silo	CD-PMFS-BH	One baghouse (377 square feet of filter area)
ES-CLR-1 through ES-CLR-6 PSD BACT¹ 02D .1112 Case-by-Case MACT²	Six (6) pellet coolers and twelve (12) pellet presses (two (2) pellet presses are associated with each pellet cooler)	CD-CLR-1 through CD-CLR-6 CD-RCO	Six (6) simple cyclones (54 inches in diameter) installed one each on the coolers, in series with One natural gas/propane-fired regenerative catalytic oxidizer/regenerative thermal oxidizer (19.8 million Btu per hour heat input)
ES-PCHP PSD BACT¹	Pellet cooler HP fines relay system	CD-PCHP-BH	One baghouse (942 square feet of filter area)
ES-FPH, ES-PB-1 through ES-PB-4, ES-PL-1 and ES-PL-2 PSD BACT¹	Finished product handling, four (4) pellet load-out bins, and two (2) pellet mill loadouts	CD-FPH-BH	One baghouse (4,842 square feet of filter area)

¹ Upon installation and operation of all control devices specified in this table, the Permittee will no longer be subject to 15A NCAC 02D .0530, Prevention of Significant Deterioration.

² Upon installation and operation of all control devices specified in this table, the Permittee will no longer be subject to 15A NCAC 02D .1112, 112(g) Case-by-Case Maximum Achievable Control Technology.

³ Diesel fuel used as a startup accelerant for the furnace (**ID No. ES-F/DBYPASS**) is limited to 30 gallons per startup and 200 gallons per year per Permit Sections 2.2 A.1.h and 2.2 A.5.c.

⁴ All air flow from the dry hammermills is controlled by baghouses (**ID Nos. CD-HM-BH1 through CD-HM-BH8**), in series with the WESP (**ID No. CD-WESP**), in series with the RTO (**ID No. CD-RTO**). Under normal operations, all air flow from the baghouses on the dry hammermills is ducted to the dryer furnace prior to treatment by the WESP and the RTO. In the event of reduced furnace/dryer operation, a portion of the air flow from the baghouses on the dry hammermills is ducted directly to the WESP for treatment by the WESP in series with the RTO. In the event of the shutdown of the furnace/dryer system, all air flow from the baghouses on the dry hammermills and dry shavings hammermills is ducted directly to the WESP and RTO.

SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS

2.1- Emission Source(s) and Control Devices(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. Three (3) green wood hammermills (ID Nos. ES-GHM-1, ES-GHM-2 and ES-GHM-3) controlled by a wet electrostatic precipitator (ID No. CD-WESP) and a regenerative thermal oxidizer (ID No. CD-RTO)**

Wood-fired direct heat drying system (ID No. ES-DRYER) controlled by a wet electrostatic precipitator (ID No. CD-WESP) and a regenerative thermal oxidizer (ID No. CD-RTO)

Furnace/dryer bypass (ID No. ES-F/DBYPASS)

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 $P < 30$ tph $E = 55 \times P^{0.11} - 40$ for $P \geq 30$ tph where, E = allowable emission rate (lb/hr) P = process weight rate (tph)	15A NCAC 02D .0515
Sulfur dioxide	<i>ID Nos. ES-DRYER, ES-F/DBYPASS, and CD-RTO only:</i> 2.3 pounds per million Btu	15A NCAC 02D .0516
Visible emissions	20 percent opacity	15A NCAC 02D .0521
PM/PM10/PM2.5 Nitrogen oxides Volatile organic compounds Carbon monoxide Greenhouse gases	Enforceable until all of the requirements from Section 2.3 A.1 have been met. See Section 2.2 A.1.	15A NCAC 02D .0530
PM/PM10/PM2.5 Nitrogen oxides Volatile organic compounds Carbon monoxide	Enforceable after all of the requirements from Section 2.3 A.1 have been met. See Section 2.2 A.2.	15A NCAC 02Q .0317 for avoidance of 15A NCAC 02D .0530
Hazardous Air Pollutants	Enforceable until all of the requirements from Section 2.3 A.1 have been met. See Section 2.2 A.3.	15A NCAC 02D .1112 [112(g) Case-by-Case MACT]
Hazardous Air Pollutants	Enforceable after all of the requirements from Section 2.3 A.1 have been met. See Section 2.2 A.4	15A NCAC 02Q .0317 for avoidance of 15A NCAC 02D .1112
Toxic Air Pollutants	State-Enforceable Only Enforceable after all of the requirements from Section 2.3 A.1 have been met. See Section 2.2 A.5	15A NCAC 02D .1100

Regulated Pollutant	Limits/Standards	Applicable Regulation
Toxic Air Pollutants	<p>State-Enforceable Only Enforceable after all of the requirements from Section 2.3 A.1 have been met.</p> <p>See Section 2.2 A.6</p>	15A NCAC 02Q .0711

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

- a. Emissions of particulate matter from these sources (**ID Nos. ES-GHM-1, ES-GHM-2 and ES-GHM-3, ES-DRYER, and ES-F/DBYPASS**) shall not exceed an allowable emission rate as calculated by the following equation:

$$E = 4.10 \times P^{0.67} \quad \text{for } P < 30 \text{ tph}$$

$$E = 55 \times P^{0.11} - 40 \quad \text{for } P \geq 30 \text{ tph}$$

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 A.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.
- c. Under the provisions of North Carolina General Statute 143-215.108, the Permittee shall demonstrate compliance with emission limits in Section 2.1 A.1.a by testing the outlet of the regenerative thermal oxidizer (**ID No. CD-RTO**) for total suspended particulate (TSP) in accordance with a testing protocol approved by the DAQ. Testing shall be conducted as specified in Section 2.2 A.2.e. Documentation for the minimum number of grids operating during testing and the minimum average secondary voltage and minimum average current for the wet electrostatic precipitator (**ID No. CD-WESP**) shall be submitted to the DAQ as part of the initial compliance test report. If the tests are not conducted or the results of the tests are above the limit given in Section 2.1 A.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

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

- d. For this source, (**ID No. ES-F/DBYPASS**), the Permittee shall maintain production records for fuel burned such that the process rates "P" in tons per hour, as specified by the formulas contained above, can be derived and shall make these records available to a DAQ authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the production records are not maintained.
- e. Particulate matter emissions from the green wood hammermills (**ID Nos. ES-GHM-1, ES-GHM-2 and ES-GHM-3**) and the wood-fired direct heat drying system (**ID No. ES-DRYER**) shall be controlled by a wet electrostatic precipitator (**ID No. CD-WESP**) in series with a regenerative thermal oxidizer (**ID No. CD-RTO**). To ensure compliance and effective operation of the wet electrostatic precipitator (**ID No. CD-WESP**), the Permittee shall:
- i. operate the wet electrostatic precipitator with at least the minimum number of grids operating during compliance testing specified in Section 2.1 A.1.c above;
 - ii. maintain the minimum daily average secondary voltage and the minimum daily average current at the level established during compliance testing specified in Section 2.1 A.1.c above.
 - iii. monitor and record the secondary voltage and current for each grid of the precipitator daily. The daily observation must be made for each day of the calendar year period. The Permittee shall be allowed three (3) days of absent observations per semiannual period.

- iv. The Permittee may re-establish any parametric operating value during periodic testing. Compliance with previously approved parametric operating values is not required during periodic required testing or other tests undertaken to re-establish parametric operating values by the Permittee. If the new parametric operating values re-established during periodic testing are more stringent, the Permittee shall submit a request to revise the value(s) in the permit at the same time the test report required pursuant to General Condition JJ is submitted. The permit revision will be processed pursuant to 15A NCAC 02Q .0514. If, during performance testing, the new parametric operating values are less stringent, the Permittee may request to revise the value(s) in the permit pursuant to 15A NCAC 02Q .0515.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the wet electrostatic precipitator (**ID No. CD-WESP**) is not operated in accordance with Sections 2.1 A.1.e.i through iii.

- f. To ensure compliance, the Permittee shall perform inspections and maintenance on the wet electrostatic precipitator (**ID No. CD-WESP**) and the regenerative thermal oxidizer (**ID No. CD-RTO**) as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
 - i. a monthly visual inspection of the system ductwork and material collection units for leaks;
 - ii. an annual (for each 12-month period following the initial inspection) internal inspection of the heat transfer medium and associated inlet/outlet valves on the regenerative thermal oxidizer (**ID No. CD-RTO**);
 - iii. an annual (for each 12-month period following the initial inspection) internal inspection of the wet electrostatic precipitator (**ID No. CD-WESP**). This inspection must include (but is not limited to) the following:
 - (A) visual checks of critical components,
 - (B) checks for any equipment that does not alarm when de-energized, to ensure it is operational,
 - (C) checks for signs of plugging in the hopper and gas distribution equipment, and
 - (D) replacement of broken equipment as required.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the wet electrostatic precipitator (**ID No. CD-WESP**) and the regenerative thermal oxidizer (**ID No. CD-RTO**) are not inspected and maintained.

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

- g. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each inspection;
 - iii. the results of any maintenance performed on the 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)]

- h. No reporting is required for particulate matter emissions from this source (**ID No. ID No. ES-F/DBYPASS**).
- i. The Permittee shall submit the results of any maintenance performed on any control device within 30 days of a written request by the DAQ.
- j. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.1 A.1.d through g 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.

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

- a. Emissions of sulfur dioxide from these sources (**ID Nos. ES-DRYER, ES-F/DBYPASS, and CD-RTO**) 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 limit given in Sections 2.1 A.2.a and b 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 firing biomass or diesel fuel in the wood-fired direct heat drying system and furnace/dryer bypass (**ID Nos. ES-DRYER and ES-F/DBYPASS**) or natural gas/propane in the regenerative thermal oxidizer (**ID No. CD-RTO**).

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

- a. Visible emissions from these sources (**ID Nos. ES-GHM-1, ES-GHM-2 and ES-GHM-3, ES-DRYER, and ES-F/DBYPASS**) 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 A.3.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

- c. To ensure compliance, once a month the Permittee shall observe the emission points of the sources in Section 2.1 A, except for the furnace/dryer bypass (**ID No. ES-F/DBYPASS**), for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from the sources in Section 2.1 A are observed to be above normal, the Permittee shall either:
- i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
 - ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 A.3.a. above.

The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if the required monthly observations are not conducted as required or if the above-normal emissions are not corrected within the monitoring period or the percent opacity demonstration cannot be made.

- d. To ensure compliance, the Permittee shall observe the furnace/dryer bypass (**ID No. ES-F/DBYPASS**) while the wood-fired direct heat drying system (**ID No. ES-DRYER**) is operating in idle mode for any visible emissions above normal. If visible emissions from the furnace/dryer bypass are observed to be above normal, the Permittee shall either:
- i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
 - ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 A.3.a. above.

The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if the required observations are not conducted when the wood-fired direct heat drying system is operating in idle mode as

required or if the above-normal emissions are not corrected or the percent opacity demonstration cannot be made.

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

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

- f. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.1 A.3.c through e 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.

