NORTH CAROLINA DIVISION OF AIR QUALITY

Application Review

Issue Date:

Region: Raleigh Regional Office
County: Chatham
NC Facility ID: 1900015
Inspector's Name: Abdul Kadir
Date of Last Inspection: 03/28/2023
Compliance Code: 3 / Compliance - inspection

Facility Data

Applicant (Facility's Name): Arauco North America, Inc.

Facility Address:
Arauco North America, Inc.
985 Corinth Road
Moncure, NC 27559

SIC: 2493 / Reconstituted Wood Products
NAICS: 321219 / Reconstituted Wood Product Manufacturing

Facility Classification: Before: Title V After: Title V
Fee Classification: Before: Title V After: Title V

Permit Applicability (this application only)

SIP: 02D .0515, .0521, .1111
NSPS: No
NESHAP: DDDD
PSD: Yes
PSD Avoidance: YES
NC Toxics: No, but toxics evaluation pursuant to 02D .0706(c)
112(r): NA
Other:

Contact Data

Facility Contact	Authorized Contact	Technical Contact
Larry Durgin Environmental Manager (919) 930-5079 985 Corinth Road Moncure, NC 27559	Jeff McMillian Plant Manager (919) 545-5865 985 Corinth Road Moncure, NC 27559	Larry Durgin Environmental Manager (919) 930-5079 985 Corinth Road Moncure, NC 27559

Application Data

Application Number: 1900015.22B
Date Received: 07/19/2022
Application Type: Modification
Application Schedule: TV-Significant
Existing Permit Data
Existing Permit Number: 03449/T57
Existing Permit Issue Date: 06/15/2022
Existing Permit Expiration Date: 02/28/2027

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2021	7.02	223.02	349.45	180.69	87.78	264.16	245.30 [Methanol (methyl alcohol)]
2020	7.58	111.15	600.67	194.33	91.15	241.16	227.18 [Methanol (methyl alcohol)]
2019	13.61	280.04	1260.94	579.34	156.92	327.33	285.05 [Methanol (methyl alcohol)]
2018	13.75	245.13	985.75	493.30	130.56	269.46	233.06 [Methanol (methyl alcohol)]
2017	12.64	216.83	708.04	340.86	123.16	241.97	175.06 [Formaldehyde]

Review Engineer: Joseph Voelker

Review Engineer's Signature: Date:

Comments / Recommendations:

Issue 03449/T58
Permit Issue Date:
Permit Expiration Date:

I. Purpose of Application

Arauco North America, Inc. (Arauco) owns and operates an existing medium density fiberboard (MDF) manufacturing mill in Moncure, North Carolina (Moncure mill). The Moncure mill is a major facility as defined by 15A North Carolina Administrative Code (NCAC) 02Q .0103(22). The facility currently operates under Title V Operating Permit No. 03449T57 issued by the North Carolina Department of Environmental Quality (DEQ), Division of Air Quality (DAQ), on June 15, 2022. Arauco is submitting this significant modification application to permit the uncontrolled operation of the MDF Board Cooler (ES-06-B) and to remove the biofilter as a listed control technology for this source in Table 2.2.B.2 of Condition 2.2 B.2.a of Permit No. 03449T57 but retain the numerical emission limit established as Best Available Control Technology (BACT).

As the proposed changes are a significant modification that contravene or conflict with a condition in the existing permit, this application is being processed as a one-step significant modification pursuant to 15A NCAC 02Q .0501(c)(1) and 02Q .0516.

II. Chronology

Date	Description
07/19/2022	An application was received and assigned application no. 1900015.22B. Application fee received. Application deemed complete for processing.
05/01/2023	ADD INFO email sent requesting supporting calculations and updated B and D1 forms completed.
07/06/2023	Information requested on 05/01/2023 received via email.
~~MM DD YYYY~~	~~Draft permit published on NCDENR website~~
~~MM DD YYYY~~	~~Public comment period ended. Comments TBD~~

III. Modification Discussion

MDF Process Description
The Moncure mill is a manufacturer of MDF, an engineered wood panel product, for use in the furniture, cabinetry, and architectural trim manufacturing industries. MDF is produced by mechanically refining wood material, such as wood chips, planer shavings, sawdust, urban wood, particleboard reclaim, sander dust, or plywood trim into a fibrous material. Typical products are 5 ft. x 16 ft. and 5 ft. x 18 ft. panels. The manufacturing steps include receipt and storage of wood residuals, softening of the wood residuals in a digester, grinding the residuals into fibers, drying the fibers, combining and mixing the fibers with resin, wax, and urea solution, preparing the fiber mats, and pressing the mats to form a panel. The panels are then sanded to the specified thickness, trimmed to appropriate lengths and widths, and shipped for sale.

The application contains an excellent process overview at Section 2.2 of the application. Below is an excerpt of the discussion relevant to the modification.

MDF Press and Cooling
Heat and pressure are applied at the press to make MDF boards of varying thickness (note that all emissions calculations and throughputs are on a ¾-inch basis). The press exhaust is vented to a wet scrubbing system (venturi scrubber) to control PM and then it is vented to the energy system for use as combustion air. The board separating saw cuts the pressed MDF boards to size and is controlled by a fabric filter (EP-07). The MDF boards then go to a board cooler. The press room and board cooler exhaust are currently routed to a mixing stack and mixed with clean air. A portion of the mixing stack exhaust goes to the energy system and a portion is used as dryer inlet air. The heat energy system therefore currently provides some emissions control for the press room and board cooler, ultimately exhausting through the biofilter. Following this project, the board cooler will be routed directly to atmosphere without any air emissions control.

Project Description
To improve industrial hygiene and reduce potential risk of fire, Arauco has identified the need to better capture and remove fugitive formaldehyde emissions from inside the MDF Press Hall (ES-16) through the installation of an exhaust extraction hood. Emissions from the MDF Press Hall will continue to be routed to the biofilter (CD18). In order to remain below the biofilter' s air flow capacity, Arauco is proposing to remove a low-VOC stream, the MDF Board Cooler (ES-06-B), from the biofilter control. As such, the MDF Board Cooler will no longer be routed through the existing venting scenario and will instead be routed directly to atmosphere and will also not be routed through the existing venturi scrubbers (CD02/CD14).

