

INITIAL TITLE V AIR PERMIT APPLICATION REVIEW

Last Modified March 25, 2003

APPLICANT: SierraPine, Limited	SITE LOCATION: Moncure	COUNTY: Chatham	
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APPLICATION NUMBER: 1900015A5.A	EXISTING PERMIT NUMBER: 03449R24	NEW PERMIT NUMBER: 03449T25	

I. Introduction

The U.S. Environmental Protection Agency (EPA) has given final approval to North Carolina's Title V operating permits program effective on October 1, 2001. This EPA approval triggered the requirements for Title V facilities to submit permit applications to the Division of Air Quality. Title V facilities are required to obtain an operating permit which addresses all applicable regulations under the State Implementation Plan, Federal Implementation Plan, and other provisions of the Clean Air Act (CAA). The Title V Operating Permit will define all of the facility's obligations under the CAA.

This Initial Title V Air Permit Application Review intends to convey all pertinent emissions data, rules, policies, and engineering assumptions used to construct the Title V operating permit. The primary source of information used to construct the permit is the above referenced air permit application.

II. Background Information

General

The Title V Operating Permit replaces the existing Air Quality Construction and Operation Permits No. 03449R24, issued on August 27, 2001, and currently scheduled to expire on July 31, 2004.

Pursuant to 15A NCAC 2Q .0506, SierraPine, Limited (formerly known as Weyerhaeuser Company) submitted its initial Title V application for the Moncure Facility to the Division of Air Quality on November 18, 1996. The application was considered complete for processing on January 23, 1997. The draft permit was noticed to the public pursuant to 15A NCAC 2Q .0521 on XX, XX, 2002.

The SierraPine, Limited, Moncure Facility, (referred to as "the Moncure facility" in the permit and throughout the review) is considered as a major source of air pollution and subject to Title V requirements since the potential emissions of each of the following pollutants exceed 100 tons per year:

- < particulate matter - 317 tons/year
- < volatile organic compounds - 890 tons/year
- < nitrogen oxides - 4975 tons/year
- < carbon monoxide - 915 tons/year.

In addition, total potential emissions of hazardous air pollutants, principally formaldehyde (at 164 tons/year) and methanol (at 189 tons/year), exceed 25 tons per year.

Background (cont.) - Prevention of Significant Deterioration (15A NCAC 2D .0530)

(Re: Page 16; Prevention of Significant Deterioration Pre-construction Review for Weyerhaeuser Company Medium Density Fiberboard Plant Microboard Plant, Chatham County, Moncure , North Carolina, January 1997.)

Weyerhaeuser Company (now SierraPine, Ltd), submitted to the North Carolina Division of Environmental Management (NCDEM) two Prevention of Significant Deterioration (PSD) permit applications (on July 15, 1994 and again on April 20, 1995) for their medium density fiberboard and particleboard manufacturing facility near Moncure, North Carolina.

The existing medium density fiberboard plant was originally purchased in 1974 and was known to be a major source with respect PSD regulations. At that time, the only pollutant believed to be emitted in significant amounts was particulate matter. In 1986, the Microboard plant (now called Particleboard Mill) was constructed and began operation under a North Carolina air permit. At the time, it was not believed that the Microboard plant construction was a major modification. However, as a result of emissions testing performed at the Moncure facility as well as other Weyerhaeuser facilities, it was discovered that emissions from wood drying and pressing are higher than previously thought and that the Microboard construction was a major modification per the PSD regulations. Weyerhaeuser then entered into a Special Order by Consent (SOC) with the State of North Carolina which allowed for continued plant operation during the preparation and review of the first PSD application received July 15, 1994.

Based on the controlled emission rates of regulated air pollutants the facility, as constructed in 1986, was a PSD major stationary source for the discharge of volatile organic compounds (VOCs), nitrogen oxides (NOx), and carbon monoxide (CO). Thus, the plant is subject to review and processing under the North Carolina Administrative Code, Title 15A, Sub-Chapter 2D, Section .0530 "Prevention of Significant Deterioration".