B. Dried wood handling operations (ID No. ES-DWH) controlled by baghouses (ID Nos. CD-DWH-BH-1 and 2)

Eight (8) dry hammermills (ID Nos. ES-HM-1 through ES-HM-8) controlled by baghouses (ID Nos. CD-HM-BH1 through CD-HM-BH8), in series with the dryer furnace (ID No. ES-DRYER), a wet electrostatic precipitator (ID No. CD-WESP) and a regenerative thermal oxidizer (ID No. CD-RTO) OR controlled by baghouses (ID Nos. CD-HM-BH1 through CD-HM-BH8), in series with a wet electrostatic precipitator (ID No. CD-WESP), and a regenerative thermal oxidizer (ID No. CD-RTO)

Hammermill conveying system (ID No. ES-HMC) controlled by baghouse (ID No. CD-HMC-BH)

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 $P < 30$ tph $E = 55 \times P^{0.11} - 40$ for $P \geq 30$ tph where, E = allowable emission rate (lb/hr) P = process weight rate (tph)	15A NCAC 02D .0515
Visible emissions	20 percent opacity	15A NCAC 02D .0521
PM/PM10/PM2.5 Nitrogen oxides Volatile organic compounds Carbon monoxide Greenhouse gases	Enforceable until all of the requirements from Section 2.3 A.1 have been met. See Section 2.2 A.1.	15A NCAC 02D .0530
PM/PM10/PM2.5 Nitrogen oxides Volatile organic compounds Carbon monoxide	Enforceable after all of the requirements from Section 2.3 A.1 have been met. See Section 2.2 A.2.	15A NCAC 02Q .0317 for avoidance of 15A NCAC 02D .0530
Hazardous Air Pollutants	Enforceable until all of the requirements from Section 2.3 A.1 have been met. See Section 2.2 A.3	15A NCAC 02D .1112 [112(g) Case-by-Case MACT]

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous Air Pollutants	Enforceable after all of the requirements from Section 2.3 A.1 have been met. See Section 2.2 A.4	15A NCAC 02Q .0317 for avoidance of 15A NCAC 02D .1112
Toxic Air Pollutants	State-Enforceable Only Enforceable after all of the requirements from Section 2.3 A.1 have been met. See Section 2.2 A.5	15A NCAC 02D .1100
Toxic Air Pollutants	State-Enforceable Only Enforceable after all of the requirements from Section 2.3 A.1 have been met. See Section 2.2 A.6	15A NCAC 02Q .0711

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

- a. Emissions of particulate matter from these sources (**ID Nos. ES-DWH, ES-HM-1 through ES-HM-8, and ES-HMC**) shall not exceed an allowable emission rate as calculated by the following equation:

$$E = 4.10 \times P^{0.67} \quad \text{for } P < 30 \text{ tph}$$

$$E = 55 \times P^{0.11} - 40 \quad \text{for } P \geq 30 \text{ tph}$$

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 B.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 shall be controlled as follows:
 - i. Particulate matter emissions from the dried wood handling operations (**ID No. ES-DWH**) shall be controlled by baghouses (**ID Nos. CD-DWH-BH-1 and CD-DWH-2**);
 - ii. Particulate matter emissions from the dry hammermills (**ID Nos. ES-HM-1 through ES-HM-8**) shall be controlled by baghouses (**ID Nos. CD-HM-BH1 through CD-HM-BH8**) in series with a wet electrostatic precipitator (**ID No. CD-WESP**), in series with a regenerative thermal oxidizer (**ID No. CD-RTO**) OR baghouses (**ID Nos. CD-HM-BH-1 through 8**), in series with a dryer furnace (**ID No. ES-DRYER**), a wet electrostatic precipitator (**ID No. CD-WESP**) in series with a regenerative thermal oxidizer (**ID No. CD-RTO**);
 - iii. Particulate matter emissions from the hammermill conveying system (**ID No. ES-HMC**) shall be controlled by baghouse (**ID No. CD-HMC-BH**); and
- d. To ensure compliance, the Permittee shall perform inspections and maintenance for the baghouses (**ID Nos. CD-DWH-BH-1, CD-DWH-BH-2, CD-HM-BH1 through CD-HM-BH8, and CD-HMC-BH**) as recommended by the manufacturer. In addition to the manufacturer’s inspection and maintenance recommendations, or if there are no manufacturer’s inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
 - i. a monthly visual inspection of the system ductwork and material collection units for leaks; and
 - ii. an annual (for each 12-month period following the initial inspection) internal inspection of the baghouses’ structural integrity.

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

- e. To ensure compliance, the Permittee shall perform inspections and maintenance for the wet electrostatic precipitator (**ID No. CD-WESP**) and the thermal regenerative oxidizer (**ID No. CD-RTO**) as specified in Section 2.1 A.1.f above. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the wet electrostatic precipitator and regenerative thermal oxidizer are not inspected and maintained.

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

- f. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each inspection;
 - iii. the results of any maintenance performed on the 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)]

- g. The Permittee shall submit the results of any maintenance performed on any control device within 30 days of a written request by the DAQ.
- h. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.1 B.1.d through f 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.

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

- a. Visible emissions from these sources (**ID Nos. ES-DWH, ES-HM-1 through ES-HM-8, and ES-HMC**) 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 B.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

- c. To ensure compliance, once a month the Permittee shall observe the emission points of the sources in Section 2.1 B for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from the sources in Section 2.1 B are observed to be above normal, the Permittee shall either:
 - i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
 - ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 B.2.a. above.

The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if the required monthly observations are not conducted as required or if the above-normal emissions are not corrected within the monitoring period or the percent opacity demonstration cannot be made.

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
 - i. 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 B.2.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.

C. Pellet mill feed silo (ID No. ES-PMFS) controlled by a baghouse (ID No. CD-PMFS-BH)

Pellet presses and pellet coolers (ID Nos. ES-CLR-1 through ES-CLR-6) controlled by cyclones (ID Nos. CD-CLR-1 through CD-CLR-6) in series with a regenerative catalytic oxidizer/regenerative thermal oxidizer (ID No. CD-RCO)

Pellet cooler HP fines relay system (ID No. ES-PCHP) controlled by a baghouse (ID No. CD-PCHP-BH)

Finished product handling (ID No. ES-FPH), pellet load-out bins (ID Nos. ES-PB-1 through ES-PB-4), and pellet mill load-out (ID No. ES-PL-1 and ES-PL-2) controlled by a baghouse (ID No. CD-FPH-BH)

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 $P < 30$ tph $E = 55 \times P^{0.11} - 40$ for $P \geq 30$ tph where, E = allowable emission rate (lb/hr) P = process weight rate (tph)	15A NCAC 02D .0515
Sulfur dioxide	<i>ID No. CD-RCO only:</i> 2.3 pounds per million Btu	15A NCAC 02D .0516
Visible emissions	20 percent opacity	15A NCAC 02D .0521
PM/PM10/PM2.5 Nitrogen oxides Volatile organic compounds Carbon monoxide Greenhouse gases	Enforceable until all of the requirements from Section 2.3 A.1 have been met. See Section 2.2 A.1.	15A NCAC 02D .0530
PM/PM10/PM2.5 Nitrogen oxides Volatile organic compounds Carbon monoxide	Enforceable after all of the requirements from Section 2.3 A.1 have been met. See Section 2.2 A.2.	15A NCAC 02Q .0317 for avoidance of 15A NCAC 02D .0530
Hazardous Air Pollutants	Enforceable until all of the requirements from Section 2.3 A.1 have been met. See Section 2.2 A.3	15A NCAC 02D .1112 [112(g) Case-by-Case MACT]

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous Air Pollutants	Enforceable after all of the requirements from Section 2.3 A.1 have been met. See Section 2.2 A.4	15A NCAC 02Q .0317 for avoidance of 15A NCAC 02D .1112
Toxic Air Pollutants	State-Enforceable Only Enforceable after all of the requirements from Section 2.3 A.1 have been met. See Section 2.2 A.5	15A NCAC 02D .1100
Toxic Air Pollutants	State-Enforceable Only Enforceable after all of the requirements from Section 2.3 A.1 have been met. See Section 2.2 A.6	15A NCAC 02Q .0711

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

- a. Emissions of particulate matter from these sources (**ID Nos. ES-PMFS, ES-CLR-1 through ES-CLR-6, ES-PCHP, ES-FPH, ES-PB-1 through ES-PB-4, PL-1 and ES-PL-2**) shall not exceed an allowable emission rate as calculated by the following equation:

$$E = 4.10 \times P^{0.67} \quad \text{for } P < 30 \text{ tph}$$

$$E = 55 \times P^{0.11} - 40 \quad \text{for } P \geq 30 \text{ tph}$$

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 C.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.
- c. Under the provisions of North Carolina General Statute 143-215.108, the Permittee shall demonstrate compliance with emission limits in Section 2.1 C.1.a above by testing the outlet of the regenerative catalytic oxidizer/regenerative thermal oxidizer (**ID No. CD-RCO**) for total suspended particulate (TSP) in accordance with a testing protocol approved by the DAQ. Testing shall be conducted as specified in Section 2.2 A.2.e. If the tests are not conducted or the results of the tests are above the limit given in Section 2.1 C.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

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

- d. Particulate matter emissions shall be controlled as follows:
 - i. Particulate matter emissions from the pellet mill feed silo (**ID No. ES-PMFS**) shall be controlled by baghouse (**ID No. CD-PMFS-BH**);
 - ii. Particulate matter emissions from the pellet presses and pellet coolers (**ID Nos. ES-CLR-1 through ES-CLR-6**) shall be controlled by cyclones (**ID Nos. CD-CLR-1 through CD-CLR-6**) in series with a regenerative catalytic oxidizer/regenerative thermal oxidizer (**ID No. CD-RCO**);
 - iii. Particulate matter emissions from pellet cooler HP fines relay system (**ID No. ES-PCHP**) shall be controlled by baghouse (**ID No. CD-PCHP-BH**); and
 - iv. Particulate matter emissions from finished product handling (**ID No. ES-FPH**), pellet load-out bins (**ID Nos. ES-PB-1 through ES-PB-4**), and pellet mill load-out (**ID No. ES-PL-1 and ES-PL-2**) shall be controlled by baghouse (**ID No. CD-FPH-BH**).

- e. To ensure compliance, the Permittee shall perform inspections and maintenance on the cyclones (**ID Nos. CD-CLR-1 through CD-CLR-6**) and baghouses (**ID Nos. CD-PMFS-BH, CD-PCHP-BH, and CD-FPH-BH**) as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
- i. a monthly visual inspection of the system ductwork and material collection units for leaks; and
 - ii. an annual (for each 12-month period following the initial inspection) internal inspection of the baghouses' structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the cyclones (**ID Nos. CD-CLR-1 through CD-CLR-6**) and baghouses (**ID Nos. CD-PMFS-BH, CD-PCHP-BH, and CD-FPH-BH**) are not inspected and maintained.

- f. To ensure compliance, the Permittee shall perform inspections and maintenance on the regenerative catalytic oxidizer/regenerative thermal oxidizer (**ID No. CD-RCO**) as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
- i. a monthly visual inspection of the system ductwork and material collection units for leaks;
 - ii. an annual inspection (for each 12-month period following the initial inspection) of the regenerative catalytic oxidizer/regenerative thermal oxidizer (**ID No. CD-RCO**). This inspection must include (but is not limited to) the following:
 - (A) an internal inspection of the heat transfer medium and associated inlet/outlet valves
 - (B) an internal inspection of the catalyst bed to check for channeling, abrasion, and settling. If problems are found, the Permittee must take corrective action consistent with the manufacturer's recommendations and conduct a catalyst activity check within 30 days of completing corrective actions
 - (C) inspections and analysis of catalyst activity in accordance with a written plan. The plan shall be submitted to the DAQ regional office for approval, maintained on site, and specify the testing procedures used to determine the catalyst activity using a micro gas chromatograph or other manufacturer recommendation; and

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the regenerative catalytic oxidizer/regenerative thermal oxidizer (**ID No. CD-RCO**) is not inspected and maintained.

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

- g. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- i. the date and time of each recorded action;
 - ii. the results of each inspection;
 - iii. the results of any maintenance performed on the 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)]

- h. The Permittee shall submit the results of any maintenance performed on any control device within 30 days of a written request by the DAQ.
- i. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.1 C.1.e through g 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.

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

- a. Emissions of sulfur dioxide from the regenerative catalytic oxidizer/regenerative thermal oxidizer (**ID No. CD-RCO**) 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 limit given in Section 2.1 C.2.a, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

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

- c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from firing natural gas/propane in the regenerative catalytic oxidizer/regenerative thermal oxidizer (**ID No. CD-RCO**).