Arauco conducted source testing on the biofilter on October 20 and 21, 2021 to demonstrate compliance with various permit limits including the volatile organic compound (WPP1) BACT limits in Condition 2.2.B.2 and the particulate matter less than 10 microns in diameter (PM10) and particulate matter less than 2.5 microns in diameter (PM2.5) PSD avoidance limits in Condition 2.2 B.1 of Permit No. 03449T55. Based on these results and the uncontrolled VOC emission factor for the "Board cooler, UF resin (SCC 3-07-009-71)" source category in Table 10.6.3-6 of AP-42, Section 10.6.3, Medium Density Fiberboard Manufacturing, it is believed that the biofilter will be able to control the remaining VOC processes, such that the emission limit can remain unchanged with the MDF Board Cooler uncontrolled. A comparison of the VOC test results and the board cooler emission factor and the VOC BACT are provided in Table1 below.

Note the biofilter columns "Potential Annual Emissions" below are calculated based on the 4.50 lb/ODMT factor developed during the test that is footnoted. The BACT for the sources controlled by the biofilter is 7.83 lb/ODMT. Thus, the "potential emissions" that are permit enforceable are actually much higher. Thus, the columns are probably better characterized as "expected maximum emissions."

Table 1
VOC Source Testing and Emission Factor summary

Source	ID No.	Control Device	Emission Factor	Potential Annual Throughput	Potential Annual Emissions (lb/yr)	Potential Annual Emissions (tpy)
Energy System Two Stage Dryer System with backup natural gas burners MDF Board Cooler MDF Press and Press Hall	ES-02-A ES-02-B ES-02-C-1, C-2 ES-02-D ES-06-B ES-16	Boifilter	4.50 lb/ODMT [a]	268,750 ODMT	1,209,375	605
MDF Board Cooler	ES-06-B	N/A	0.13 lb/MSF 3/4 [b]	215,000 MSF 3/4	27,950	14
Effective Emission Factor at Potential Emission Rates (lb/ODMT)					4.7	
Facility BACT Limit (lb/ODMT)					7.83	
In Compliance?					Yes	

a. Emission factor from attachment to letter titled "Emissions Testing of Medium Density Fiberboard Process (MDF) Biofilter CD-18 for Particulate Matter (PM), Nitrogen Oxides (NOx), Formaldehyde, Methane, Methanol, and VOC" from William T. Wike, Jr., Compliance Supervisor, DAQ, Raleigh Regional Office to Jeff McMillian, Plant Manager, Arauco dated December 29, 2021.
b. Emission factor for "Board cooler, UF resin (SCC 3-07-009-71)" from Table 10.6.3-6 of AP-42 Section 10.6.3, Medium Density Fiberboard Manufacturing (08/02).

Assuming the AP-42 emission factor is reasonable, the uncontrolled board cooler is expected to continue to contribute a relatively small fraction of the VOC emissions subject to the BACT limit of 7.3 lb/ODMT and from the facility overall.

Similarly, based on these results and the uncontrolled PM10 emission factor for the "Board cooler, UF resin (SCC 3-07-009-71)" source category in Table 10.6.3-4 of AP-42, Section 10.6.3, Medium Density Fiberboard Manufacturing, it is believed that the control scheme ending with the biofilter will be able to control particulate emissions from the remaining processes, such that the existing emission limit can remain unchanged with the MDF

Board Cooler uncontrolled. A comparison of the test results and the board cooler emission factor and the PM10/PM2.5 PSD avoidance limit are provided in Table 2 below.

Table 2
PM Source Testing and Emission Factor Summary

Source	ID No.	Control Device	Emission Factor	Potential Annual Throughput	Potential Annual Emissions (TPY)*
Energy System Two Stage Dryer System with backup natural gas burners MDF Board Cooler MDF Press and Press Hall	ES-02-A ES-02-B ES-02-C-1, C-2 ES-02-D ES-06-B ES-16	Biofilter	0.29 lb/ODMT [a]	268,750 ODMT	39
MDF Board Cooler	ES-06-B	N/A	0.0038 lb/MSF 3/4 [b]	215,000 MSF 3/4	0.41
Effective Emission Factor at Potential Emission Rates (lb/ODMT)					0.296
Facility PSD Avoidance Limit (lb/ODMT)					0.51
In Compliance?					Yes

a. Emission factor from attachment to letter titled "Emissions Testing of Medium Density Fiberboard Process (MDF) Biofilter CD-18 for Particulate Matter (PM), Nitrogen Oxides (NO_x), Formaldehyde, Methane, Methanol, and VOC" from William T. Wike, Jr., Compliance Supervisor, DAQ, Raleigh Regional Office to Jeff McMillian, Plant Manager, Arauco dated December 29, 2021.
b. Emission factor for "Board cooler, UF resin (SCC 3-07-009-71)" from Table 10.6.3-4 of AP-42 Section 10.6.3, Medium Density Fiberboard Manufacturing (08/02).

* potential emissions based on emission rate of 0.29 lb/ODMT

Facility Emissions Changes

By routing the exhaust of the board cooler directly to the atmosphere, the board cooler emissions will no longer be controlled by the biofilter nor the venturi scrubber. Hence, the emissions of a number of pollutants will increase.

The Permittee provided a PSD applicability analysis as follows:

Baseline Actual Emissions

Throughputs Used for Baseline Actual Emissions

For this application, Arauco used average annual throughputs from the 24-month baseline period of calendar years 2020 and 2021 and current tested emission factors to calculate baseline actual emissions. With the issuance of Title V Permit No. 03449T55, Arauco became subject to updated BACT limits for the MDF Facilities Operations. These sources include emissions from the energy system, dryer, board cooler, and press. These limits were not in place prior to Title V Permit No. 03449T54, which was issued on May 19, 2021. Additionally, in accordance with Title V Permit No. 03449T55, Arauco conducted stack testing to demonstrate compliance with these limits. Therefore, the emissions for the baseline period are calculated using past throughputs and recent stack testing results. Note that this results in emissions different than those reported in the 2020 and 2021 emissions inventory. This will be discussed below.

VOC Calculation Methodology
Since VOC present in wood products, such as α-pinene and terpene, are long-chain carbon compounds, traditional methods of VOC measurement do not yield correct mass emissions of VOC from wood products industries. Therefore, VOC emissions are estimated using stack testing which employed the Wood Products Protocol 1 (WPP1):

- Subtract the methane determined by Method 18 from the THC as propane.