In addition to fulfilling the required SOC, Weyerhaeuser Company also submitted, on April 20, 1995, a second application for modifications to both the Microboard and Medium Density Fiberboard (MDF) operations which would have allowed for an expansion in production capacity. The expansion required modifications to existing equipment as well as an additional fiber dryer, particleboard furnish dryer, and various wood furnish handling equipment. This modification would have resulted in significant emissions increases of VOCs and NOx. Thus, the plant was again subject to review and processing under the North Carolina Administrative Code, Title 15A, Sub-Chapter 2D, Section .0530 "Prevention of Significant Deterioration". Both the SOC application and the expansion application were reviewed simultaneously and processed as one PSD application.

Current PSD and BACT Requirements for the Title V Permit

As a result of the above, the current permit (Air Permit No. 03449R24) includes PSD limits, and requires Best Available Control Technology (BACT) for both the Particle Board Mill and the MDF operations. The limits and BACT controls were installed on the Particleboard Mill, however, PSD limits have not yet applied nor have the BACT controls been installed on the MDF plant since the actual expansion and modifications including installation of a dryer has never occurred. Though the expansion and modification including the installation of the dryer has been approved (consistent with EPA policy for maintaining PSD preconstruction permit), a permit application is required before construction can begin.

This permit action clarifies the actual PSD requirements as follows:

1. The title V permit reflects the current operation with BACT installed and PSD pollutant limitations in place for the Particleboard Mill as required by the major modification triggered by the construction of the mill in 1986.
2. The current permit indicates BACT has been installed and PSD limits are in place for the MDF plant. As the expansion was never completed, the MDF plant has and continues to not be required to comply with these limits therefore the PSD/BACT requirements have been removed from the title V operation permit to reflect current requirements and associated monitoring and recordkeeping.
3. The pollutants subject to BACT for the original Weyerhaeuser Microboard Plant construction are VOCs, NOx, and CO. The pollutants subject to BACT for expansion including modifications at both the Medium Density Fiberboard and Particleboard plants are VOCs and NOx. In addition Weyerhaeuser had "opted-in" to BACT for PM10 and CO even though a PSD review, including BACT analysis was not triggered by significant increases

resulting from the expansion (Re: Page 6; Prevention of Significant Deterioration Pre-construction Review for Weyerhaeuser Company Medium Density Fiberboard Plant Microboard Plant, Chatham County, Moncure, North Carolina, January 1997.) This title V permit leaves the PSD and BACT requirements in place for the Particleboard plant.

4. This title V permit contains a construction section (Part II) acknowledging that the expansion, including proposed modifications to both the MDF and MB plants, with the PSD pollutants and associated and BACT limits are currently approved, however, the permittee is required to provide a permit application before the expansion and construction of new sources addressing the EPA's policy requirements to keep the PSD/BACT permits for the expansion viable.

III. Facility Description

The SierraPine Limited's Moncure Facility produces medium-density fiberboard and particleboard. The medium-density fiberboard facility has been in operation since before 1974. The particleboard facility has been in operation since 1987.

Medium-density fiberboard is made from softwood and/or hardwood chips, shavings, and other fiber sources which are thermally and mechanically pulped and bound with a resin. Particleboard is made in several layers with varying compositions of softwood and hardwood. The inner layer consists of wood flakes that are sandwiched between outer layers of sawdust. These outer layers provide a smooth, blemish-free surface that is necessary for the application of veneers and laminates. A liquid resin adhesive binds the materials in particleboard.

The medium-density and particleboard lines share wood furnish receiving operations, fire system supply pumps, as well as water and waste systems, but operate independently beyond that point. The facility typically operates 24 hours per day and has regularly scheduled maintenance periods.

IV. Statement of Compliance

The DAQ has reviewed the compliance status of this facility. As a result of a facility inspection performed May 11 and 12, 2000, Sierra Pine Limited was issued a Notice of Violation for the failure to properly maintain control equipment.

The applicant has certified that the facility will be in compliance with all applicable requirements. The applicant has also certified that the facility will be in compliance with any applicable requirements taking effect during the term of the permit and will meet such requirements on a timely basis.