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

- a. Visible emissions from these sources (**ID Nos. ES-PMFS, ES-CLR-1 through ES-CLR-6, ES-PCHP, ES-FPH, ES-PB-1 through ES-PB-4, PL-1 and ES-PL-2**) 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 C.3.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

- c. To ensure compliance, once a month the Permittee shall observe the emission points of these sources (**ID Nos. ES-PMFS, ES-CLR-1 through ES-CLR-6, ES-PCHP, ES-FPH, ES-PB-1 through ES-PB-4, PL-1 and ES-PL-2**) for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. For the pellet presses and pellet coolers (**ID Nos. ES-CLR-1 through ES-CLR-6**), the Permittee shall establish "normal" in the first 30 days following the commencement of operation after installation of the regenerative catalytic oxidizer/regenerative thermal oxidizer (**ID No. CD-RCO**). If visible emissions from the sources in Section 2.1 C are observed to be above normal, the Permittee shall either:
- i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
 - ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 C.3.a. above.

The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if the required monthly observations are not conducted as required or if the above-normal emissions are not corrected within the monitoring period or the percent opacity demonstration cannot be made or if "normal" is not established for these sources in the first 30 days following the beginning of operation.

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 A.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.

2.2- Multiple Emission Source(s) Limitations and Conditions

A. Facility-wide Emission Sources

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
PM/PM10/PM2.5 Nitrogen oxides Volatile organic compounds Carbon monoxide Greenhouse gases	Enforceable until all of the requirements from Section 2.3 A.1 have been met. PSD BACT Limits	15A NCAC 02D .0530
PM/PM10/PM2.5 Nitrogen oxides Volatile organic compounds Carbon monoxide	Less than 250 tons per 12-month period, each Less than 250 tons per 12-month period, Less than 250 tons per 12-month period Less than 250 tons per 12-month period	15A NCAC 02Q .0317 for avoidance of 15A NCAC 02D .0530
Hazardous Air Pollutants	Enforceable until all of the requirements from Section 2.3 A.1 have been met. See Section 2.2 A.3.	15A NCAC 02D .1112 [112(g) Case-by-Case MACT]
Hazardous Air Pollutants	Less than 25 tons for combined HAPs per 12-month period Less than 10 tons for any single HAP per 12-month period.	15A NCAC 02Q .0317 for avoidance of 15A NCAC 02D .1112
Toxic air pollutants	State-Enforceable Only Source-specific emissions limitations for acrolein, arsenic, benzene, cadmium, chlorine, formaldehyde, hexachlorodibenzo-p-dioxin, hydrogen chloride, manganese, and phenol	15A NCAC 02D .1100
Toxic air pollutants	State-Enforceable Only Facility-Wide Toxics Permitting Emission Rates	15A NCAC 02Q .0711
Odorous emissions	State-Enforceable Only Odor control requirements	15A NCAC 02D .1806

1. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

- a. The following conditions in this Section are enforceable until all controls (**ID Nos. CD-WESP, CD-RTO, CD-HM-BH1 through CD-HM-BH8, CD-CLR-1 through CD-CLR-6, and CD-RCO**) have been constructed and are operational to reduce facility-wide emissions to below PSD major source thresholds, in accordance with the schedule specified in Section 2.3 A.1. Following the applicability of Section 2.2 A.2, the facility will be classified as a PSD minor source and will no longer be subject to 15A NCAC 02D .0530, "Prevention of Significant Deterioration."
- b. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements in accordance with 15A NCAC 02D .0530, "Prevention of Significant Deterioration of Air Quality" (PSD) as promulgated in 40 CFR 51.166.
- c. For PSD purposes, the following "Best Available Control Technology" (BACT) emissions limits shall not be exceeded:

Emission Source	Pollutant	Control Technology or Work Practice	BACT Emission Limit	Averaging Period
Wood-fired Direct Heat Drying System (ID No. ES-DRYER)	NOx	Good Combustion Practices	0.20 lb/million Btu	3-hour
	CO	Process Design	0.21 lb/million Btu	3-hour
	GHG	Good Operating Practices	230,000 tpy (CO ₂ e)	Annual
Wood-fired Direct Heat Drying System (ID No. ES-DRYER) Green Wood Hammermills (ID Nos. ES-GHM-1 to ES-GHM-3)	VOC*	RTO	0.15 lb/ODT**	3-hour
	PM/PM10/2.5	WESP	0.105 lb/ODT** (filterable only)	3-hour
Dry Hammermills (ID Nos. ES-HM-1 to ES-HM-8)	VOC*	Good Operating Procedures	0.60 lb/ODT**	3-hour
	PM	Baghouse	0.004 gr/scf	3-hour
	PM10		0.004 gr/scf (filterable only)	3-hour
	PM2.5		0.000014 gr/scf (filterable only)	3-hour
PM	0.004 gr/scf		3-hour	
Hammermill Conveying System (ID No. ES-HMC)	PM	Baghouse	0.004 gr/scf	3-hour
Dried Wood Handling (ID No. ES-DWH)	VOC*	Good Operating Procedures	0.12 lb/ODT**	3-hour
	PM	Baghouses	0.004 gr/scf	3-hour
Pellet Presses and Coolers (ID No. ES-CLR-1 to ES-CLR-6)	VOC*	Good Operating Procedures	1.74 lb/ODT**	3-hour
	PM	Cyclones - Proper Design and Good Operating Procedures	0.04 gr/scf	3-hour
	PM10		0.0057 gr/scf (filterable only)	3-hour
	PM2.5		0.0007 gr/scf (filterable only)	3-hour
PM2.5/PM10/PM	0.004 gr/scf		3-hour	
Pellet Mill Feed Silo (ID No. ES-PMFS)	PM2.5/PM10/PM	Baghouse	0.004 gr/scf	3-hour
Finished Product Handling/Pellet Loadout Bins/Pellet Mill Loadouts (ID Nos. ES-FPH, ES-PB-1 to 4/ ES-PL-1 and 2)	PM	Baghouse	0.004 gr/scf	3-hour
	PM10	Baghouse	0.004 gr/scf	3-hour
	PM2.5	Baghouse	0.000014 gr/scf	3-hour
Paved Roads (ID No. IES-PAVEDROADS)	PM/PM10/PM2.5	Combination of watering of paved roads, vehicle speed control, and good housekeeping	Not Applicable	

Emission Source	Pollutant	Control Technology or Work Practice	BACT Emission Limit	Averaging Period
Green Wood Handling (ID No. IES-GWH)	PM/PM10/PM2.5	None	Not Applicable	
Green Wood Storage Piles (ID Nos. IES-GWSP-1 to IES-GWSP-4)	VOC			
	PM/PM10/PM2.5			
Bark Fuel Storage Piles (ID Nos. IES-BFSP-1 and IES-BFSP-2)	VOC			
	PM/PM10/PM2.5			
Bark Fuel Bin (ID No. IES-BFB)	PM/PM10/PM2.5			
Dry Shavings Material Handling (ID No. IES-DRYSHAVE)	PM			
Debarker (ID No. IES-DEBARK-1)	PM/PM10/PM2.5			
Log Chipping (ID No. IES-CHIP-1)	VOC			
Bark Hog (ID No. IES-BARKHOG)	VOC			
	PM			
Diesel storage tanks (ID Nos. IES-TK1, IES-TK2, and IES-TK3)	VOC	Good operation practices	Not Applicable	

* The VOC limit is expressed as alpha pinene basis per the procedures in EPA OTM 26.

** ODT means oven dried tons

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

- d. The completion of the Softwood Expansion Project (SWEP) (Application No. 8200152.18A) is defined as the replacement of pellet presses that allow throughput of up to 657,000 oven dried tons per year (ODT/year) on an annual basis and the rerouting of the exhaust from the green wood hammermills (ID Nos. ES-GHM-1, ES-GHM-2, and ES-GHM-3) to the wet electrostatic precipitator (ID No. CD-WESP) and the regenerative thermal oxidizer (ID No. CD-RTO). The Permittee shall notify the DAQ of the actual completion date of the SWEP postmarked within 15 days after such date. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if this notification is not submitted.

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

- e. **Initial Performance Tests** – Under the provisions of North Carolina General Statute 143-215.108, the Permittee shall demonstrate compliance with the BACT emission limits in Section 2.2 A.1.c above by conducting an initial performance test on the wood-fired direct heat drying system (ID No. ES-DRYER), the green wood hammermills (ID Nos. ES-GHM-1, ES-GHM-2, and ES-GHM-3), the dry hammermills (ID Nos. ES-HM-1 through ES-HM-8), the dried wood handling operations (ID Nos. ES-DWH), and the pellet presses and coolers (ID Nos. ES-CLR-1 through ES-CLR-6). Initial testing shall be conducted in accordance with the following:
 - i. The pollutants and emission sources to be tested during the initial performance test are listed in the following table:

Emission Sources	Pollutant
Dryer system/green wood hammermills controlled via WESP and RTO	VOC
	PM/PM10/PM2.5
	NOx
	CO
One pellet cooler cyclone	VOC
	PM/PM10/PM2.5

Emission Sources	Pollutant
One dry hammermill baghouse	VOC
	PM/PM10/PM2.5
Dried wood handling operations	VOC

- ii. The Permittee shall conduct initial compliance testing in accordance with a testing protocol approved by the DAQ.
- iii. The Permittee shall submit a protocol to DAQ at least 45 days prior to initial compliance testing and shall submit a notification of initial compliance testing at least 15 days in advance of the testing.
- iv. The RTO (**ID No. CD-RTO**) is comprised of multiple fireboxes, with each containing two temperature probes. During the initial compliance test and upon completion of the SWEP, the Permittee shall establish the minimum average firebox temperature for each of the fireboxes comprising the regenerative thermal oxidizer (**ID No. CD-RTO**), for a total of the three average temperatures for the regenerative thermal oxidizer. “Average firebox temperature” means the average temperature of the two temperature probes in each firebox. The minimum average firebox temperature for each firebox shall be based upon the average temperature of the two temperature probes over the span of the test runs. Documentation for the minimum average firebox temperature for each firebox shall be submitted to the DAQ as part of the initial compliance test report and as part of the compliance testing upon completion of the SWEP.
- v. Initial compliance testing required upon the issuance of Air Permit No. 10386R04 was conducted on December 16 through 20, 2019, with the exception of particulate matter emission testing for the dry hammermills (**ID Nos. ES-HM-1 through ES-HM-8**).
- vi. Initial compliance testing upon completion of the SWEP shall be completed as follows:
 - (A) The Permittee shall be responsible for ensuring, within practicable limits, that the equipment or processes being tested are operated at or near the maximum normal production rate but at a rate not to exceed 120 ODT per hour (not to exceed 657,000 ODT per year on an annual basis).
 - (B) Testing shall be conducted at the maximum normal operating softwood percentage, not to exceed 80% softwood.
 - (C) Testing shall be completed and results submitted to the DAQ within 120 days of completion of the construction of the SWEP, unless an alternate date is approved in advance by DAQ.
 - (D) Testing under this condition (Section 2.2 A.1.e.v) can be consolidated with testing required under Section 2.2 A.2.e below, if approved in advance by DAQ.