- Subtract predetermined responses of formaldehyde, phenol, and methanol from the THC as propane less methane. The remaining VOC are assumed to be α-and β- pinene, which fully respond on the THC monitor. The VOC mass emission rate is then calculated using the molecular weight of pinene.
- Determine the concentrations and rates of methanol, formaldehyde, and phenol using the Method 320 measured concentrations.
- Sum the pinenes, methanol, formaldehyde, and phenol rates and the resulting total is VOC as emitted rate.

All VOC emissions calculated in Appendix C of the application, with the exception of VOC exclusively from combustion sources or fuel tanks, are assumed to be equivalent to "WPP1 VOC." Stack tests and industry-standard emission factors are provided as WPP1 VOC.

Projected Actual Emissions

Arauco is not projecting that the proposed project will increase mill production. As such the projected actual throughput is equivalent to the baseline actual throughput. No changes to emission factors are expected other than the addition of uncontrolled VOC (and organic HAP and TAPs) and particulate emissions from the board cooler. Additional details on the calculation methodology for this source are discussed below.

Uncontrolled VOC and particulate emissions from the board cooler were determined using the emission factors from AP-42, Section 10.6.3, Medium Density Fiberboard Manufacturing and the projected actual throughput. Detailed emission calculations provided in Appendix C. Sample calculations for VOC are provided in the application at Section 3.3.1.

Summary

The following table (reproduced from the application tables C.1 -1, -2 and -3) represents a summary of the emission increases of the regulated NSR pollutants as a result of the modification. When the baseline emissions were compared to emissions inventory data reported for the years 2020 and 2021, the emissions inventory data for many of the pollutants were much higher. The projected actual emissions approach is reasonable assuming the emission factor for the uncontrolled board cooler is validated. The implications of the baseline and projected actual emissions will be discussed further in the regulatory discussion for 02D .0530.

Table 3
Baseline to Projected Actual Emissions Summary

Table C.1-1. Baseline Actual Emissions

Source	Total PM (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)	VOC (tpy)	SO_2 (tpy)	NO_X (tpy)	CO (tpy)	Lead (tpy)	CO_2e (tpy)
Biofilter Exhaust [1]	15.75	15.75	15.75	230.54	6.35	165.08	160.65	0.01	66,917.59
Total Emissions	**15.75**	**15.75**	**15.75**	**230.54**	**6.35**	**165.08**	**160.65**	**0.01**	**66,917.59**

Table C.1-2. Projected Actual Emissions [2]

Source	Total PM (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)	VOC (tpy)	SO_2 (tpy)	NO_X (tpy)	CO (tpy)	Lead (tpy)	CO_2e (tpy)
Biofilter Exhaust [1]	15.75	15.75	15.75	230.54	6.35	165.08	160.65	0.01	66,917.59
Board Cooler (ES-06-B)	4.70	0.33	0.33	11.31	--	--	--	--	--
Total Emissions	**20.44**	**16.08**	**16.08**	**241.85**	**6.35**	**165.08**	**160.65**	**0.01**	**66,917.59**

Table C.1-3. Project Emissions Increase Summary

Emissions	Total PM (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)	VOC (tpy)	SO_2 (tpy)	NO_X (tpy)	CO (tpy)	Lead (tpy)	CO_2e (tpy)
(B) Projected Actual Emissions	20.44	16.08	16.08	241.85	6.35	165.08	160.65	0.01	66,917.59
(A) Baseline Actual Emissions	15.75	15.75	15.75	230.54	6.35	165.08	160.65	0.01	66,917.59
Total Change (B-A)	4.70	0.33	0.33	11.31	0	0	0	0	0
SER	25	15	10	40	40	40	100	0.6	75,000
% of SER	19%	2%	3%	28%	< 1%	< 1%	< 1%	< 1%	< 1%
Exceeds?	No	No	No	No	No	No	No	No	No

1. Total PM emissions set equal to PM_{10} emissions.
2. Projected actual emissions are based on flat throughput of raw materials and product from the baseline period. Arauco does not expect to see any production increases as a result of this project.

HAP and TAP emission increases

The following shows the potential and expected HAP and TAP emission increases associated with the project. Note that as expected, formaldehyde and methanol will have the largest increases. The implications of these increases will be discussed further in the regulatory discussions for 02D .1100 and 02D .1111 below.

Table 4
Summary of HAP and TAP emission increases associated with this modification

					Potential	Projected			
Compound	CAS No.	Emission Factor	Control Efficiency (%)	Reference	Uncontrolled Emissions (tpy)	Uncontrolled Emissions (tpy)	Controlled Emissions (tpy)	HAP	TAP
VOC [1]		1.31E-01 lb/MSF 3/4	-	1	14.08	11.39	11.39		
2,5-Dimethyl Benzaldehyde	5779942	1.90E-04 lb/MSF 3/4	-	2	0.02	0.02	0.02		
Acetaldehyde	75070	1.00E-03 lb/MSF 3/4	-	2	0.11	0.09	0.11	X	X
Acetone	67641	9.20E-03 lb/MSF 3/4	-	2	0.99	0.80	0.99		
Acrolein	107028	2.20E-04 lb/MSF 3/4	-	2	0.02	0.02	0.02	X	X
Benzaldehyde	100527	9.90E-05 lb/MSF 3/4	-	2	0.01	0.01	0.01		
Butylaldehyde	123728	1.40E-03 lb/MSF 3/4	-	2	0.15	0.12	0.15		
Crotonaldehyde	4170303	2.60E-04 lb/MSF 3/4	-	2	0.03	0.02	0.03		
Formaldehyde	50000	4.20E-02 lb/MSF 3/4	-	2	4.52	3.65	4.52	X	X
Hexaldehyde	66251	6.50E-04 lb/MSF 3/4	-	2	0.07	0.06	0.07		
Isovaleraldehyde	590863	2.50E-04 lb/MSF 3/4	-	2	0.03	0.02	0.03		
Methanol	67561	2.50E-02 lb/MSF 3/4	-	2	2.69	2.17	2.69	X	
Methyl Ethyl Ketone	78933	1.10E-04 lb/MSF 3/4	-	2	0.01	0.01	0.01		X

IV. Regulatory Review

The regulatory applicability of all sources affected by the proposed modification will be discussed below.

