



NORTH CAROLINA
Environmental Quality

ROY COOPER
Governor

ELIZABETH S. BISER
Secretary

MICHAEL ABRACZINSKAS
Director

xx

Mr. Jake Elston
Senior Vice President - Operations
Roanoke Valley Lumber
290 Power Place Drive
Weldon, NC 27890

SUBJECT: Air Quality Permit No. 10708R00
Facility ID: 4200207
Roanoke Valley Lumber
Weldon, North Carolina
Halifax County
PSD Status: Major
Fee Class: Title V

Dear Mr. Elston:

In accordance with your completed application received on August 12, 2021, we are forwarding herewith Air Quality Permit No. 10708R00 to Roanoke Valley Lumber, 290 Power Place Drive, Weldon, Halifax County, North Carolina, authorizing the construction and operation of the emission source(s) and associated air pollution control device(s) specified herein. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant per 15A North Carolina Administrative Code 02Q .0503(8) have been listed for informational purposes as ATTACHMENT to this cover letter.

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

If any parts, requirements, or limitations contained in this Air Quality Permit are unacceptable to you, you have the right to request a formal adjudicatory hearing within 30 days following receipt of this permit, identifying the specific issues to be contested. This hearing request must be in the form of a written petition, conforming to NCGS (North Carolina General Statutes) 150B-23, and filed with both the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, North Carolina 27699-6714 and the Division of Air Quality, Permitting Section, 1641 Mail Service Center, Raleigh, North Carolina 27699-1641. The form for requesting a formal adjudicatory hearing may be obtained upon request from the Office of Administrative Hearings. Please note that this permit will be stayed in its entirety upon receipt of the request for a hearing. Unless a request for a hearing is made pursuant to NCGS 150B-23, this Air Quality Permit shall be final and binding 30 days after issuance.

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



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

Mr. Jake Elston

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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.

Halifax County has triggered increment tracking under PSD for PM₁₀, SO₂, and NO_x. This modification will result in an increase in 1.49 pounds per hour of PM₁₀, 0.12 pounds per hour of SO₂, and 9.12 pounds per hour of NO_x.

This Air Quality Permit shall be effective from xx and shall expire on xx. This Air Quality Permit 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 Rahul P. Thaker, P.E., QEP, at Rahul.Thaker@ncdenr.gov or (919) 707-8740.

Sincerely yours,

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

Enclosure

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

ATTACHMENT to Permit No. 10708R00

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

Emission Source ID No.	Emission Source Description
I-D1	Debarker - Log bucking and debarking (463 tons logs per hour processing rate)
I-S1	Sawmill (463 tons logs per hour processing rate)
I-CH1 and I-CH2	Two block/trim chippers (each 25 tons per hour processing rate)
I-H1 and I-H2	Two bark hogs (each 30 tons per hour processing rate)
I-FP1 PSD BACT MACT ZZZZ	Diesel-fired emergency fire water pump (305 hp engine output capacity)
I-BH1	Byproducts handling equipment (Conveyors and storage bins, 1.28 million tons per year total chips/bark/saw dust/shavings processing rate)

1. Because an activity is insignificant does not mean that the activity is exempted from an applicable requirement or that the Permittee is exempted from demonstrating compliance with any applicable requirement.
2. When applicable, emissions from stationary source activities identified above shall be included in determining compliance with the permit requirements for toxic air pollutants under 15A NCAC 02D .1100 "Control of Toxic Air Pollutants" or 02Q .0711 "Emission Rates Requiring a Permit."



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

AIR QUALITY PERMIT

Permit No.	Replaces Permit No.	Effective Date	Expiration Date
10708R00	None	xx	xx

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:	Roanoke Valley Lumber
Facility ID:	4200207
Primary SIC Code:	2421
NAICS Code:	321113
Facility Site Location:	290 Power Place Drive
City, County, State, Zip:	Weldon, Halifax County, North Carolina 27890
Mailing Address:	290 Power Place Drive
City, State, Zip:	Weldon, North Carolina 27890
Application Number:	4200207.21A
Complete Application Date:	August 12, 2021
Division of Air Quality, Regional Office Address:	Raleigh Regional Office 3800 Barrett Drive Raleigh, North Carolina 27609

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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
DKN1 through DKN5 PSD BACT MACT DDDD	Five direct-fired, continuous, dual path, lumber drying kilns (processing Southern Yellow Pines, 100 million board feet per year design capacity each) with natural gas-fired low-NOx burners (45 million Btu per hour heat input capacity each)	N/A	N/A
PM1	Planer mill with dry hammer hog, and associated dust collection system (cyclone and baghouse) ¹	N/A	N/A

¹ “Inherent” process equipment and not an air pollution control equipment.

SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS

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

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

A. Five direct-fired, continuous, dual path, lumber drying kilns with natural gas-fired low-NOx burners (ID Nos. DKN1 through DKN5)

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	$E = 4.10 \times P^{0.67}$ for $P \leq 30$ tons per hour or $E = 55.0(P)^{0.11} - 40$ for $P > 30$ tons per hour Where, E = allowable emissions rate in pounds per hour P = process weight rate in tons per hour	15A NCAC 02D .0515
SO ₂	2.3 pounds per million Btu	15A NCAC 02D .0516
Visible Emissions	20 percent opacity	15A NCAC 02D .0521
VOC	See Section 2.2 A.1	15A NCAC 02D .0530
GHGs	See Section 2.2 A.1	15A NCAC 02D .0544
Hazardous Air Pollutants	See Section 2.1 A.4	15A NCAC 02D .1111 (40 CFR 63, Subpart DDDD)
Odors	See Section 2.2 A.2	15A NCAC 02D .1806
NOx	See Section 2.2 A.3	15A NCAC 02Q .0317 (Avoidance of PSD)
N/A	See Section 2.2 A.4	15A NCAC 02Q .0504

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

- a. Emissions of particulate matter from the lumber drying kilns (ID Nos. DKN1 through DKN5) shall not exceed an allowable emission rate as calculated by the following equation:

$$E = 4.10 \times P^{0.67} \quad \text{for units with process weight rate less than or equal to 30 tons per hour}$$

or

$$E = 55.0(P)^{0.11} - 40 \quad \text{for units with process weight rates greater than 30 tons per hour}$$

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

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

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

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition in Section 3.

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

- c. Monitoring/Recordkeeping/Reporting requirements for production rates (throughputs) for lumber drying kilns (**ID Nos. DKN1 through DKN5**) in Sections 2.2 A.1.1, o, and u below shall be sufficient to ensure compliance with 15A NCAC 02D .0515.

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

- a. Emissions of sulfur dioxide from the lumber drying kilns (**ID Nos. DKN1 through DKN5**) 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 .0308(a)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition in Section 3.

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

- c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the lumber drying kilns (**ID Nos. DKN1 through DKN5**).

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

- a. Visible emissions from the lumber drying kilns (**ID Nos. DKN1 through DKN5**) 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 .0308(a)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition in Section 3.

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

- c. No monitoring/recordkeeping/reporting is required for visible emissions from the lumber drying kilns (**ID Nos. DKN1 through DKN5**).

4. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

- a. For direct-fired continuous lumber drying kilns (**ID Nos. DKN1 through DKN5**), the Permittee shall comply with all applicable provisions in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR Part 63, Subpart DDDD "National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products" and Subpart A "General Provisions."

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

- b. No testing shall be required.

Notifications [40 CFR 63.2231, 63.2233(a)(2), 63.2252, and 63.2280(b)]

- c. The Permittee shall submit an Initial Notification to DAQ, no later than 120 calendar days after the

initial startup of each lumber drying kiln (ID Nos. DKN1 through DKN5).

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

- d. No monitoring/recordkeeping/reporting is required for hazardous air pollutants emissions from the lumber drying kilns (ID Nos. DKN1 through DKN5).

B. Planer Mill with Dry Hammer Hog, and Associated “Inherent” Dust Collection system (Cyclone and Baghouse) (ID No. PM1)

The following table provides a summary of limits and standards for the emission sources described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	Adequate duct work and properly designed collectors	15A NCAC 02D .0512
Visible Emissions	20 percent opacity	15A NCAC 02D .0521
Odors	See Section 2.2 A.2	15A NCAC 02D .1806
N/A	See Section 2.2 A.4	15A NCAC 02Q .0504

1. 15A NCAC 02D .0512: PARTICULATES FROM MISCELLANEOUS WOOD PRODUCTS FINISHING PLANTS

- a. The Permittee shall not cause, allow, or permit particulate matter caused by the working, sanding, or finishing of wood to be discharged from any stack, vent, or building into the atmosphere without providing, as a minimum for its collection, adequate duct work and properly designed collectors. In no case shall the ambient air quality standards be exceeded beyond the property line.