If the tests are not conducted or the results of the tests are above the limits given in Section 2.2 A.1.c above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

- f. **Periodic Performance Tests** – Under the provisions of North Carolina General Statute 143-215.108, the Permittee shall demonstrate compliance with the BACT emission limits in Section 2.2 A.1.c above by conducting periodic performance tests on the wood-fired direct heat drying system (**ID No. ES-DRYER**), the green wood hammermills (**ID Nos. ES-GHM-1, ES-GHM-2, and ES-GHM-3**), the dry hammermills (**ID Nos. ES-HM-1 through ES-HM-8**), and the pellet presses and coolers (**ID Nos. ES-CLR-1 through ES-CLR-6**). Periodic testing shall be conducted in accordance with the following:
 - i. The pollutants and emission sources to be tested during the periodic performance tests are listed in the following table:

Emission Sources	Pollutant
Dryer system/green wood hammermills controlled via WESP and RTO	VOC
	PM/PM10/PM2.5
	NOx
	CO
One pellet cooler cyclone	VOC
	PM/PM10/PM2.5
One dry hammermill baghouse	VOC
	PM/PM10/PM2.5

- ii. The Permittee shall conduct periodic compliance testing in accordance with a testing protocol approved by the DAQ.
- iii. The Permittee shall submit a protocol to DAQ at least 45 days prior to periodic compliance testing and shall submit a notification of periodic compliance testing at least 15 days in advance of the testing.
- iv. The Permittee shall be responsible for ensuring, within practicable limits, that the equipment or processes being tested are operated at or near the maximum normal production rate.
- v. To the extent possible, testing shall be conducted at the maximum normal operating softwood percentage.
- vi. The Permittee shall conduct periodic performance tests when the following conditions are met:
 - (A) The monthly average softwood content exceeds the average softwood percentage documented during prior performance testing by more than 10 percentage points, or
 - (B) The monthly production rate exceeds the average production rate documented during prior performance testing by more than 10 percentage points, or
 - (C) At a minimum testing shall be conducted annually, unless less frequent testing is approved pursuant to Section 2.2 A.1.f.x. Annual performance tests shall be completed no later than 13 months after the previous performance test.
- vii. The Permittee shall notify the DAQ within 15 days when the conditions specified in Section 2.2 A.1.f.vi (A) or (B) are met.
- viii. The Permittee shall conduct the periodic performance test and submit a written report of the test results to the DAQ within 90 days from the date the monthly softwood content or overall production rate increased as described in Section 2.2 A.1.f.vi (A) and (B) above, unless an alternate date is approved in advance by DAQ,
- ix. When periodic performance testing has occurred at 90 percent softwood AND at 90 percent of the maximum permitted throughput, subsequent periodic performance testing shall occur on an annual basis and shall be completed no later than 13 months after the previous performance test, unless a longer duration is otherwise approved pursuant to Section 2.2 A.1.f.x.
- x. The Permittee may request that the performance tests be conducted less often for a given pollutant if the performance tests for at least 3 consecutive years show compliance with the emission limit. If the request is granted, the Permittee shall conduct a performance test no more than 36 months after the previous performance test for the given pollutant.
- xi. If a performance test shows noncompliance with an emission limit for a given pollutant, the Permittee shall return to conducting annual performance tests (no later than 13 months after the previous performance test) for that pollutant.
- xii. Except as specified in Section 2.2 A.1.f.viii above, the Permittee shall submit a written report of the performance test results to the Regional Supervisor, DAQ, no later than 30 days following sample collection test in accordance with 15A NCAC 02D .2602(f), unless an alternative date is approved in advance by DAQ.
- xiii. The Permittee may re-establish any parametric operating value during periodic testing. Compliance with previously approved parametric operating values is not required during periodic testing or other tests undertaken to re-establish parametric operating values by the Permittee. If the new parametric operating values re-established during periodic testing are more stringent, the Permittee shall submit a request to revise the value(s) in the permit at the same time the test report required pursuant to General

Condition JJ is submitted. The permit revision will be processed pursuant to 15A NCAC 02Q .0514.

If, during performance testing, the new parametric operating values are less stringent, the Permittee may request to revise the value(s) in the permit pursuant to 15A NCAC 02Q .0515.

- xiv. The Permittee shall comply with applicable emission standards at all times, including during periods of testing.

If the tests are not conducted or if the results of the tests are above the limit given in Section 2.2 A.1.c above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

- g. The Permittee shall not process more than 657,000 ODT of pellets per consecutive 12-month period. The process rate shall be recorded monthly in a logbook (written or electronic format) kept on-site and made available to an authorized representative upon request.
- h. The furnace/dryer bypass (**ID No. ES-F/DBYPASS**) shall be limited to less than 50 hours per year for startups (for temperature control) and shutdowns. The furnace bypass shall be limited to a cold startup of 15% maximum heat input (or 37.6 million Btu per hour). The cold startup period begins when the wood-fired furnace is started up and lasts until the wood-fired furnace's refractory is heated to a temperature sufficient to sustain combustion operations at a minimal level or 8 hours, whichever is less. The use of diesel fuel as a startup accelerant shall be limited to 30 gallons per startup and 200 gallons per year. The Permittee shall keep the following:
- i. To ensure compliance with the diesel fuel usage as an accelerant for cold startups, the Permittee shall record the gallons used for each cold startup and the gallons used per year in a logbook (written or electronic format) kept on-site and made available to an authorized representative upon request.
 - ii. The Permittee shall monitor and record the date, time, and duration that the furnace bypass is operated during startup and shutdown.
- i. The furnace/dryer bypass (**ID No. ES-F/DBYPASS**) in idle mode, defined as maximum heat input of 10 million Btu per hour, shall be limited to less than 500 hours per year. The Permittee shall monitor and record the date, time, and duration that the furnace bypass is operated during idle mode.
- j. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate all emission sources including associated control devices in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
- k. The Permittee shall record the hardwood/softwood mix monthly in a logbook (written or electronic format) kept on-site and made available to an authorized representative upon request.
- l. The Permittee shall calculate the total emissions of NO_x, filterable PM, CO, and VOC monthly and shall record the emissions monthly in a logbook (written or electronic format) kept on-site and made available to DAQ personnel upon request.
- m. For the wood-fired direct heat drying system (**ID No. ES-DRYER**), GHG (CO₂e) emissions shall be calculated monthly and compliance demonstrated using the applicable Part 98 emission factors. Compliance shall be documented on a 12-month rolling basis.
- n. To ensure compliance and effective operation of the RTO (**ID No. CD-RTO**), the Permittee shall:
- i. maintain a 3-hour rolling average firebox temperature for each firebox comprising the RTO at or above the minimum average temperatures established during the most recent performance testing. The minimum 3-hour average firebox temperature for Chambers A/B is 1,601°F and the minimum 3-hour average firebox temperature for Chambers C/D is 1,601°F, as measured during the initial performance tests on December 16 through 20, 2019.
 - ii. maintain records of the 3-hour rolling average temperatures for each firebox.
 - iii. perform inspections and maintenance on the RTO as specified above in Section 2.1 A.1.f.
- o. To ensure compliance and effective operation of the wet electrostatic precipitator (**ID No. CD-WESP**), the Permittee shall perform inspections and maintenance as specified above in Section 2.1 A.1.f. The Permittee shall also maintain the minimum secondary voltage and minimum current of the wet electrostatic precipitator as specified above in Section 2.1 A.1.e.

- p. To ensure compliance and effective operation of the baghouses and cyclones, the Permittee shall perform inspections and maintenance as specified above in Sections 2.1 B.1.d and 2.1 C.1.e.
- q. Monitoring and recordkeeping are not required for the following emission sources:
 - i. Paved roads;
 - ii. VOC emissions from storage tanks; and
 - iii. Emission sources with no BACT emission limits or work practice standards.
- r. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if any emission, throughput, or operating limit in Sections 2.2 A.1 g through p is exceeded or if the records are not maintained.

Reporting [15A NCAC 02Q .0508(f), 15A NCAC 02D .0605(b)(3)]

- s. The Permittee shall submit the results of any maintenance performed on any control device within 30 days of a written request by the DAQ.
- t. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.2 A.1.g through p 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.

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

- a. The following conditions in this section are enforceable after all controls (**ID Nos. CD-WESP, CD-RTO, CD-HM-BH1 through CD-HM-BH8, CD-CLR-1 through CD-CLR-6, and CD-RCO**) have been constructed and are operational to reduce facility-wide emissions to below PSD major source thresholds, in accordance with the schedule specified in Section 2.3 A.1. Following the applicability of this condition (Section 2.2 A.2), the facility will be classified as a PSD minor source.
- b. In order to avoid applicability of 15A NCAC 2D .0530(g), the above emission sources shall discharge into the atmosphere less than 250 tons of PM, PM10, PM2.5, volatile organic compounds (VOC), nitrogen oxides (NOx), and carbon monoxide (CO) per consecutive 12-month period.
- c. To ensure compliance with limits established in Section 2.2 A.2.b above after the construction and operation of the proposed control devices, the Permittee shall meet the following:
 - i. The green hammermills (**ID Nos. ES-GHM-1, ES-GHM-2, and ES-GHM-3**) and the wood-fired direct heat drying system (**ID No. ES-DRYER**) shall be controlled by a wet electrostatic precipitator (**ID No. CD-WESP**) in series with a regenerative thermal oxidizer (**ID No. CD-RTO**);
 - ii. The dry hammermills (**ID Nos. ES-HM1 through ES-HM-8**) shall be controlled by baghouses (**ID Nos. CD-HM-BH1 through CD-HM-BH8**) in series with either a wet electrostatic precipitator (**ID No. CD-WESP**) in series with a regenerative thermal oxidizer (**ID No. CD-RTO**) or to the dryer furnace (**ID No. ES-DRYER**) in series with a wet electrostatic precipitator (**ID No. CD-WESP**) in series with a regenerative thermal oxidizer (**ID No. CD-RTO**);
 - (A) In the event of reduced furnace/dryer operation, a portion of the air flow from the baghouses on the dry hammermills is ducted directly to the WESP (**ID No. CD-WESP**) in series with the RTO (**ID No. CD-RTO**).
 - (B) In the event of the shutdown of the furnace/dryer system, all air flow from the baghouse on the dry hammermills is ducted directly to the WESP (**ID No. CD-WESP**) and the RTO (**ID No. CD-RTO**).
 - iii. The pellet presses and pellet coolers (**ID Nos. ES-CLR-1 through ES-CLR-6**) shall be controlled by cyclones (**ID Nos. CD-CLR-1 through CD-CLR-6**) in series with a regenerative catalytic oxidizer/regenerative thermal oxidizer (**ID No. CD-RCO**);

- iv. Other particulate matter emission sources shall be controlled with baghouses (**ID Nos. CD-DWH-BH-1 and CD-DWH-BH-2, CD-PCHP-BH, CD-FPH-BH, CD-HMC-BH, and CD-PMFS-BH**) as specified the Equipment List in Section 1.0; and
- v. The Permittee shall not process more than 120 ODT per hour, not to exceed 657,000 ODT/year on a rolling 12-month average basis.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if these requirements are not met.

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

- d. The completion of the modification to become a PSD minor source is defined as the following:
 - i. the rerouting of the exhaust from the dry hammermills (**ID Nos. ES-HM-1 to ES-HM-8**), associated integral cyclones and baghouses (**ID Nos. CD-HM-BH1 through CD-HM-BH8**), to the dryer furnace (**ID No. ES-DRYER**), wet electrostatic precipitator (**ID No. CD-WESP-1**), and regenerative thermal oxidizer (**ID No. CD-RTO**).
 - ii. the rerouting of the exhaust from the dry hammermills (**ID Nos. ES-HM-1 to ES-HM-8**), associated integral cyclones and baghouses (**ID Nos. CD-HM-BH1 through CD-HM-BH3**) to the wet electrostatic precipitator (**ID No. CD-WESP**) and regenerative thermal oxidizer (**ID No. CD-RTO**).
 - iii. the installation of the regenerative catalytic oxidizer/regenerative thermal oxidizer (**ID No. CD-RCO**) on the exhaust of the pellet presses and pellet coolers (**ID Nos. ES-CLR-1 through ES-CLR-6**) after control by cyclones (**ID Nos. CD-CLR-1 through CD-CLR-6**).

The Permittee shall notify the DAQ of the actual completion date of the modification postmarked within 15 days after such date. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if this notification is not submitted.