Medium Density Fiberboard Facilities Operations as presented below:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description	Emission Point
ES-01	Refiner	CD01	Refiner Abort Cyclone (66 inches in diameter) [1]	EP01
		CD02 in series with CD18	Venturi scrubber Biofilter	EP18
		CD14 In series with CD18	Venturi scrubber Biofilter	EP18
ES-02-A	Energy System consisting of a dry/wet wood/woodwaste-fired burner (205 million Btu per hour heat input)	CD02-A	Urea/water injection system	EP18
		CD02 In series with CD18	Venturi scrubber Biofilter	EP18
		CD14 In series with CD18	Venturi scrubber Biofilter	EP18
ES-02-B ES-02-C-1, ES-02-C-2 and ES-02-D	Two Stage Dryer System Three backup natural gas-fired dryer burners (35, 35 and 17 million Btu per hour heat input respectively)	CD02 In series with CD18	Venturi scrubber Biofilter	EP18
		CD14 In series with CD18	Venturi scrubber Biofilter	EP18
ES-06-B	MDF Board Cooler	CD02 In series with CD18	Venturi scrubber Biofilter	EP18
		CD14 In series with CD18	Venturi scrubber Biofilter	EP18
ES-16	MDF Press and Press Hall	CD02 In series with CD18	Venturi scrubber Biofilter	EP18
		CD14 In series with CD18	Venturi scrubber Biofilter	EP18

The table above is from the existing permit at Section 2.1. C. These sources are grouped in the permit as they all had the same controls and emission point. As requested, the board cooler will now be completely uncontrolled. This will allow more airflow to be used elsewhere. In this application, Arauco plans on using this airflow to better control the MDF Press Hall (ES-16) emissions through the installation of an exhaust extraction hood which will allow more localized capture and control of the press hall emissions and improve industrial hygiene and reduce potential risk of

[2] For operation during startup, shutdown and malfunction only.

fire. The Press Hall emissions are already being captured and routed to the existing control system as are the other sources identified in the table above. As such, no changes are needed to the existing permit conditions for these sources other than those addressing the board cooler. No further review is necessary. Continued compliance with all applicable regulations is expected.

Table 2.1 C will appear in the revised permit as follows:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description	Emission Point
ES-01	Refiner	CD01	Refiner Abort Cyclone (66 inches in diameter) [2]	EP01
		CD02 in series with CD18	Venturi scrubber Biofilter	EP18
		CD14 In series with CD18	Venturi scrubber Biofilter	EP18
ES-02-A	Energy System consisting of a dry/wet wood/woodwaste-fired burner (205 million Btu per hour heat input)	CD02-A	Urea/water injection system	EP18
		CD02 In series with CD18	Venturi scrubber Biofilter	EP18
		CD14 In series with CD18	Venturi scrubber Biofilter	EP18
ES-02-B ES-02-C-1, ES-02-C-2 and ES-02-D	Two Stage Dryer System Three backup natural gas-fired dryer burners (35, 35 and 17 million Btu per hour heat input respectively)	CD02 In series with CD18	Venturi scrubber Biofilter	EP18
		CD14 In series with CD18	Venturi scrubber Biofilter	EP18
ES-06-B	MDF Board Cooler	NA	NA	EP-06-B
ES-16	MDF Press and Press Hall	CD02 In series with CD18	Venturi scrubber Biofilter	EP18
		CD14 In series with CD18	Venturi scrubber Biofilter	EP18

Board cooler regulatory discussion

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

This rule applies to stacks, vents, or outlets emitting particulates from industrial processes with no other applicable standards. The allowable emission rate is in terms of pounds per hour and is calculated using the following equations:

For process rates up to 30 tons per hour: $E = 4.10(P)^{0.67}$
For process rates greater than 30 tons per hour: $E = 55.0(P)^{0.11} - 40$

[2] For operation during startup, shutdown and malfunction only.

Where: E = Allowable emission rate in pounds per hour (lb/hr)
P = Process weight in tons per hour (tph)

The maximum process rate for the board cooler is 251,000 MSF ¾" basis per year or 268,750 oven dry metric tons (ODMT) per year. Assuming 8760 hours/year production this is approximately equivalent to 31 ODMT/hr or 34 tons per hour (tph) Using the equation for process rates greater than 30 tons per hour results in an allowable emission rate of 41 lb/hr of PM. As shown in Section III, Table 2 above, the Permittee expects annual PM emissions from the board cooler to be 0.41 tpy or 0.1 lb/hr. Thus, compliance with this regulation is expected by a wide margin.

Consistent with DAQ permitting policy for uncontrolled sources with an expectation of a wide margin of compliance, no testing will be required. Monitoring, recordkeeping and reporting will consist of the following:

> The Permittee shall maintain production records 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.
>
> No reporting is required for particulate emissions from the uncontrolled board cooler.

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

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

No SO2 emissions are expected from the board cooler. Thus, this regulation does not apply.

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

This regulation applies to fuel burning operations and industrial processes where visible emissions can be reasonably expected to occur. The board cooler will have a dedicated emission point (EP-06-B).

As the board cooler was "manufactured" after July 1, 1971, the visible emissions from the board cooler shall not be more than 20 percent opacity when averaged over a six-minute period except for the following exceptions:

Six-minute averaging periods may exceed 20 percent opacity if:
(1) no six-minute period exceeds 87 percent opacity;
(2) no more than one six-minute period exceeds 20 percent opacity in any hour; and
(3) no more than four six-minute periods exceed 20 percent opacity in any 24-hour period.

Visible emissions from this source are expected to be less than 20 % opacity. However, for conservatism, weekly monitoring will be required as follows:

> Monitoring requirements shall consist of weekly observations of the emission points of this source for any visible emissions above normal. The weekly observation must be made for each week of the calendar year period to ensure compliance with this requirement. The Permittee shall establish "normal" for this source in the first 30 days following the effective date of the permit / of beginning 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, 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 applicable opacity limit.

Recordkeeping for the results of the monitoring requirements and a semiannual summary report of the monitoring and recordkeeping requirements will also be required.

State Enforceable Only
15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS
See discussion in SECTION V below.

State Enforceable Only
15A NCAC 02D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS
See discussion in SECTION V below.

15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY
40 CFR 63, Subpart DDDD. "National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products

Arauco is considered to be an existing facility under Subpart DDDD. As such the board cooler has no emission limitations or work practice requirements under the rule. As such, the existing permit has no requirements for the board cooler and there are no changes necessary to the permit as a result of the modification.

Revise 40 CFR Part 63, Subpart DDDD permit condition to reflect rule changes of August 2020

The revisions to the permit condition addressing 40 CFR Part 63 Subpart DDDD were not part of the requested modification but are being incorporated as the permit is open for modification anyway.