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

- b. No testing shall be required.

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

- c. No monitoring/recordkeeping/reporting is required for particulate emissions from the planer mill with dry hammer hog (ID No. PM1).

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

- a. Visible emissions from the planer mill with dry hammer hog (ID No. PM1) 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 .0308(a)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition in Section 3.

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

- c. To ensure compliance, once every month the Permittee shall observe the emission points of the planer mill with dry hammer hog (ID No. PM1) 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. The Permittee shall establish “normal” for this source in the first 30 days following the

beginning of operation. If visible emissions from these sources are observed to be above normal, the Permittee shall either:

- i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
 - ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 B.2.a above.
- 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.

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

- e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Section 2.1 A.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.

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

A. Facility-wide

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Volatile Organic Compounds	See Section 2.2 A.1	15A NCAC 02D .0530
Greenhouse Gases	See Section 2.2 A.1	15A NCAC 02D .0544
Odor	See Section 2.2 A.2	15A NCAC 02D .1806
Nitrogen Oxides (as NO ₂)	See Section 2.2 A.3	15A NCAC 02Q .0317 (Avoidance of PSD)
-	Section 2.2 A.4	15A NCAC 02Q .0504

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

15A NCAC 02D .0544: PREVENTION OF SIGNIFICANT DETERIORATION REQUIREMENTS FOR GREENHOUSE GASES

- a. The Permittee shall comply with all applicable emission limits, testing, monitoring, recordkeeping, and reporting requirements, in accordance with 15A NCAC 02D .0530, “Prevention of Significant Deterioration of Air Quality” and 02D .0544 “Prevention of Significant Deterioration Requirements for Greenhouse Gases”.
- b. The Permittee shall commence the phased construction project (Application 4200207.21A) as follows:
 - i. Phase 1 construction is projected to begin in May 2022 and comprises of three lumber drying

kilns (**ID Nos. DKN1 through DKN3**), one planer mill with dry hammer hog, and associated “inherent” dust collection system (cyclone and baghouse) (**ID No. PM1**), one bark hog (**ID No. I-H1**), one block/trim chipper (**ID No. I-CH1**), one debarker (**ID No. I-D1**), one sawmill (**ID No. I-S1**), byproducts handling equipment - conveyors and storage bins (**ID No. I-BH1**), and one emergency fire water pump (**ID No. I-FP1**).

- ii. Phase 2 construction is projected to begin by September 2024 and comprises of two lumber drying kilns (**ID Nos. DKN4 and DKN5**), one bark hog (**ID No. I-H2**), and one block/trim chipper (**ID No. I-CH2**).
- c. For the phased construction project described in Section 2.2 A.1.b above, the DAQ shall review and modify as appropriate the determination of Best Available Control Technology (BACT) in Section 2.2 A.1.e below at the latest reasonable time which occurs no later than 18 months prior to commencement of construction of each independent phase of the project. At such time, the Permittee may be required to demonstrate the adequacy of the BACT in Section 2.2 A.1.e below.
- d. The PSD permit for the project described in Section 2.2 A.1.b above shall become invalid if the Permittee does not commence construction within 18 months after receipt of the approval of Air Quality Permit 10708R00, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. The DAQ may extend the 18-month period upon a satisfactory showing that an extension is justified. This provision does not apply to the time period between construction of the approved phases of a phased construction project; each phase shall commence construction within 18 months of the projected and approved commencement date in Section 2.2 A.1.b above.
- e. The Permittee shall comply with the following BACT during all periods of operation (normal, startup, shutdown, and malfunction):

EMISSION SOURCE	REGULATED NSR POLLUTANT	BACT	CONTROL DESCRIPTION
Lumber Drying Kilns (ID Nos. DKN1 through DKN5)	VOC	4.2 lb/1000 bd-ft as WPP1 (i.e., as terpene + methanol + formaldehyde) ² , 3-hour average 1,054.1 tons per consecutive 12-months	Good design and operating practices
Lumber Drying Kilns (ID Nos. DKN1 through DKN5)	GHGs	89,756 tons per consecutive 12-months	Good combustion, and operating and maintenance practices
Emergency Fire Water Pump (ID No. I-FP1)	VOC	good combustion control (good operation and maintenance practices), use of low sulfur diesel (15 ppm sulfur), and limited operations (500 hours)	-
Emergency Fire Water Pump (ID No. I-FP1)	GHGs	good combustion control (good operation and maintenance practices), use of low sulfur diesel (15 ppm sulfur), and limited operations (500 hours)	-