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

- e. Initial Performance Tests – Under the provisions of North Carolina General Statute 143-215.108, the Permittee shall demonstrate compliance with PSD avoidance limits in Section 2.2 A.2.b above by conducting an initial performance test on the wood-fired direct heat drying system (**ID No. ES-DRYER**), the green hammermills (**ID Nos. ES-GHM-1, ES-GHM-2, and ES-GHM-3**), the dry hammermills (**ID Nos. ES-HM-1 through ES-HM-8**), and the pellet presses and coolers (**ID Nos. ES-CLR-1 through ES-CLR-6**). Initial testing shall be conducted in accordance with the following:
 - i. The pollutants and emission sources to be tested during the initial performance test are listed in the following table:

Emission Sources	Pollutant
Dryer system, green hammermills, dry hammermills controlled via a WESP and CD-RTO	VOC
	PM/PM10/PM2.5
	NO _x
	CO
Pellet presses and pellet coolers controlled via cyclones and CD-RCO/RTO	VOC
	PM/PM10/PM2.5
	NO _x
Dried wood handling operations (CD-DWH-BH-1 or CD-DWH-BH-2)	CO
	VOC

- ii. The Permittee shall utilize EPA reference methods contained in 40 CFR Part 60, Appendix A, 40 CFR Part 63, and OTM 26 and in accordance with a testing protocol (using testing protocol submittal form) approved by the DAQ.
- iii. The Permittee shall submit a protocol to the DAQ at least 45 days prior to compliance testing and shall submit a notification of initial compliance testing at least 15 days in advance of the testing.

- iv. The Permittee shall be responsible for ensuring, within practicable limits, that the equipment or processes being tested are operated at or near the maximum normal production rate or at a lesser rate if specified by the Director or his delegate.
- v. To the extent possible, testing shall be conducted at the maximum normal operating softwood percentage.
- vi. The regenerative thermal oxidizer (**ID No. CD-RTO**) and regenerative catalytic oxidizer/ regenerative thermal oxidizer (**ID No. CD-RCO**) are each comprised of multiple fireboxes, with each firebox containing two temperature probes. During the initial compliance test, the Permittee shall establish the minimum average firebox temperature for each of the fireboxes comprising the regenerative thermal oxidizer and the minimum average firebox temperature (same as the inlet temperature of the catalyst) of the regenerative catalytic oxidizer/regenerative thermal oxidizer. “Average firebox temperature” means the average temperature of the two temperature probes in each firebox. The minimum average firebox temperature for each firebox shall be based upon the average temperature of the two temperature probes over the span of the test runs. Documentation for the minimum average firebox temperature for each firebox shall be submitted to the DAQ as part of the initial compliance test report.
- vii. Unless an alternate date is approved in advance by DAQ, initial testing shall be completed within 180 days of commencement of operation of the regenerative catalytic oxidizer/regenerative thermal oxidizer (**ID No. CD-RCO**) on the pellet presses and pellet coolers (**ID Nos. ES-CLR-1 through ES-CLR-6**) and after rerouting exhaust from the dry hammermills (**ID Nos. ES-HM-1 through ES-HM-8**) to the dryer furnace (**ID No. ES-DRYER**), the wet electrostatic precipitator (**ID No. CD-WESP**) and the regenerative thermal oxidizer (**ID No. CD-RTO**) OR directly to the wet electrostatic precipitator (**ID No. CD-WESP**) and regenerative thermal oxidizer (**ID No. CD-RTO**).
- viii. The Permittee shall submit a written report of the performance test results to the Regional Supervisor, DAQ, no later than 30 days following sample collection test in accordance with 15A NCAC 02D .2602(f), unless an alternative date is approved in advance by DAQ.

If the tests are not conducted or if the results of the tests are above the limit given in Section 2.2 A.2.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

- f. Periodic Performance Tests – Under the provisions of North Carolina General Statute 143-215.108, the Permittee shall demonstrate compliance with the PSD avoidance limits in Section 2.2 A.2.b above by conducting periodic performance tests on the wood-fired direct heat drying system (**ID No. ES-DRYER**), the green hammermills (**ID Nos. ES-GHM-1, ES-GHM-2, and ES-GHM-3**), the dry hammermills (**ID Nos. ES-HM-1 to ES-HM-8**), and the pellet presses and coolers (**ID Nos. ES-CLR-1 through ES-CLR-6**). Periodic testing shall be conducted in accordance with the following:
 - i. The pollutants and emission sources to be tested during the periodic performance tests are listed in the following table:

Emission Sources	Pollutant
Dryer system, green hammermills, dry hammermills controlled via a WESP and CD-RTO	VOC
	PM/PM10/PM2.5
	NOx
	CO
Pellet presses and pellet coolers controlled via cyclones and CD-RCO/RTO	VOC
	PM/PM10/PM2.5
	NOx
	CO

- ii. Testing shall be conducted in accordance with Section 2.2 A.2.e.ii through vi above.
- iii. The Permittee shall conduct periodic performance tests when the following conditions are met:
 - (A) The monthly average softwood content exceeds the average softwood percentage documented during prior performance testing by more than 10 percentage points, or
 - (B) The monthly production rate exceeds the average production rate documented during prior performance testing by more than 10 percentage points, or

- (C) At a minimum testing shall be conducted annually, unless less frequent testing is approved pursuant to Section 2.2 A.2.f.vi. Annual performance tests shall be completed no later than 13 months after the previous performance test, unless a longer duration is approved in advance by DAQ.
- iv. The Permittee shall conduct the periodic performance test and submit a written report of the test results to the Regional Supervisor, DAQ, within 90 days from the date the monthly softwood content or overall production rate increased as described in Section 2.2 A.2.f.iii (A) and (B) above unless an alternate date is approved in advance by DAQ.
 - v. When performance testing has occurred at 90 percent softwood and 90 percent of the maximum permitted throughput, subsequent periodic performance testing shall occur on an annual basis and shall be completed no later than 13 months after the previous performance test. The Permittee shall submit a written report of the performance test results to the Regional Supervisor, DAQ, no later than 30 days following sample collection test in accordance with 15A NCAC 02D .2602(f), unless an alternative date is approved in advance by DAQ.
 - vi. The Permittee may request that the performance tests be conducted less often for a given pollutant if the performance tests for at least 3 consecutive years show compliance with the emission limit. If the request is granted, the Permittee shall conduct a performance test no more than 36 months after the previous performance test for the given pollutant.
 - vii. If a performance test shows noncompliance with an emission limit for a given pollutant, the Permittee shall return to conducting annual performance tests (no later than 13 months after the previous performance test) for that pollutant.
 - viii. Except as specified in Section 2.2 A.2.f.iv above, the Permittee shall submit a written report of the performance test results to the Regional Supervisor, DAQ, no later than 30 days following sample collection in accordance with 15A NCAC 02D .2602(f), unless an alternative date is approved in advance by DAQ.
 - ix. The Permittee may re-establish any parametric operating value during periodic testing. Compliance with previously approved parametric operating values is not required during periodic required testing or other tests undertaken to re-establish parametric operating values by the Permittee. If the new parametric operating values re-established during periodic testing are more stringent, the Permittee shall submit a request to revise the value(s) in the permit at the same time the test report required pursuant to General Condition JJ is submitted. The permit revision will be processed pursuant to 15A NCAC 02Q .0514. If, during performance testing, the new parametric operating values are less stringent, the Permittee may request to revise the value(s) in the permit pursuant to 15A NCAC 02Q .0515.
 - x. The Permittee shall comply with applicable emission standards at all times, including during periods of testing.

If the tests are not conducted or if the results of the tests are above the limit given in Section 2.2 A.2.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

- g. The Permittee shall calculate the facility-wide emissions of PM, PM10, PM2.5, CO, NOx, and VOC emissions monthly
 - i. Monthly PM, PM10, PM2.5 emissions, in tons, shall be calculated by the following equations and emission factors:

$$E_{PM(\text{total})} = \sum E_{PM(\text{CD-RTO})} + \sum E_{PM(\text{CD-RCO})} + \sum E_{PM(\text{furnace bypass})} + PM \text{ Constant}$$

$$E_{PM10(\text{total})} = \sum E_{PM10(\text{CD-RTO})} + \sum E_{PM10(\text{CD-RCO})} + \sum E_{PM10(\text{furnace bypass})} + PM10 \text{ Constant}$$

$$E_{PM2.5(\text{total})} = \sum E_{PM2.5(\text{CD-RTO})} + \sum E_{PM2.5(\text{CD-RCO})} + \sum E_{PM2.5(\text{furnace bypass})} + PM2.5 \text{ Constant}$$

Where:

$E_{PM, PM10, PM2.5(Total)}$	=	total tons of PM, PM0, and PM2.5 emissions per month from the facility
$E_{PM, PM10, PM2.5(CD-RTO)}$	=	total tons of PM, PM0, and PM2.5 emissions from the outlet of the thermal regenerative oxidizer (ID No. CD-RTO) per month
$E_{PM, PM10, PM2.5(CD-RCO)}$	=	total tons of PM, PM0, and PM2.5 emissions from the outlet of the catalytic regenerative oxidizer / regenerative thermal oxidizer (ID No. CD-RTO) per month
$E_{PM, PM10, PM2.5(furnace bypass)}$	=	total tons of PM, PM0, and PM2.5 emissions from the furnace/dryer bypass (ID No. ES-F/DBYPASS) per month
PM Constant = 0.27	=	monthly PTE tons for the miscellaneous sources including emergency generator, fire water pump, baghouses, bark hog, propane vaporizers, double duct burners, additive handling and storage, and green wood handling operations
PM10 Constant = 0.25	=	monthly PTE tons for the miscellaneous sources including emergency generator, fire water pump, baghouses, bark hog, propane vaporizers, double duct burners, additive handling and storage, and green wood handling operations
PM2.5 Constant = 0.19	=	monthly PTE tons for the miscellaneous sources including emergency generator, fire water pump, baghouses, bark hog, propane vaporizers, double duct burners, additive handling and storage, and green wood handling operations

ii. Monthly CO emissions, in tons, shall be calculated by the following equations and emission factors:

$$E_{CO(total)} = \sum E_{CO(CD-RTO)} + \sum E_{CO(CD-RCO)} + \sum E_{CO(furnace bypass)} + CO Constant$$

Where:

$E_{CO(Total)}$	=	total tons of CO emissions per month from the facility
$E_{CO(CD-RTO)}$	=	total tons of CO emissions from the outlet of the thermal regenerative oxidizer (ID No. CD-RTO) per month
$E_{CO(CD-RCO)}$	=	total tons of CO emissions from the outlet of the catalytic regenerative oxidizer / regenerative thermal oxidizer (ID No. CD-RCO) per month
$E_{CO(furnace bypass)}$	=	total tons of CO emissions from the furnace/dryer bypass (ID No. ES-F/DBYPASS) per month
CO Constant = 0.30	=	monthly PTE tons of CO from the emergency generator, fire water pump, double duct burners, and propane vaporizers

iii. Monthly NOx emissions, in tons, shall be calculated by the following equations and emission factors:

$$E_{NOx(total)} = \sum E_{NOx(CD-RTO)} + \sum E_{NOx(CD-RCO)} + \sum E_{NOx(furnace bypass)} + NOx Constant$$

Where:

$E_{NOx(Total)}$	=	total tons of NOx emissions per month from the facility
$E_{NOx(CD-RTO)}$	=	total tons of NOx emissions from the outlet of the thermal regenerative oxidizer (ID No. CD-RTO) per month
$E_{NOx(CD-RCO)}$	=	total tons of NOx emissions from the outlet of the catalytic regenerative oxidizer / regenerative thermal oxidizer (ID No. CD-RCO) per month
$E_{NOx(furnace bypass)}$	=	total tons of NOx emissions from the furnace/dryer bypass (ID No. ES-F/DBYPASS) per month
NOx Constant = 0.35	=	monthly PTE tons of NOx from the emergency generator, fire water pump, double duct burners, and propane vaporizers

- iv. Monthly VOC emissions, in tons, shall be calculated by the following equations and emission factors:

$$E_{VOC\ (total)} = \sum E_{VOC\ (CD-RTO)} + \sum E_{VOC\ (CD-RCO)} + \sum E_{VOC\ (furnace\ bypass)} + VOC\ Constant$$

Where:

$E_{VOC(Total)}$	=	total tons of VOC emissions per month from the facility
$E_{VOC(CD-RTO)}$	=	total tons of VOC emissions from the outlet of the thermal regenerative oxidizer (ID No. CD-RTO) per month
$E_{VOC(CD-RCO)}$	=	total tons of VOC emissions from the outlet of the catalytic regenerative oxidizer / regenerative thermal oxidizer (ID No. CD-RCO) per month
$E_{VOC(furnace\ bypass)}$	=	total tons of VOC emissions from the furnace/dryer bypass (ID No. ES-F/DBYPASS) per month
VOC Constant = 1.25	=	monthly PTE tons of VOC from emergency generator, fire water pump, dried wood handling, bark hog, double duct burners, propane vaporizers, and storage tanks

- h. The monthly emissions shall be recorded in a logbook (written or electronic format) and made available to an authorized representative upon request.
- i. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the monthly calculations are not conducted, the records are not maintained, or if the emissions exceed the limit in Section 2.2 A.2.b above.