On August 13, 2020, amendments to MACT DDDD were published as a final rule in the Federal Register at 89 FR 49434. That action finalized the residual risk and technology review (RTR) conducted for 40 CFR Part 63, Subpart DDDD "National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products."

In addition, the EPA took final action addressing periods of startup, shutdown and malfunction (SSM); adding electronic reporting; adding repeat emissions testing; and making technical and editorial changes. These final amendments include no revisions to the numerical emission limits in the rule based on the RTR.

As a result of these changes to MACT DDDD, substantial changes were necessary to the existing permit condition to align the permit with the current requirements of MACT DDDD. The most substantial changes center around, but are not limited to:

- Revising the requirements including the work practices, monitoring recordkeeping and reporting required during startups, shutdowns, and malfunctions
- Adding substantial electronic reporting requirements
- Expanding temperature sensor validation requirements

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

The New Source Review (NSR) program is implemented based on a site's attainment status. The Prevention of Significant Deterioration (PSD) program for attainment or unclassifiable areas is codified under 40 CFR 51.166. North Carolina has incorporated this program into the North Carolina State Implementation Plan (SIP), with amendments, under 15A NCAC 02D .0530. Alternatively, the Nonattainment New Source Review (NNSR) program for nonattainment areas is codified under 40 CFR 51.165 and has been incorporated into the North Carolina SIP under 15A NCAC 02D .0531.

The Moncure mill is located in Chatham County, which is designated as "attainment" or "unclassifiable" for all criteria pollutants. Therefore, 15A NCAC 02D .0531 does not apply. The PSD permitting program only regulates emissions from "major stationary sources" of regulated NSR pollutants. A stationary source is considered "major" under the PSD program if the facility:

- Belongs to one of the 28 named source categories in 40 CFR 51.166(b)(1)(i)(a) and has a PTE of 100 tpy of any pollutant subject to regulation; or
- Has a PTE of 250 tpy of any pollutant subject to regulations, regardless of its source category.

The Moncure mill is a wood products manufacturing facility. Wood products manufacturing is not one of the 28 named source categories. Therefore, PSD major source applicability is triggered when the PTE of a regulated pollutant exceeds 250 tpy. As indicated in the facility's Title V permit, the facility is a PSD major source. Therefore, the project must be evaluated for PSD permitting applicability.

As shown in Section III, Table 3 above, emissions increases of all regulated pollutants are less than their respective SERs. As mentioned previously, the baseline emissions used in the analysis appear to be much lower than those reported in the 2020 and 2021 emissions inventory. However, this is not an issue in the PSD applicability analysis as this would simply serve to make the difference between the projected actuals and the baseline conservatively larger.

15A NCAC 02D .0530(u) requires additional recordkeeping and reporting requirements be included in the permits for sources that utilize projected actual emissions to determine applicability with PSD requirements and result in project emission increases 50 percent or greater than the amount of the SER for any PSD regulated pollutant. As shown in Section III Table 3 above, the project emission increases are expected to be below 50 percent

As listed in Title V permit Condition 2.2 B.2 and listed in Table 2.2 B.2, Arauco is currently subject to a BACT limit of 7.83 lb WPP1 VOC/ODMT for the MDF facilities operations. With this application, Arauco is requesting that the MDF Board Cooler (ES-06-B) be removed from the sources listed with the Biofilter (CD18) as Control Technology. Following this project, Arauco intends to continue to meet and comply with this limit. The table in Section III, Table 1 above, which is based on recent stack testing and the uncontrolled board cooler emission factor from AP-42 support this statement.

Additionally, the Moncure mill complies with PM10 and PM2.5 PSD avoidance limits established in accordance with 15A NCAC 02Q. 0317. These requirements are contained in Title V permit Condition 2.2 B.1 and in Table 2.2 B.1. As shown in Section III Table 2 above, Arauco expects continued compliance with these limits after the modification.

Although Arauco makes a strong argument that continued compliance with the existing VOC BACT limit of 7.83 lb WPP1 VOC/ODMT for the MDF facilities operations and with the PM10 and PM2.5 PSD avoidance limits, the arguments are primarily based on AP-42 emission factors. However, consider the following discussions.

PSD avoidance for PM10 and PM2.5

The facility estimates the potential production throughput of the board cooler to be 215,000 MSF ¾" per year (see supporting calcs submitted via email on May 01, 2023). The baseline production rate was 173,960 MSF ¾" per year (see Table C-1.1 of the application). Thus, the maximum possible increase in production possible (but not expected since the modification does not expect the modification to result in an increase in production) is 41,040 MSF ¾" per year.

For PM, the analysis submitted is based on 0.0038 lb/MSF ¾" of emissions from the uncontrolled board cooler. Thus, an emissions increase associated with a theoretical increase in production to the potential throughput would be 0.41 tpy. An examination of the 2021 and 2022 emissions inventory shows that the margin of compliance for the PM2.5/PM10 PSD avoidance limits are at least 23.5 and 24.3 tpy respectively. The Permittee does not wish to revise the PSD avoidance emission factor 0.51 lb/ODMT that applies to the existing biofilter controlled sources which includes the board cooler but would like to continue to use it to account for the biofilter controlled sources and uncontrolled board cooler emissions.

The 0.0038 lb MSF ¾" emission factor (after using the proper conversion factor based on the projected actual throughputs from Table C.2-1 of the application) is equivalent to 0.006 lb/ODMT. Recall from Table 2 above that the last source test for the biofilter resulted in an emission rate of 0.29 lb/ODMT, which when combined with the uncontrolled board cooler factor of 0.006 lb/ODMT would result in an "effective emission factor of 0.296 lb/ODMT. Thus, by the continued use of the very conservative emission factor of 0.51 lb/ODMT to account for the biofilter controlled sources and the uncontrolled board cooler, PSD review would be triggered sooner than if Permittee chose to revise the biofilter controlled sources emission factor and to also use the 0.0038 lb/MSF ¾" emission factor.

As stated above the project could increase PM10/2.5 emissions by 0.41 tpy based on the 0.0038 lb/MSF ¾" emission factor. To exceed the most stringent PSD SER of 10 tpy for PM2.5, the emission factor would have to be biased low by a factor of almost 25 (i.e., 10/0.41). Similar source test data for another board cooler at another wood products facility (EGGER, facility ID no. 2900386), showed the AP-42 emission factor for PM being biased high on the order of a factor of 10. Thus, it seems unlikely that emission factor of 0.0038 lb/MSF ¾" for the subject board cooler would be biased low by a factor of 25.