- f. The maximum total throughput for five lumber drying kilns (**ID Nos. DKN1 through DKN5**) shall not exceed 500 million bd-ft per consecutive 12-month period.
- g. The maximum total heat input for five lumber drying kilns’ low-NOx burners (**ID Nos. DKN1 through DKN5**) shall not exceed 1.533 x 10⁶ million Btu per consecutive 12-month period.

² “Interim VOC Measurement Protocol for the Wood Products Industry (WPP1)”, EPA, July 2007.

- h. The operating hours for emergency fire water pump (**ID No. I-FP1**) shall not exceed 500 hours per consecutive 12-month period.

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

- i. No testing shall be required for VOC or GHGs BACT for lumber drying kilns (**ID Nos. DKN1 through DKN5**) and emergency fire water pump (**ID No. I-FP1**).

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

- j. The Permittee shall operate and maintain five direct-fired continuous drying kilns (**ID Nos. DKN1 through DKN5**) in accordance with the manufacturer’s specifications until the site-specific operation and maintenance plan in Section 2.2 A.1.k below is submitted and approved by DAQ. The Permittee shall record any maintenance performed on the kilns each month in a logbook (written or electronic format).
- k. Within 180 days of commencement of operation of the first lumber drying kiln (**ID Nos. DKN1 through DKN5**), the Permittee shall submit to DAQ for approval a site-specific operation and maintenance plan for these kilns. The plan shall identify key operating parameters to be monitored that will allow continued compliance with the VOC and GHGs BACT in Section 2.2 A.1.e above, providing the information on target values, locations and frequency of monitoring, averaging period for monitored parameter(s), monitoring equipment, methods for data collection and validation, and any other information the Permittee deems appropriate.
- l. The Permittee shall monitor the production rate for each kiln (**ID Nos. DKN1 through DKN5**) on a monthly basis and total them for each of the consecutive 12-months period, and determine the total production rate on a facility wide basis monthly and for each of the consecutive 12-months period.
- m. The Permittee shall monitor the amount of natural gas burned in low NOx burners of each kiln (**ID Nos. DKN1 through DKN5**) on a monthly basis and total them for each of the consecutive 12-month period, and determine the total amount of natural gas burned on a facility wide basis (both scf and million Btu) monthly and for each of the consecutive 12-months period.
- n. The Permittee shall calculate VOC emissions for each kiln (**ID Nos. DKN1 through DKN5**) on a monthly basis and total them for each 12-months period, and determine monthly the total VOC emissions for these kilns on a facility wide basis and for each of the consecutive 12-months period, according to the following formula:

$$\text{VOC tons/month} = \frac{[\sum\{4.2 \text{ lb}/1000 \text{ bd-ft} \times A \text{ bd-ft/month}\} + \sum\{5.5 \text{ lbs}/10^6 \text{ scf} \times B \text{ scf/month}\}]}{2000 \text{ lbs/ton}}$$

Where:

- A = Production rate in bd-ft per month for each lumber drying kiln
- B = Natural gas usage in standard cubic feet per month for each lumber drying kiln’s low NOx burners

- o. The Permittee shall record monthly the kiln production rates, natural gas usage, and VOC emissions for each kiln (**ID Nos. DKN1 through DKN5**) and facility-wide, in a logbook (written or electronic format).
- p. The Permittee shall calculate GHGs emissions for each kiln (**ID Nos. DKN1 through DKN5**) and emergency fire water pump (**ID No. I-FP1**) monthly, and total them for each of the consecutive 12-months period, and determine the total GHGs emissions on a facility wide basis monthly and for each of the consecutive 12-month period, according to the following formula:

GHGs as CO₂e, tons/month =

$$(\sum [\{53.06 \text{ kg}/10^6 \text{ Btu} \times A \text{ scf/month} \times 1,026 \text{ Btu/scf}\} +$$

$$\begin{aligned} & \{0.001 \text{ kg}/10^6 \text{ Btu} \times A \text{ scf}/\text{month} \times 1,026 \text{ Btu}/\text{scf} \times 25\} + \\ & \{0.0001 \text{ kg}/10^6 \text{ Btu} \times A \text{ scf}/\text{month} \times 1,026 \text{ Btu}/\text{scf} \times 298\} + \\ & [\{73.96 \text{ kg}/10^6 \text{ Btu} \times 16.4 \text{ gallon}/\text{hour} \times B \text{ hour}/\text{month} \times 138,000 \text{ Btu}/\text{gallon}\} + \\ & \{0.003 \text{ kg}/10^6 \text{ Btu} \times 16.4 \text{ gallon}/\text{hour} \times B \text{ hour}/\text{month} \times 138,000 \text{ Btu}/\text{gallon} \times 25\} + \\ & \{0.0006 \text{ kg}/10^6 \text{ Btu} \times 16.4 \text{ gallon}/\text{hour} \times B \text{ hour}/\text{month} \times 138,000 \text{ Btu}/\text{gallon} \times 298\}] \\ & \times (2.205) / 2000 \end{aligned}$$

Where,

A = Natural gas usage in standard cubic feet per month for each lumber drying kiln's low NOx burner

B = Operating hours per month for emergency fire water pump

- q. The Permittee shall record monthly GHGs emissions for each lumber drying kiln (**ID Nos. DKN1 through DKN5**) and emergency fire water pump (**ID No. I-FP1**), and facility-wide total GHGs emissions, in a logbook (written or electronic format).
- r. The Permittee shall keep monthly records of operating hours for emergency fire water pump (**ID No. I-FP1**) in a logbook (written or electronic format).
- s. The Permittee shall perform tune-ups on low-NOx burners of each lumber drying kiln (**ID Nos. DKN1 through DKN5**) annually (no more than 13 months after the previous tune-up). All other operation and maintenance (other than periodic tune-ups) on these lumber kilns shall be performed according to manufacturer's specifications in Section 2.2 A.1.j or an approved site-specific plan in Section 2.2 A.1.k, as applicable. The Permittee shall keep records of tune-ups performed on each low-NOx burner including a description of any corrective actions taken as a part of the tune-up.

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

- t. The Permittee shall notify the DAQ in writing of the date of commencement of construction for each phase of the construction project in Section 2.2 A.1.b above, postmarked no later than 15 days after such date.
- u. The Permittee shall submit a semiannual summary report of monitoring and recordkeeping activities given in Sections 2.2 A.1.j through s above, postmarked on or before January 30 of each calendar year for the preceding six-month period and on or before July 30 of each calendar year for the preceding six-month period. The report shall contain the following:
 - i. The monthly VOC emissions for each lumber drying kiln (**ID Nos. DKN1 through DKN5**) and facility wide total VOC for the previous 17 months. The monthly GHGs emissions for each kiln (**ID Nos. DKN1 through DKN5**) and emergency fire water pump (**ID No. I-FP1**), and facility-wide total GHGs for the previous 17 months. The emissions must be calculated for each of the consecutive 12-month period over the previous 17 months; and
 - ii. The monthly production rate and natural gas usage for each lumber drying kiln (**ID Nos. DKN1 through DKN5**), and monthly operating hours for emergency fire water pump (**ID No. I-FP1**) for the previous 17 months. The production rates, natural gas usages, and operating hours must be calculated for each of the consecutive 12-months period over the previous 17 months.

2. 15A NCAC 02D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS

- a. 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.

**3. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS
for 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION**

- a. In order to avoid applicability of 15A NCAC 02D .0530(g) for the new major stationary source, included in application 4200207.21A, the facility wide NOx emissions shall be less than 40 tons per consecutive 12-month period.

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

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition in Section 3.