Regenerative Thermal Oxidizer and Regenerative Catalytic Oxidizer

- j. The Permittee shall install, calibrate, operate, maintain, and inspect a continuous temperature monitoring, and recording system, in accordance with manufacturer's recommendations for the regenerative thermal oxidizer (**ID No. CD-RTO**) and the regenerative catalytic oxidizer/regenerative thermal oxidizer (**ID No. CD-RCO**) to monitor the temperature in the combustion chamber to ensure the average combustion temperature does not drop below the temperature range established during the performance test. To ensure compliance and effective operation of the RTO (**ID No. CD-RTO**) and RTO/RCO (**ID No. CD-RCO**), the Permittee shall:
- maintain a 3-hour rolling average firebox temperature for each firebox comprising the RTO and RTO/RCO at or above the minimum average temperatures established during the most recent performance testing. For the RTO (**ID No. CD-RTO**), the minimum 3-hour average firebox temperature for Chambers A/B is 1,601°F and the minimum 3-hour average firebox temperature for Chambers C/D is 1,601°F, as measured during the initial performance tests on December 16 through 20, 2019.
 - maintain records of the 3-hour rolling average temperatures for each firebox.
 - perform inspections and maintenance on the regenerative thermal oxidizer (**ID No. CD-RTO**) and the regenerative catalytic oxidizer/regenerative thermal oxidizer (**ID No. CD-RCO**), as specified above in Section 2.1 A.1.f.
- k. The Permittee shall develop and maintain a written malfunction plan for the temperature monitoring and recording system that describes, in detail, the operating procedures for periods of malfunction and a protocol to address malfunctions so that corrective actions can immediately be implemented. The plan shall be submitted to the DAQ regional office for approval and maintained on site. The malfunction plan shall identify malfunctions, as described by the manufacturer, and ensure the operators are prepared to correct such malfunctions as soon as practical. The Permittee shall keep any necessary parts for routine repairs of the temperature monitoring and recording system readily available.
- l. The Permittee shall perform periodic inspection and maintenance for the oxidizers as recommended by the manufacturer. The Permittee shall perform periodic catalyst activity checks for the regenerative catalytic oxidizer as recommended by the manufacturer. At a minimum, the Permittee shall perform an annual (not to exceed 12-month) internal inspection of the primary heat exchanger and associated inlet/outlet valves of the control device to ensure structural integrity, as specified above in Sections 2.1 A.1.f and 2.1 C.1.f.

- m. The monthly pellet production in ODT, the rolling 12-month total pellet production in ODT, monthly average softwood content, and 12-month rolling average softwood content shall be recorded in a monthly logbook (written or electronic format) and made available to an authorized representative upon request.
- n. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate all emission sources including associated control devices in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
- o. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if any emission, throughput, or operating limit in Sections 2.2 A.2 j through n is exceeded or if the records are not maintained.

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

- p. The Permittee shall submit a semi-annual summary report of monitoring and recordkeeping activities given in Sections 2.2 A.2.g and h and Sections 2.2 A.2.j through n 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. The report shall contain the following:
 - i. The monthly facility-wide PM, PM10, PM2.5, VOC, NOx, and CO emissions for the previous 17 months. The emissions must be calculated for each of the 12-month periods over the previous 17 months.
 - ii. A report indicating and explaining all instances of the average minimum regenerative thermal oxidizer and regenerative catalytic oxidizer/ regenerative thermal oxidizer combustion chamber temperature falling below the temperature range established during the performance test or noting that no such instances have occurred.
 - iii. The monthly and 12-month facility-wide total pellet production, and
 - iv. The monthly and 12-month rolling hardwood/softwood mix.
 - v. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 02D .112: 112(g) CASE BY CASE MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

- a. The following conditions in this Section are enforceable until all controls have been constructed and are operational to reduce facility-wide HAP emissions to below the major source thresholds, in accordance with the schedule specified in Section 2.3 A.1. Following the applicability of this condition (Section 2.2 A.3), the facility will be classified as a HAP minor source and will no longer be subject to 15A NCAC 02D .112, "112(g) Case-by-Case Maximum Achievable Control Technology."
- b. 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 .112, "Case-By-Case Maximum Achievable Control Technology," and as promulgated in 40 CFR 63, including Subpart A "General Provisions." The Permittee shall comply with the following:
 - i. For the wood-fired direct heat drying system (**ID No. ES-DRYER**), the Permittee shall use a low HAP emitting dryer design not requiring add-on control.
 - ii. For the pellet presses and pellet coolers (**ID Nos. ES-CLR-1 through ES-CLR-6**), the Permittee shall:
 - (A) Submit to DAQ an application requesting authorization for installation of a regenerative catalytic oxidizer/regenerative thermal oxidizer (**ID No. CD-RCO**) to control HAP emissions from the pellet presses and pellet coolers (**ID Nos. ES-CLR-1 through ES-CLR-6**) within six months of issuance of Air Permit No. 10386R04 on October 2, 2019. This requirement was met with the receipt of application No. 8200152.20B on April 7, 2020, which was deemed technically complete on June 11, 2020.

- (B) Complete installation and startup of the control device within twelve months of issuance of Air Permit 10386R05 on June 9, 2021. Initial compliance for the RCO shall be demonstrated in accordance with initial compliance testing requirements under Section 2.2 A.3.c below.
- iii. For the dry hammermills (**ID Nos. ES-HM-1 through ES-HM-8**), the Permittee shall:
 - (A) Submit to DAQ an application requesting authorization to reroute exhaust from the baghouses (**ID Nos. CD-HM-BH1 through CD-HM-BH8**) to the dryer furnace (**ID No. ES-DRYER**), the wet electrostatic precipitator (**ID No. CD-WESP**) and the regenerative thermal oxidizer (**ID No. CD-RTO**) OR directly to the wet electrostatic precipitator (**ID No. CD-WESP**) and regenerative thermal oxidizer (**ID No. CD-RTO**) within six months of issuance of Air Permit No. 10386R04 on October 2, 2019. This requirement was met with the receipt of application No. 8200152.20B on April 7, 2020, which was deemed technically complete on June 11, 2020.
 - (B) Complete the rerouting of the exhaust from the baghouses (**ID Nos. CD-HM-BH1 through CD-HM-BH8**) within twelve months of issuance of Air Permit 10386R05 on June 9, 2021. Initial compliance for the RTO shall be demonstrated in accordance with initial compliance testing requirements under Section 2.2 A.3.c below.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1112 if these requirements are not met.

Testing [15A NCAC 02Q .0308(a)]

- c. **Initial Performance Tests** – Under the provisions of North Carolina General Statute 143-215.108, the Permittee shall establish emission factors for HAPs by conducting an initial performance test on the wood-fired direct heat drying system (**ID No. ES-DRYER**), the green wood hammermills (**ID Nos. ES-GHM-1, ES-GHM-2, and ES-GHM-3**), the dry hammermills (**ID Nos. ES-HM-1 through ES-HM-8**), the dried wood handling operations (**ID Nos. ES-DWH**), and the pellet presses and coolers (**ID Nos. ES-CLR-1 through ES-CLR-6**). Initial testing shall be conducted in accordance with the following:
 - i. The pollutants and emission sources to be tested during the initial performance test are listed in the following table:

Emission Source	Pollutant
Dryer system/green wood hammermills controlled via WESP and RTO	Acetaldehyde Acrolein
One pellet cooler cyclone	Formaldehyde
One dry hammermill baghouse	Methanol
Dried wood handling operations	Phenol Propionaldehyde

- ii. Initial testing shall be conducted in accordance with Section 2.2 A.4.c.ii through viii. below. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1112 if the tests are not conducted.

- d. **Periodic Performance Tests** – Under the provisions of North Carolina General Statute 143-215.108, the Permittee shall establish emission factors for HAPs by conducting periodic performance tests on the wood-fired direct heat drying system (**ID No. ES-DRYER**), the green wood hammermills (**ID Nos. ES-GHM-1, ES-GHM-2, and ES-GHM-3**), the dry hammermills (**ID Nos. ES-HM-1 through ES-HM-8**), and the pellet presses and coolers (**ID Nos. ES-CLR-1 through ES-CLR-6**). Periodic testing shall be conducted in accordance with the following:
 - ii. The pollutants and emission sources to be tested during the periodic performance tests are listed in the following table:

Emission Sources	Pollutant
Dryer system/green wood hammermills controlled via WESP and RTO	Acetaldehyde Acrolein
One pellet cooler cyclone	Formaldehyde
One dry hammermill baghouse	Methanol Phenol Propionaldehyde

- ii. Periodic testing shall be conducted in accordance with Section 2.2 A.1.f.ii through xiv above. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1112 if the tests are not conducted.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0308(a)]

- e. No monitoring recordkeeping, or reporting is required for any emission source subject to 112(g) Case-by-Case MACT.

4. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS for 15A NCAC 02D .1112: 112(g) Case-by-Case Maximum Available Control Technology (MACT) Standards

- a. The following conditions in this section are enforceable after all controls have been constructed and are operational to reduce facility-wide HAP emissions to below the major source thresholds, in accordance with the schedule specified in Section 2.3 A.1. Following the applicability of this condition (Section 2.2 A.3), the facility will be classified as a HAP minor source.
- b. In order to remain classified a minor source for hazardous air pollutants (HAP) and avoid applicability of 15A NCAC 02D .1112, "112(g) Case-by-Case Maximum Achievable Control Technology," facility-wide HAP emissions shall be less than the following limitations:
 - i. 25 tons per consecutive 12-month period of total, combined HAP; and,
 - ii. 10 tons per consecutive 12-month period of any individual HAP.

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

- c. **Initial Performance Tests** – Under the provisions of North Carolina General Statute 143-215.108, the Permittee shall establish emission factors for HAPs by conducting an initial performance test on the wood-fired direct heat drying system (**ID No. ES-DRYER**), the green wood hammermills (**ID Nos. ES-GHM-1, ES-GHM-2, and ES-GHM-3**), the dry hammermills (**ID Nos. ES-HM-1 through ES-HM-8**), and the pellet presses and coolers (**ID Nos. ES-CLR-1 through ES-CLR-6**). Initial testing shall be conducted in accordance with the following:
 - i. The pollutants and emission sources to be tested during the initial performance test are listed in the following table:

Emission Source	Pollutant
Dryer system/green wood hammermills/ dry hammermills controlled via WESP and RTO	Acetaldehyde Acrolein Formaldehyde
Pellet presses and pellet coolers controlled via cyclones and CD-RCO/RTO	Methanol Phenol Propionaldehyde

- ii. The Permittee shall utilize EPA reference methods contained in 40 CFR Part 60, Appendix A, 40 CFR Part 63, and OTM 26 and in accordance with a testing protocol (using testing protocol submittal form) approved by the DAQ.