In summary, given the discussion above, no PM10/2.5 testing will be required in the draft permit.

PSD applicability for VOC and VOC BACT Limit Compliance

Similar to the PM discussion above, a theoretical increase to the maximum production rate of the board cooler could result in an increase of 14 tpy of VOC if relying on the AP-42 emission factor of 0.13 lb/MSF ¾". This emission factor (after using the proper conversion factor based on the projected actual throughputs from Table C.2-1 of the application) is equivalent to 0.2 lb/ODMT. Recall from Table 1 above that the last source test for the biofilter resulted in an emission rate of 4.50 lb/ODMT of VOC, which when combined with the uncontrolled board cooler factor of 0.2 lb/ODMT would result in an effective emission factor of 4.7 lb/ODMT.

Assuming that the emission rate of 4.50 lb/ODMT will remain similar in future tests, the board cooler would have to contribute 3.13 lb/ODMT of VOC emissions to meet or exceed the combined BACT limit for the biofilter controlled sources and the uncontrolled board cooler. Thus, the emission factor relied upon in this analysis for the uncontrolled board cooler would have to be biased low by a factor of almost 17 (i.e., 3.13/0.2). Thus, there is little concern that the BACT limit will be exceeded as a result of the board cooler emissions not being quantified unless the future biofilter tests have a substantially lower margin of compliance. If the results of any future VOC test on the biofilter should approach the 7.83 lb/ODMT limit with a slim margin of compliance, VOC testing on the board cooler may be implemented at that time.

To exceed the PSD SER of 40 tpy for VOC at the projected actual production rate of 173,960 MSF ¾" per year (see Table 3 above), the emission factor would have to be biased low by a factor of over 3.5 (i.e., 40 tpy /11.3 tpy). Similar source test data for another board cooler at another wood products facility (EGGER, facility ID no. 2900386), showed the AP-42 emission factor for VOC being biased low on the order of a factor of 2 but still less than a factor of 3.5.

In summary, given the discussion above, no VOC testing will be required in the draft permit.

V. Facility-wide Regulatory Considerations

15A NCAC02D .0524: NEW SOURCE PERFORMANCE STANDARDS (NSPS)

No NSPS standards apply to the sources at the facility affected by this modification.

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

The proposed facility is a major source of HAP. The implications with respect to MACT are discussed in Section IV above.

15A NCAC 02D .0614: COMPLIANCE ASSURANCE MONITORING (CAM)

02D .0614 implements the federal rule "Compliance Assurance Monitoring" (CAM) at 40 CFR Part 64. The CAM rule requires owners and operators at a facility with a Title V permit to conduct monitoring to provide a reasonable assurance of compliance with applicable requirements. Monitoring focuses on emissions units that rely on pollution control device equipment to achieve compliance with applicable standards. Applicability is addressed at 02D .0614(a), which states:

> (a) General Applicability. Except as set forth in Paragraph (b) of this Rule, the requirements of this Paragraph shall apply to a pollutant-specific emissions unit at a facility required to obtain a permit pursuant to 15A NCAC 02Q .0500 if the unit:
> (1) is subject to an emission limitation or standard for the applicable regulated air pollutant, or a surrogate thereof, other than an emission limitation or standard that is exempt pursuant to Subparagraph (b)(1) of this Rule;
> (2) uses a control device to achieve compliance with any such emission limitation or standard; and
> (3) has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source. For purposes of this Subparagraph, "potential pre-control device emissions" means the same as "potential to emit" as defined in 15A NCAC 02Q .0103, except that emission reductions achieved by the applicable control device shall not be taken into account.

Note that a pollutant-specific emissions unit (PSEU) is defined at 40 CFR 64.1 as an emissions unit considered separately with respect to each regulated air pollutant. Also note that TAPs are not considered regulated air pollutants as defined at 40 CFR 64.1 and hence not subject to CAM.

All the sources currently ultimately controlled by the biofilter as discussed in Section IV above are subject to CAM requirements in the existing permit at Section 2.1 C.4 and C.5. No changes are necessary to the existing CAM conditions. As the board cooler will no longer have controls it will not be subject to this rule. Continued compliance is expected.

15A NCAC 02D .0900 VOLATILE ORGANIC COMPOUNDS (VOCs)
15A NCAC 02D .0902 APPLICABILITY

The 02D .0900 Section of rules applies to sources that emit greater than or equal to 15 pounds of volatile organic compounds per day unless specified otherwise in this Section.

The facility is located in Chatham County. The county is considered in attainment for all pollutants and is not a maintenance area for the 1997 8-hour NAAQS for ozone.

Pursuant to 02Q .0902(e) the following rules apply statewide:

- 15A NCAC 02D .0925, Petroleum Liquid Storage in Fixed Roof Tanks, for fixed roof tanks at gasoline bulk plants and gasoline bulk terminals
- 15A NCAC 02D .0927, Bulk Gasoline Terminals
- 15A NCAC 02D .0928, Gasoline Service Stations Stage I
- 15A NCAC 02D .0932, Gasoline Cargo Tanks and Vapor Collection Systems
- 15A NCAC 02D .0933, Petroleum Liquid Storage in External Floating Roof Tanks, for external floating roof tanks at bulk gasoline plants and bulk gasoline terminals
- 15A NCAC 02D .094 VOC Emissions from Transfer Operations
- 15A NCAC 02D .0949, Storage of Miscellaneous Volatile Organic Compounds

None of these rules apply.

Pursuant to 02D .0902(f), (g), and (h), all 02D .0900 rules potentially apply to facilities in the following counties if they meet other certain criteria relating to the facility's status as being located in a moderate nonattainment or maintenance area for the 1997 8-hour ambient air quality standard for ozone and in one of the following areas.

- Cabarrus County
- Gaston County
- Lincoln County
- Mecklenburg County
- Rowan County
- Union County
- Davidson Township and Coddle Creek Township in Iredell County.

As Chatham County is not on this list, rule applicability pursuant to 02D .0902(f), (g) and (h) does not apply. In summary, no 02D .0900 rules apply.