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

- c. Monitoring and record keeping requirements for natural gas usage for each kiln (**ID Nos. DKN1 through DKN5**), operating hours for emergency fire water pump (**ID No. I-FP1**), and annual tune-ups for low-NOx burners on each lumber drying kiln (**ID Nos. DKN1 through DKN5**) in Sections 2.2 A.1.m, o, r, and s above shall be sufficient to ensure compliance with 15A NCAC 02Q .0317.
- d. The Permittee shall calculate NOx emissions on a monthly basis and record them in a logbook (written or electronic format), according to the following formula:

$$\text{NO}_x \text{ tons/month} = \frac{[\sum\{50 \text{ lbs}/10^6 \text{ scf} \times A \text{ scf/month}\} + \{0.031 \text{ lbs}/\text{hp-hr} \times B \text{ hp-hr/month}\}]}{2000 \text{ lbs/ton}}$$

Where:

- A = Natural gas usage in standard cubic feet per month for each lumber drying kiln
B = Power output in hp-hr per month for emergency fire water pump

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

- e. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain:
 - i. the monthly NOx emissions for each of the previous 17 months and each of the consecutive 12-month periods over the previous 17 months.
- f. Reporting requirements for natural gas usage for lumber drying kilns (**ID Nos. DKN1 through DKN5**) and operating hours for emergency fire water pump (**ID No. I-FP1**) in Section 2.2 A.1.u above shall be sufficient to ensure compliance with 15A NCAC 02Q .0317.

4. 15A NCAC 02Q .0504: OPTION FOR OBTAINING CONSTRUCTION AND OPERATION PERMIT

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

- a. For completion of the two-step significant modification process, pursuant to 15A NCAC 02Q .0501(b)(2), the Permittee shall file an application for five lumber drying kilns (**ID Nos. DKN1 through DKN5**), one planer mill with dry hammer hog, and associated “inherent” dust collection system (cyclone and baghouse) (**ID No. PM1**), two bark hogs (**ID No. I-H1 and I-H2**), two block/trim chippers (**ID Nos. I-CH1 and I-CH2**), one debarker (**ID No. I-D1**), one sawmill (**ID No. I-S1**), byproducts handling equipment - conveyors and storage bins (**ID No. I-BH1**), and one emergency fire water pump (**ID No. I-FP1**), following the procedures of Section 15A NCAC 02Q .0500, within one year from the date of beginning of operation of any of the above lumber drying kilns, whichever occurs first.

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

- b. The Permittee shall notify the DAQ in writing of the date of beginning of operation of lumber drying kilns (**ID Nos. DKN1 through DKN5**), planer mill with dry hammer hog and associated “inherent” dust collection system (cyclone and baghouse) (**ID No. PM1**), two bark hogs (**ID No. I-H1 and I-H2**), two block/trim chippers (**ID Nos. I-CH1 and I-CH2**), one debarker (**ID No. I-D1**), one sawmill (**ID No. I-S1**), byproducts handling equipment - conveyors and storage bins (**ID No. I-BH1**), and one emergency fire water pump (**ID No. I-FP1**), postmarked no later than 15 days after such date.

SECTION 3 - GENERAL CONDITIONS

1. In accordance with G.S. 143-215.108(c)(1), TWO COPIES OF ALL DOCUMENTS, REPORTS, TEST DATA, MONITORING DATA, NOTIFICATIONS, REQUESTS FOR RENEWAL, AND ANY OTHER INFORMATION REQUIRED BY THIS PERMIT shall be submitted to the:

Regional Supervisor
North Carolina Division of Air Quality
Raleigh Regional Office
3800 Barrett Drive
Raleigh, NC 27609
919-791-4200

For identification purposes, each submittal should include the facility name as listed on the permit, the facility identification number, and the permit number.

2. RECORDS RETENTION REQUIREMENT - In accordance with 15A NCAC 02D .0605, any records required by the conditions of this permit shall be kept on site and made available to DAQ personnel for inspection upon request. These records shall be maintained in a form suitable and readily available for expeditious inspection and review. These records must be kept on site for a minimum of 2 years, unless another time period is otherwise specified.
3. ANNUAL FEE PAYMENT - Pursuant to 15A NCAC 02Q .0203(a), the Permittee shall pay the annual permit fee within 30 days of being billed by the DAQ. Failure to pay the fee in a timely manner will cause the DAQ to initiate action to revoke the permit.
4. EQUIPMENT RELOCATION - In accordance with 15A NCAC 02Q .0301, a new air permit shall be obtained by the Permittee prior to establishing, building, erecting, using, or operating the emission sources or air cleaning equipment at a site or location not specified in this permit.
5. REPORTING REQUIREMENT - In accordance with 15A NCAC 02Q .0309, any of the following that would result in previously unpermitted, new, or increased emissions must be reported to the Regional Supervisor, DAQ:
 - a. changes in the information submitted in the application regarding facility emissions;
 - b. changes that modify equipment or processes of existing permitted facilities; 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.