- iii. The Permittee shall submit a protocol to the DAQ at least 45 days prior to compliance testing and shall submit a notification of initial compliance testing at least 15 days in advance of testing.
- iv. The Permittee shall be responsible for ensuring, within practicable limits, that the equipment or processes being tested are operated at or near the maximum normal production rate or at a lesser rate if specified by the Director or his delegate.
- v. To the extent possible, testing shall be conducted at the maximum normal operating softwood percentage.
- vi. The regenerative thermal oxidizer (**ID No. CD-RTO**) and the regenerative catalytic/regenerative thermal oxidizer (**ID No. CD-RCO**) are comprised of fireboxes, with each firebox containing two temperature probes. During the initial compliance test, the Permittee shall establish the minimum average firebox temperature (same as the inlet temperature of the catalyst) for each of the fireboxes comprising the regenerative thermal oxidizer and regenerative catalytic/regenerative thermal oxidizer. "Average firebox temperature" means the average temperature of the two temperature probes in each firebox. The minimum average firebox temperature for each firebox shall be based upon the average temperature of the two temperature probes over the span of the test runs. Documentation for the minimum average firebox temperature for each firebox shall be submitted to the DAQ as part of the initial compliance test report.
- vii. Unless an alternate date is approved in advance by DAQ, initial testing shall be completed within 180 days of commencement of operation of the regenerative catalytic oxidizer/regenerative thermal oxidizer (**ID No. CD-RCO**) on the pellet presses and pellet coolers (**ID Nos. ES-CLR-1 through ES-CLR-6**) and after rerouting exhaust from the dry hammermills (**ID Nos. ES-HM-1 through ES-HM-8**) to the dryer furnace (**ID No. ES-DRYER**), the wet electrostatic precipitator (**ID No. CD-WESP**) and the regenerative thermal oxidizer (**ID No. CD-RTO**) OR directly to the wet electrostatic precipitator (**ID No. CD-WESP**) and regenerative thermal oxidizer (**ID No. CD-RTO**).
- viii. The Permittee shall submit a written report of the performance test results to the Regional Supervisor, DAQ, no later than 30 days following sample collection test in accordance with 15A NCAC 02D .2602(f), unless an alternative date is approved in advance by DAQ.

If the tests are not conducted or if the results of the tests are above the limit given in Section 2.2 A.4.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1112.

- d. Periodic Performance Tests – Under the provisions of North Carolina General Statute 143-215.108, the Permittee shall establish emission factors for HAPs by conducting periodic performance tests on the wood-fired direct heat drying system (**ID No. ES-DRYER**), the green wood hammermills (**ID Nos. ES-GHM-1, ES-GHM-2, and ES-GHM-3**), the dry hammermills (**ID Nos. ES-HM-1 through ES-HM-8**), and the pellet presses and coolers (**ID Nos. ES-CLR-1 through ES-CLR-6**). Periodic testing shall be conducted in accordance with the following:
 - i. The pollutants and emission sources to be tested during the periodic performance test are listed in the following table:

Emission Source	Pollutant
Dryer system/green wood hammermills/ dry hammermills controlled via WESP and RTO	Acetaldehyde Acrolein Formaldehyde
Pellet presses and pellet coolers controlled via cyclones and CD- RCO/RTO	Methanol Phenol Propionaldehyde

- ii. Periodic testing shall be conducted in accordance with Section 2.2 A.2.f.iii through x above. If the tests are not conducted or if the results of the tests are above the limit given in Section 2.2 A.4.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1112.

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

- e. The Permittee shall calculate HAP emissions from the wood-fired direct heat drying system (**ID No. ES-**

DRYER), the green wood hammermills (**ID Nos. ES-GHM-1, ES-GHM-2, and ES-GHM-3**), the dry hammermills (**ID Nos. ES-HM-1 through ES-HM-8**), the dried wood handling operations (**ID Nos. ES-DWH**), and the pellet presses and coolers (**ID Nos. ES-CLR-1 through ES-CLR-6**) using emission factors developed from the most recent stack tests.

- f. The Permittee shall calculate HAP emissions from the furnace/dryer bypass (**ID No. ES-F/DBYPASS**), the diesel-fired fire pump (**ID Nos. IFWP**), the diesel-fired emergency (**ID No. IES-EG**), the duct burners (**ID Nos. IES-DBB1 and IES-DBB-2**), the propane vaporizers (**ID Nos. IES-PV-1 and IES-PV-2**), and the bark hog (**ID No. IES-BARKHOG**) using HAP emission factors as provided in Air Permit Application No. 8200152.20B.
- g. Calculations of HAP emissions as specified in Sections 2.2 A.4.e and f above shall be made at the end of each month. Calculations and the total amount of HAP emissions shall be recorded monthly in a logbook (written or electronic format) and made available to an authorized representative upon request.
- h. 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 must include the analysis demonstrating why the Permittee believes the source is unaffected pursuant to 40 CFR Part 63.10(b)(3).
- i. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1112 if the monthly calculations are not conducted, the records are not maintained, or if the emissions exceed the limit in Section 2.2 A.2.b above.

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

- j. The Permittee shall submit a summary report of monitoring and recordkeeping activities given in Sections 2.2 A.4.e through h above. The report shall summarize emissions of hazardous air pollutants containing the following:
 - i. greatest quantity in pounds of an individual hazardous air pollutant used:
 - (A) for each month during the semiannual period, and
 - (B) for each 12-month period ending on each month during the semiannual period using a 12-month rolling total.
 - ii. pounds of all hazardous air pollutants used:
 - (A) for each month during the semiannual period, and
 - (B) for each 12-month period ending on each month during the semiannual period using a 12-month rolling total.
 - iii. All instances of deviations from the requirements of this permit must be clearly identified.

State-enforceable only

5. 15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS

- a. The following conditions in this section are enforceable after all controls have been constructed and are operational to reduce facility-wide HAP emissions to below the major source thresholds, in accordance with the schedule specified in Section 2.3 A.1. Following the applicability of Section 2.2 A.4 above, the facility will be classified as a HAP minor source.
- b. Pursuant to 15A NCAC 02D .1100 and in accordance with the application for an air toxic compliance demonstration performed on a source-by-source basis, submitted with Application Nos. 8200152.18A and 8200152.20B, the following permit limits shall not be exceeded:

Emission Source	Toxic Air Pollutant	Emission Limits
Green wood hammermills (ID Nos. ES-GHM-1, ES-GHM-2 and ES-GHM-3) and wood-fired direct heat drying system (ID No. ES-DRYER) controlled by a wet electrostatic precipitator (ID No. CD-WESP) and a	Acrolein	0.69 lb/hr
	Arsenic	3.58 lb/yr
	Benzene	742 lb/yr
	Cadmium	1.08 lb/yr
	Chlorine	0.198 lb/hr
		4.75 lb/day

Emission Source	Toxic Air Pollutant	Emission Limits
regenerative thermal oxidizer (ID No. CD-RTO)	Formaldehyde	0.63 lb/hr
	Hexachlorodibenzo-p-dioxin	0.176 lb/yr
	Hydrogen Chloride	0.476 lb/hr
	Manganese	0.698 lb/day
	Phenol	0.490 lb/hr
Furnace/Dryer Bypass (ID No. ES-F/DBYPASS) in Idle Mode	Acrolein	0.040 lb/hr
	Arsenic	1.93 lb/yr
	Cadmium	0.359 lb/yr
	Chlorine	0.0079 lb/hr
		0.190 lb/day
	Formaldehyde	0.0440 lb/hr
	Hexachlorodibenzo-p-dioxin	0.140 lb/yr
	Hydrogen Chloride	0.190 lb/hr
	Manganese	0.384 lb/day
	Phenol	0.000510 lb/hr
	Furnace/Dryer Bypass (ID No. ES-F/DBYPASS) in Startup Mode	Acrolein
Arsenic		7.22 lb/yr
Cadmium		1.35 lb/yr
Chlorine		0.0297 lb/hr
		0.713 lb/day
Formaldehyde		0.165 lb/hr
Hexachlorodibenzo-p-dioxin		0.140 lb/yr
Hydrogen Chloride		0.714 lb/hr
Manganese	1.44 lb/day	
Dry Hammermills (ID Nos. ES-HM-1 through ES-HM-8)	Acrolein	1.30 lb/hr
	Formaldehyde	0.96 lb/hr
	Phenol	0.49 lb/hr
Pellet Presses and Coolers (ID Nos. ES-CLR-1 through ES-CLR-6)	Acrolein	6.06 lb/hr
	Formaldehyde	3.74 lb/hr
	Phenol	3.02 lb/hr
Dried Wood Handling (ID No. ES-DWH)	Formaldehyde	0.101 lb/hr

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

- c. To ensure compliance with 15A NCAC 02D .1100, the furnace/dryer bypass (ID No. ES-F/DBYPASS) shall be limited to no more than 50 hours per year for startups (for temperature control) and shutdowns. The furnace bypass shall be limited to a cold startup of 15% maximum heat input rate (or 37.56 million Btu per hour). The cold startup period begins when the wood-fired furnace is started up and lasts until the wood-fired furnace’s refractory is heated to a temperature sufficient to sustain combustion operations at a minimal level or 8 hours, whichever is less. The use of diesel fuel as a startup accelerant shall be limited to 30 gallons per startup and 200 gallons per year. The Permittee shall keep the following:
 - i. To ensure compliance with the diesel fuel usage as an accelerant for cold startups, the Permittee shall record the gallons used for each cold startup and the gallons used per year in a logbook (written or electronic format) kept on-site and made available to an authorized representative upon request.
 - iii. The Permittee shall monitor and record the date, time, and duration that the furnace bypass is operated during startup and shutdown.
- d. To ensure compliance with 15A NCAC 02D .1100, the furnace/dryer bypass (ID No. ES-F/DBYPASS) in idle mode, defined as a maximum heat input of 10 million Btu per hour, shall be limited to no more than 500 hours per year. The Permittee shall monitor and record the date, time, and duration that the furnace bypass is operated during idle mode.

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

- e. The Permittee shall submit a semi-annual summary report of monitoring and recordkeeping activities given in Section 2.2 A.5.c through 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.

State-enforceable only

6. 15A NCAC 02Q .0711: PERMIT REQUIREMENTS FOR TOXIC AIR POLLUTANTS

- a. The following conditions in this section are enforceable after all controls have been constructed and are operational to reduce facility-wide HAP emissions to below the major source thresholds, in accordance with the schedule specified in Section 2.3 A.1. Following the applicability of Section 2.2 A.4 above, the facility will be classified as a HAP minor source.
- b. The facility shall be operated and maintained in such a manner that any new, existing or increased actual emissions of any Toxic Air Pollutant (TAP) listed in 15A NCAC 02Q .0711 or in this permit from all sources at the facility (excluding those sources exempt under 15A NCAC 02Q .0702 "Exemptions"), including fugitive emissions and emission sources not otherwise required to have a permit, will not exceed its respective TAP permitting emission rates (TPER) listed in 15A NCAC 02Q .0711 without first obtaining an air permit to construct or operate.
- c. PRIOR to exceeding any of the TPERs listed in 15A NCAC 02Q .0711, the Permittee shall be responsible for obtaining an air permit to emit TAPs and for demonstrating compliance with the requirements found in 15A NCAC 02D .1100 "Control of Toxic Air Pollutants."
- d. The Permittee shall maintain at the facility records of operational information sufficient for demonstrating to the Division of Air Quality staff that actual TAPs are less than the rate listed in 15A NCAC 02Q .0711.
- e. The TPER table listed below is provided to assist the Permittee in determining when an air permit is required pursuant to 15A NCAC 02Q .0711 and may not represent all TAPs being emitted from the facility. This table will be updated at such time as the permit is either modified or renewed.