State enforceable only
15A NCAC 02Q .0700: TOXIC AIR POLLUTANT PROCEDURES
15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS

The regulations at 15A NCAC 02Q .0700 require, with some exceptions, a permit to emit any toxic air pollutant (TAP) at levels greater than the TAP permitted emission rate (TPER) specified in 15A NCAC 02Q .0711. These regulations include the procedural rules used to comply with the TAP control requirements found at 15A NCAC 02D .1100. 15A NCAC 02D .1104 contains Acceptable Ambient Levels (AALs) for each TAP. Generally, a facility must conduct a dispersion modeling analysis to demonstrate that each TAP emitted above its respective TPER will not result in the respective AAL being exceeded beyond the facility's premises. Collectively, these "toxics" rules are state-enforceable only and are not subject to the TV requirements found at 15A NCAC 02Q .0500.

As discussed in Section III, "HAP and TAP Emission Increases" above, when the board cooler is no longer controlled by the biofilter an actual increase in TAP emissions from the board cooler will be realized.

The Permittee has supplied a spreadsheet entitled "Arauco MDF PTE_v1.0_DAQ.xls" via email on July 6, 2023. The TAB entitled TAP Summary provides an exhaustive list of potential TAP emissions estimates and compares them to the TAPs associated TPERs. When the facility-wide potential emissions after controls for all sources at the facility (which also includes the sources meeting the exemptions at 02Q .0702) are compared to each TAPs respective TPER, the only TAPs after the modification expected to exceed the TPERS based on potential emissions are cadmium, formaldehyde, and phenol. Each TAP will be discussed separately.

Cadmium
The ratio of the facility-wide emissions to the TPER is 2.4. However, a review of the emissions inventory over the past three years (2020, 2021, and 2022) shows the ratio of actual emissions to the TPER to be anywhere from 0.51 to 0.72. The particle board operations ceased in 2020 and were removed from the permit. Thus, these three years provide a reasonable baseline for emissions of cadmium for the MDF operations based on actual production rates. Based on the submitted information cadmium is not an expected TAP from the board cooler. Thus, the project is not expected to result in an increase in cadmium emissions. Thus, emissions are expected to remain well below the TPER based on projected actual production rates.

Formaldehyde
The ratio of the facility-wide emissions to the TPER is 29. However, a review of the emissions inventory over the past three years (2020, 2021, and 2022) shows the ratio of actual emissions to the TPER to be anywhere from 10 to 15. Clearly emissions of formaldehyde are expected to be emitted well over the TPER.

All sources of formaldehyde at the facility are subject to a MACT standard and therefore meet the toxics permitting exemption at 15A NCAC 02Q .0702(a)(27). However, pursuant to 15 A NCAC 02Q .0704(c), sources meeting the exemption set forth in 15A NCAC 02Q .0702(a)(27) shall be reviewed by the Division pursuant to G.S. 143-215.107(a)(5)b. Thus, a determination needs to be made if the modification (i.e., operation of the uncontrolled

biofilter) poses an "unacceptable risk to human health." In simple terms, if the inclusion of such a source in a modeling demonstration from which it was excluded would reasonably be expected to contribute to an AAL exceedance, the source would at first pass be considered to pose an "unacceptable risk to human health" and therefore require further analysis, potentially requiring the source to be included in a revised modeling demonstration.

In the permit review document for Permit No. T48, issued February 28, 2018 (available electronically in Laserfiche), an analysis was conducted at that time to assess if that modification posed an "unacceptable risk to human health." That analysis leveraged the modeling conducted for formaldehyde in 2015 and 2016 which showed compliance at 92% of the AAL. At that time, the particleboard plant was in operation and the facility-wide emissions were much greater. In those models, a total of 92 lb/hr of formaldehyde was modeled. In the spreadsheet entitled "Arauco MDF PTE_v1.0_DAQ.xls" discussed above, the potential facility-wide emissions of formaldehyde are expected to be 4.6 lb/hr after the modification, or 87.4 lb/hr less than rates included in the 2016/2016 modeling demonstrations. Note that the uncontrolled board cooler is expected to contribute 1 lb/hr of the 4.6 lb/hr facility-wide total. Since the current potential facility-wide emissions are expected to well below the emissions included in the previous modeling demonstrations that showed compliance with the formaldehyde AAL, it is highly unlikely the proposed modification will pose an "unacceptable risk to human health."

Phenol

The ratio of the facility-wide potential emissions to the TPER is 1.6. However, a review of the emissions inventory over the past three years (2020, 2021, and 2022) shows the ratio of actual emissions to the TPER to be anywhere from 1.1 to 1.4. Clearly emissions of phenol are expected to be over the TPER, but not by much.

In any case, like formaldehyde as discussed above, all sources of phenol at the facility are subject to a MACT standard and therefore meet the toxics permitting exemption at 15A NCAC 02Q .0702(a)(27). However, pursuant to 15 A NCAC 02Q .0704(c), sources meeting the exemption set forth in 15A NCAC 02Q .0702(a)(27) shall be reviewed by the Division pursuant to G.S. 143-215.107(a)(5)b. Thus, a determination needs to be made if the modification (i.e., operation of the uncontrolled biofilter) poses an "unacceptable risk to human health."

Phenol has not been included in any previous modeling demonstrations. However, like formaldehyde, phenol has an hourly TPER and an AAL that is on a 1-hour basis. The sources of phenol are from the dryers and the press which are both controlled by the biofilter. The dryers and the press are also sources of formaldehyde.

For a given dispersion modeling demonstration, the AAL impacts are directly proportional to the emission rates assuming all the dispersion parameters remain constant and the AALs are on the same time basis (as is the case here). Recall from above that the 2015 and 2016 formaldehyde models showed a maximum impact of 92 % of the formaldehyde AAL, which is 0.15 mg/m3, at 92 lb/hr of formaldehyde emissions. The AAL for Phenol is 0.95 mg/m3, or over 6 times greater than that of formaldehyde. Thus, a modeled emission rate of 92 lb/hr of phenol from the same sources would also be expected to result in a maximum impact less than 0.15 mg/m3 of phenol, well less than the 0.95 mg/m3 AAL for phenol. Since the emissions of phenol are from a subset of the same sources of formaldehyde, the same conclusion would be reached. Also note that the potential facility-wide emissions of phenol are approximately only 1.6 lb/hr and the uncontrolled board cooler is not a source of phenol emissions. Based on this discussion, it is highly unlikely the proposed modification will pose an "unacceptable risk to human health."

State Enforceable Only

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

This rule requires that 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.

As the facility has not been constructed the facility has no history with respect to odors. The proposed facility is not expected to cause or contribute to objectionable odors beyond the facility's boundary. However, the Permittee is prepared to implement measures to comply with this regulation should the DAQ make such a determination.