6. In accordance with 15A NCAC 02Q .0309, this permit is subject to revocation or modification by the DAQ upon a determination that information contained in the application or presented in the support thereof is incorrect, conditions under which this permit was granted have changed, or violations of conditions contained in this permit have occurred. In accordance with G.S. 143-215.108(c)(1), 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 cleaning device(s) and appurtenances.
7. CHANGES NOT REQUIRING PERMIT REVISIONS - Pursuant to 15A NCAC 02Q .0318, changes to the facility that are not exempt pursuant to 15A NCAC 02Q .0102 may be allowed without first

modifying an applicable air permit if the change(s) meet(s) the requirements of 15A NCAC 02Q .0318(b)(1) through (b)(5) and the owner or operator notifies the Director in writing, using forms provided by the Division, seven calendar days before the change is made. Within 10 business days of receipt of the notice, the Division shall notify the owner or operator of its determination of whether the change(s) meet(s) the requirements of 15A NCAC 02Q .0318(b)(1) through (b)(5).

8. In accordance with G.S. 143-215.108(c)(1), this permit is nontransferable by the Permittee. Future owners and operators must obtain a new air permit from the DAQ.
9. In accordance with G.S. 143-215.108(c)(1), this issuance of this permit in no way absolves the Permittee of liability for any potential civil penalties which may be assessed for violations of State law which have occurred prior to the effective date of this permit.
10. In accordance with G.S. 143-215.108(c)(1), this permit does not relieve the Permittee of the responsibility of complying with all applicable requirements of any Federal, State, or Local water quality or land quality control authority.
11. In accordance with 15A NCAC 02D .0605, reports on the operation and maintenance of the facility shall be submitted by the Permittee to the Regional Supervisor, DAQ at such intervals and in such form and detail as may be required by the DAQ. Information required in such reports may include, but is not limited to, process weight rates, firing rates, hours of operation, and preventive maintenance schedules.
12. A violation of any term or condition of this permit shall subject the Permittee to enforcement pursuant to G.S. 143-215.114A, 143-215.114B, and 143-215.114C, including assessment of civil and/or criminal penalties.
13. Pursuant to North Carolina General Statute 143-215.3(a)(2), no person shall refuse entry or access to any authorized representative of the DAQ who requests entry or access for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or interfere with any such 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.
14. In accordance with G.S. 143-215.108(c)(1), this permit does not relieve the Permittee of the responsibility of complying with any applicable Federal, State, or Local requirements governing the handling, disposal, or incineration of hazardous, solid, or medical wastes, including the Resource Conservation and Recovery Act (RCRA) administered by the Division of Waste Management.
15. PERMIT RETENTION REQUIREMENT - In accordance with 15A NCAC 02Q .0110, the Permittee shall retain a current copy of the air permit at the site. The Permittee must make available to personnel of the DAQ, upon request, the current copy of the air permit for the site.
16. CLEAN AIR ACT SECTION 112(r) REQUIREMENTS - Pursuant to 15A NCAC 02D .2100 "Risk Management Program," if the Permittee is required to develop and register a risk management plan pursuant to Section 112(r) of the Federal Clean Air Act, then the Permittee is required to register this plan with the USEPA in accordance with 40 CFR Part 68.
17. PREVENTION OF ACCIDENTAL RELEASES - GENERAL DUTY - Pursuant to Title I Part A Section 112(r)(1) of the Clean Air Act "Hazardous Air Pollutants - Prevention of Accidental Releases - Purpose and General Duty," 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. **This condition is federally enforceable only.**

18. GENERAL EMISSIONS TESTING AND REPORTING REQUIREMENTS - If emissions testing is required by this permit, or the DAQ, or if the Permittee submits emissions testing to the DAQ in support of a permit application or to demonstrate compliance, the Permittee shall perform such testing in accordance with 15A NCAC 2D .2600 and follow all DAQ procedures including protocol approval, regional notification, report submittal, and test results approval. Additionally, in accordance with 15A NCAC 2D .0605, the Permittee shall follow the procedures for obtaining any required audit sample and reporting those results.

Permit issued this the xx.

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

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

Air Permit No. 10708R00