TPER Limitations				
Pollutant (CAS Number)	Carcinogens (lb/yr)	Chronic Toxicants (lb/day)	Acute systemic toxicants (lb/hr)	Acute irritants (lb/hr)
Acetaldehyde (75-07-0)				6.80
Ammonia (7664-41-7)				0.68
Benzo(a)pyrene (50-32-8)	2.2			
Beryllium (7440-41-7)	0.28			
Butadiene, 1,3- (106-99-0)	11			
Carbon tetrachloride (56-23-5)	460			
Chlorobenzene (108-90-7)		46		
Chloroform (67-66-3)	290			
Soluble chromate compounds, as chromium (VI) equivalent		0.013		
p-Dichlorobenzene (106-46-7)				16.8

TPER Limitations				
Pollutant (CAS Number)	Carcinogens (lb/yr)	Chronic Toxicants (lb/day)	Acute systemic toxicants (lb/hr)	Acute irritants (lb/hr)
di (2-ethylhexyl)phthalate (117-81-7)		0.63		
Ethylene dichloride (107-06-2)	260			
n-Hexane (110-54-3)		23		
Mercury, vapor (7439-97-6)		0.013		
Methylene chloride (75-09-2)	1600		0.39	
Methyl ethyl ketone (78-93-3)		78.0		22.4
Nickel metal (7440-02-0)		0.13		
Pentachlorophenol (87-86-5)		0.063	0.0064	
Perchloroethylene (127-18-4)	13000			
Polychlorinated biphenyls (1336-36-3)	5.6			
Styrene (100-42-5)			2.7	
Tetrachlorodibenzo-p-dioxin (1746-01-6)	0.00020			
Toluene (108-88-3)		98		14.4
Trichloroethylene (79-01-6)	4,000			
Vinyl Chloride (75-01-4)	26			
Xylene (1330-20-7)		57		16.4

State-enforceable only**7. 15A NCAC 02D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS**

The Permittee shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary.

2.3 - Schedule of Compliance

A. Special Order by Consent (SOC 2020-004)

Section 2.2 A.1.b of Air Permit No. 10386R04 establishes Best Available Control Technology (“BACT”) emission limits in accordance with 15A NCAC 02D .0530 for numerous emission sources at the facility and specifies that these BACT emission limits shall not be exceeded. As required by Section 2.2 A.1.d of Air Permit No. 10386R04, the Permittee conducted initial source testing during the week of December 16-20, 2019 on the wood-fired direct heat drying system (**ID No. ES-DRYER**), the green hammermills (**ID Nos. ES-GHM-1, ES-GHM-2, and ES-GHM-3**), the dried wood handling operations (**ID No. ES-DWH**), two (2) dry hammermills (**ID Nos. ES-HM-3 and ES-HM-4**), and one (1) pellet press and pellet cooler (**ID No. ES-CLR-5**) to demonstrate compliance with the applicable BACT emission limits. On January 30, 2020, the DAQ Fayetteville Regional Office (“FRO”) received the source test report for the December 2019 testing.

DAQ issued a review memorandum dated March 11, 2020 approving the source tests and stating that the source test results demonstrated compliance with the applicable BACT emission limits, with the exception of PM emissions and PM10 emissions from the pellet presses and coolers and PM2.5 emissions from the dry hammermills. DAQ had previously granted an extension to the Permittee to delay the initial source testing for PM2.5 emissions from the dry hammermills until the BACT limit for this source and pollutant could be reevaluated. On May 5, 2020, DAQ issued a Notice of Violation (NOV) to the Permittee for exceeding the BACT emission limits for PM and PM10 from the pellet presses and coolers during the December 2019 source testing.

The Permittee and the NC Division of Air Quality have entered into a Special Order by Consent, SOC 2020-004, with an effective date of December 16, 2020, to address noncompliance with 15A NCAC 02D .0530. The SOC provides a schedule of compliance allowing the Permittee to reduce potential emissions to below PSD applicability thresholds (achieve synthetic minor status for PSD), at which point BACT emission limits in Section 2.2 A.1.c above are no longer applicable.

The SOC 2020-004 will expire upon DAQ approval of the results of emissions testing required by Paragraph II.B of the SOC, or by December 31, 2022, whichever comes first.

The schedule of compliance for the Permittee, as provided in SOC 2020-004, is as follows:

1. The Permittee shall use best commercial efforts to install new emission controls and implement new emission control strategies to achieve synthetic minor status for PSD within nine (9) months, and in no event to exceed twelve (12) months, of issuance of Air Permit No. 10386R05 by DAQ authorizing the implementation of new emission controls and control strategies for the pellet presses/coolers and the dry hammermills.
2. The Permittee shall perform emissions testing to quantify PM and PM₁₀ emissions rates from the pellet presses and coolers and PM_{2.5} emission rates from the dry hammermills after the new control devices and control strategies are installed and operational at the facility in accordance with the permit issued authorizing implementation of the new emission controls and control strategies (i.e., Air Permit No. 10386R05) and a DAQ-approved protocol.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

F. **Circumvention** - STATE ENFORCEABLE ONLY

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

G. **Permit Modifications**

1. Administrative Permit Amendments [15A NCAC 02Q .0514]

The Permittee shall submit an application for an administrative permit amendment in accordance with 15A NCAC 02Q .0514.

2. Transfer in Ownership or Operation and Application Submittal Content [15A NCAC 02Q .0524 and 02Q .0505]

The Permittee shall submit an application for an ownership change in accordance with 15A NCAC 02Q.0524 and 02Q .0505.

3. Minor Permit Modifications [15A NCAC 02Q .0515]

The Permittee shall submit an application for a minor permit modification in accordance with 15A NCAC 02Q .0515.

4. Significant Permit Modifications [15A NCAC 02Q .0516]

The Permittee shall submit an application for a significant permit modification in accordance with 15A NCAC 02Q .0516.

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

The Permittee shall submit an application for reopening for cause in accordance with 15A NCAC 02Q .0517.

H. **Changes Not Requiring Permit Modifications**

1. Reporting Requirements

Any of the following that would result in new or increased emissions from the emission source(s) listed in Section 1 must be reported to the Regional Supervisor, DAQ:

- a. changes in the information submitted in the application;
- b. changes that modify equipment or processes; or
- c. changes in the quantity or quality of materials processed.

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

2. Section 502(b)(10) Changes [15A NCAC 02Q .0523(a)]

- a. "Section 502(b)(10) changes" means changes that contravene an express permit term or condition. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
- b. The Permittee may make Section 502(b)(10) changes without having the permit revised if:
 - i. the changes are not a modification under Title I of the Federal Clean Air Act;
 - ii. the changes do not cause the allowable emissions under the permit to be exceeded;
 - iii. the Permittee notifies the Director and EPA with written notification at least seven days before the change is made; and
 - iv. the Permittee shall attach the notice to the relevant permit.
- c. The written notification shall include:

- i. a description of the change;
 - ii. the date on which the change will occur;
 - iii. any change in emissions; and
 - iv. any permit term or condition that is no longer applicable as a result of the change.
 - d. Section 502(b)(10) changes shall be made in the permit the next time that the permit is revised or renewed, whichever comes first.
3. Off Permit Changes [15A NCAC 02Q .0523(b)]

The Permittee may make changes in the operation or emissions without revising the permit if:

 - a. the change affects only insignificant activities and the activities remain insignificant after the change; or
 - b. the change is not covered under any applicable requirement.
4. Emissions Trading [15A NCAC 02Q .0523(c)]

To the extent that emissions trading is allowed under 15A NCAC 02D, including subsequently adopted maximum achievable control technology standards, emissions trading shall be allowed without permit revision pursuant to 15A NCAC 02Q .0523(c).

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

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

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

Excess Emissions

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

Permit Deviations

3. Pursuant to 15A NCAC 02Q .0508(f)(2), the Permittee shall report deviations from permit requirements (terms and conditions) as follows:
 - a. Notify the Regional Supervisor or Director of all other deviations from permit requirements not covered under 15A NCAC 02D .0535 quarterly. A written report to the Regional Supervisor shall include the

probable cause of such deviation and any corrective actions or preventative actions taken. The responsible official shall certify all deviations from permit requirements.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

O. Retention of Records [15A NCAC 02Q .0508(f) and 02Q .0508 (l)]

The Permittee shall retain records of all required monitoring data and supporting information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring information, and copies of all reports required by the permit. These records shall be maintained in a form suitable and readily available for expeditious inspection and review. Any records required by the conditions of this permit shall be kept on site and made available to DAQ personnel for inspection upon request.

P. Compliance Certification [15A NCAC 02Q .0508(n)]

The Permittee shall submit to the DAQ and the EPA (Air and EPCRA Enforcement Branch, EPA, Region 4, 61 Forsyth Street SW, Atlanta, GA 30303) postmarked on or before March 1 a compliance certification (for the preceding calendar year) by a responsible official with all federally-enforceable terms and conditions in the permit, including emissions limitations, standards, or work practices. It shall be the responsibility of the current owner to submit a compliance certification for the entire year regardless of who owned the facility during the year. The compliance certification shall comply with additional requirements as may be specified under Sections 114(a)(3) or 504(b) of the Federal Clean Air Act. The compliance certification shall specify:

1. the identification of each term or condition of the permit that is the basis of the certification;
2. the compliance status (with the terms and conditions of the permit for the period covered by the certification);
3. whether compliance was continuous or intermittent; and
4. the method(s) used for determining the compliance status of the source during the certification period.

Q. Certification by Responsible Official [15A NCAC 02Q .0520]

A responsible official shall certify the truth, accuracy, and completeness of any application form, report, or compliance certification required by this permit. All certifications shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

R. Permit Shield for Applicable Requirements [15A NCAC 02Q .0512]

1. Compliance with the terms and conditions of this permit shall be deemed compliance with applicable requirements, where such applicable requirements are included and specifically identified in the permit as of the date of permit issuance.
2. A permit shield shall not alter or affect:
 - a. the power of the Commission, Secretary of the Department, or Governor under NCGS 143-215.3(a)(12), or EPA under Section 303 of the Federal Clean Air Act;
 - b. the liability of an owner or operator of a facility for any violation of applicable requirements prior to the effective date of the permit or at the time of permit issuance;
 - c. the applicable requirements under Title IV; or
 - d. the ability of the Director or the EPA under Section 114 of the Federal Clean Air Act to obtain information to determine compliance of the facility with its permit.

3. A permit shield does not apply to any change made at a facility that does not require a permit or permit revision made under 15A NCAC 02Q .0523.
4. A permit shield does not extend to minor permit modifications made under 15A NCAC 02Q .0515.

S. **Termination, Modification, and Revocation of the Permit** [15A NCAC 02Q .0519]

The Director may terminate, modify, or revoke and reissue this permit if:

1. the information contained in the application or presented in support thereof is determined to be incorrect;
2. the conditions under which the permit or permit renewal was granted have changed;
3. violations of conditions contained in the permit have occurred;
4. the EPA requests that the permit be revoked under 40 CFR 70.7(g) or 70.8(d); or
5. the Director finds that termination, modification, or revocation and reissuance of the permit is necessary to carry out the purpose of NCGS Chapter 143, Article 21B.

T. **Insignificant Activities** [15A NCAC 02Q .0503]

Because an emission source or activity is insignificant does not mean that the emission source or activity is exempted from any applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement. The Permittee shall have available at the facility at all times and made available to an authorized representative upon request, documentation, including calculations, if necessary, to demonstrate that an emission source or activity is insignificant.

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

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

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

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

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

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

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

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

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

The Permittee shall report by **June 30 of each year** the actual emissions of each air pollutant listed in 15A NCAC 02Q .0207(a) from each emission source within the facility during the previous calendar year. The report shall be

in or on such form as may be established by the Director. The accuracy of the report shall be certified by a responsible official of the facility.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

1. For modifications made pursuant to 15A NCAC 02Q .0501(b)(2), the Permittee shall file a Title V Air Quality Permit Application for the air emission source(s) and associated air pollution control device(s) on or before 12 months after commencing operation.
2. For modifications made pursuant to 15A NCAC 02Q .0501(c)(2), the Permittee shall not begin operation of the air emission source(s) and associated air pollution control device(s) until a Title V Air Quality Permit Application is filed and a construction and operation permit following the procedures of Section .0500 (except for Rule .0504 of this Section) is obtained.

3. For modifications made pursuant to 502(b)(10), in accordance with 15A NCAC 02Q .0523(a)(1)(C), the Permittee shall notify the Director and EPA (EPA - Air Planning Branch, 61 Forsyth Street SW, Atlanta, GA 30303) in writing at least seven days before the change is made. The written notification shall include:
 - a. a description of the change at the facility;
 - b. the date on which the change will occur;
 - c. any change in emissions; and
 - d. any permit term or condition that is no longer applicable as a result of the change.

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

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

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

ATTACHMENT

List of Acronyms

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