VI. NSPS, NESHAPS, PSD, Attainment Status, 112(r), CAM and Toxics

NSPS
See discussion in Facility-wide Regulatory Considerations in Section V above.

NESHAPS/MACT
Arauco is considered a major source of HAP. See discussion in Facility-wide Regulatory Considerations in Section V above.

PSD/Attainment Status
The facility is located in Chatham County. Chatham County is considered in attainment for all pollutants and is not a maintenance area for the 1997 8-hour NAAQS for ozone. See PSD discussion in Section IV above.

Chatham County has triggered the PSD Minor Source Baseline dates for PM10, SO2 and NOx. As seen in the table "Baseline to Projected Actual Emissions Summary" in Section III above, no SO2 or NOx emissions are expected to increase. PM10 is expected to increase by 0.33 tpy. Assuming 8760 hours of operation, this becomes 0.08 lb/hr.

112r - Risk Management Program (RMP) (15A NCAC 2D .2100)
The Permittee is not subject to Section 112(r) of the Clean Air Act requirements because it does handle any of the regulated substances in quantities above the thresholds in 40 CFR 68.130.

CAM
See discussion in Facility-wide Regulatory Considerations in Section V above.

Toxics
See discussion in Facility-wide Regulatory Considerations in Section V above.

VII. Compliance History

The following excerpts are from the compliance inspection report for the inspection conducted March 28, 2023.

Five Year Violation History:

Date	Letter Type	Rule Violated	Violation Resolution Date
11/09/2020	NOV	2D .0530 Prevention of Significant Deterioration	11/14/2020
06/05/2019	NOV/NRE	Part 63 - NESHAP/MACT Subpart DDDD Plywood and Composite Wood Products	07/01/2019
06/05/2019	NOV/NRE	2D .0530 Prevention of Significant Deterioration	07/01/2019
06/05/2019	NOV/NRE	Permit Permit Condition	07/01/2019

(XI) CONCLUSIONS/RECOMMENDATIONS: Based on observations made during the inspection, the facility appears to be in compliance. It is recommended that an annual inspection be performed within the next 12 months.

VIII. Changes Implemented in Revised Permit

Page No.	Section	Description of Changes
NA	Cover Letter	• Updated permit revision numbers, issue and effective dates, etc.
4	1	• The equipment list was revised to reflect the removal the control devices (CD02, CD04 and CD18) from the MDF board cooler
11	2.1 C	• Table 2.1 C was revised to reflect the removal the control devices (CD02, CD04 and CD18) from the MDF board cooler
12	2.1 C.1	• 02D .0515 condition • Added production rate recordkeeping requirement consistent with current DAQ permitting shell standards for uncontrolled sources. No reporting is required.
13	2.1 C.2	• 02D .0521 condition • Paragraph c was revised as follows: ▪ removed the following language as it has been satisfied: The Permittee shall re-establish "normal" within 30 days after the initial operation of the biofilter **(ID No. CD18)** after the modifications undertaken in application no. 1900015.18A are completed. ▪ Revised language to reflect that there are now multiple emission points associated with the sources identified in Table 2.1 C. ▪ Added the following language; The Permittee shall re-establish "normal" for the sources in Table 2.1 C above within 30 days after the initial operation of the sources in Table 2.1 C above after the modifications undertaken in application no. 1900015.22B are completed.

36	2.2 A.1	• MACT DDDD condition • Removed testing and permit revision requirement at existing Section 2.2 A.1.m.i(A) as it was satisfied by the issuance of permit revision no. T56 issued March 28, 2022. • Substantial revisions to the condition were made in response to the August 13, 2020 amendments to MACT DDDD that were published as a final rule in the Federal Register at 89 FR 49434. Thes include, but are not limited to: ▪ Revising the requirements including the work practices, monitoring recordkeeping and reporting required during startups, shutdowns, and malfunctions ▪ Adding substantial electronic reporting requirements ▪ Expanding temperature sensor validation requirements • Added reference to the Press Hall in Section 2.2 A.1.i. as it is subject to enclosure requirements under MACT DDDD
43	2.2 B.1	• PSD avoidance condition for PM10 and PM2.5 • Removed existing testing condition at Section 2.2 B.1.c.ii as it has already been satisfied. The most recent testing showed an emission rate from the biofilter of 0.29 lb/ODMT. See Table 2 of permit review. The Permittee for conservatism requested the emission factor of 0.51 lb/ODMT in Table 2.2 B.1 to remain unchanged. • Added a footnote (**) to the dryer emission factors in Table 2.2 B.1 to reflect that the factors also now cover the emissions from the uncontrolled board cooler which are expected to have negligible PM emissions. • Added board cooler process rate recordkeeping.
45	2.2 B.2	• 02D .0530 PSD condition • Removed the biofilter as a control technology for the MDF board cooler • No specific testing required for the uncontrolled board cooler given the expected margin of compliance. Future testing may be required if margin of compliance substantially changes.

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

A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 02Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. As per an agreement between the EPA Region 4 and the DAQ, , the EPA will have a concurrent 45-day review period. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 02Q .0522, a copy of each permit application, each proposed permit, and each final permit pursuant shall be provided to EPA.

Also pursuant to 02Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State and local program at or before the time notice provided to the public under 02Q .0521 above. The current NC permitting policy is to provide notice to all local programs in NC and all contiguous states regardless of their status as an affected state under 02Q .0522.

X. PE Seal

Pursuant to 15A NCAC 02Q .0112 “Application requiring a Professional Engineering Seal,” specifically 02Q .0112(a), a professional engineer’s seal (PE Seal) is required to seal technical portions of air permit applications for new sources and modifications of existing sources as defined in 15A NCAC 02Q .0103 that involve:

(1) design;

(2) determination of applicability and appropriateness; or
(3) determination and interpretation of performance of air pollution capture and control systems.

This application required no such determinations and therefore no PE seal was required.

XI. Zoning

A zoning consistency determination is required pursuant to 15A NCAC 02Q .0304(b) if the air permit application involves a new facility or the expansion of an existing facility. This modification is neither and hence no zoning consistency determination was submitted.

XII. Recommendations

This permit application has been reviewed by NC DAQ to determine compliance with all procedures and requirements. NC DAQ has determined that this facility appears to be complying with all applicable requirements.

The Raleigh Regional Office has received a copy of this permit and had no comments.

~~Recommend Issuance of Permit No. 03449T58.~~ TBD