V. Summary of Emission Sources and Control Devices

The following table identifies all emission sources and associated control devices including those for which the Initial Title V Operating Permit is being issued.

Emission Source ID No.	Emission Source Description	Pollutants Emitted	Control Device ID No.	Control Device Description	Emission Point ID No.
Common Processes					

DFP -1	Fire Pump Engine (267 horsepower, 1.87 million Btu/hour heat input, Diesel fired)	Particulate matter Sulfur dioxide Nitrogen dioxide Volatile organic compounds Carbon monoxide	N/A	None	DFP-5004
ODG	Backup Generator Engine (465 horsepower, 3.26 million Btu/hour heat input, Diesel fired)	Particulate matter Sulfur dioxide Nitrogen dioxide Volatile organic compounds Carbon monoxide	N/A	None	5005
Fugitive Sources					
7001 or SP-1	Truck/Rail Chip Handling System	Particulate matter	N/A	Enclosure	Fugitive
7004 or SP-2	Truck/Rail Sawdust Handling System	Particulate matter	N/A	Enclosure	Fugitive
7010	Particle Board Mill Truck Dump	Particulate matter	3552	None	7010
7012 7014 7015 7029	Dump Bunkers and CL Dryer Dump	Particulate matter Volatile organic compounds	N/A	None	Fugitive
7052 7054 7055 7056	Wood Residue Bunkers	Volatile organic compounds	N/A	None	Fugitive
6001 7002-A 7002-B 7002-C 7002-D	Wood Chip Piles - Medium Density Fiberboard Mill	Particulate matter Volatile organic compounds	N/A	None	Fugitive
6003 7006 7007 7022	Wood Fuel Pad and Boiler Transfers	Particulate matter Volatile organic compounds	N/A	None	Fugitive
7005-D 7005-E 7005-F 7005-G	Sawdust Transport to A-frame	Volatile organic compounds	N/A	None	Fugitive
7008	Boiler Fuel House	Particulate matter Volatile organic compounds	N/A	None	Fugitive

7025	Scale Transfer Conveyors	Particulate matter Volatile organic compounds	N/A	None	Fugitive
7019 7026	Fiber Dump and Reject Filter Bins	Particulate matter Volatile organic compounds	N/A	None	Fugitive
7027	Hog Fuel Hopper	Particulate matter Volatile organic compounds	N/A	None	Fugitive
7003	Medium Density Fiberboard Mill Feed Bins	Particulate matter Volatile organic compounds	N/A	None	Fugitive
7040 7044 7046 7048 7050	Particleboard Mill Chip Transfer	Particulate matter	N/A	None	Fugitive
7024	Particleboard Mill Feed Bins	Volatile organic compounds	N/A	None	Fugitive
Medium Density Fiberboard Facilities					
HCB	Green Chip and Board Trim Transport System	Particulate matter Volatile organic compounds	CCB CCC CCD CCE 4001	Four (4) High efficiency simple cyclones - each 72 inches in diameter Reverse flow bag filter with 2410 square feet of surface area	4001
RDS	Refiners	Particulate matter Volatile organic compounds	5002	High efficiency cyclone - 96 inches in diameter	5002
DA	System A Fiber Dryer (15 million Btu/hour maximum firing rate - natural gas fired)	Particulate matter Sulfur dioxide Nitrogen dioxide Carbon monoxide Volatile organic compounds Formaldehyde Methanol	CA	High efficiency cyclone - 204 inches in diameter	3001

DB	System B Fiber Dryer (15 million Btu/hour maximum firing rate - natural gas fired)	Particulate matter Sulfur dioxide Nitrogen dioxide Carbon monoxide Volatile organic compounds Formaldehyde Methanol	CB	High efficiency cyclone - 204 inches in diameter	3001
RCB-2	Fiber Conveying System	Particulate matter	RCA RCB 3003	Two (2) High efficiency cyclones - each 98.5 inches in diameter Air pulse bag filter with 3,475 square feet of surface area	3003
FB-1	Fiber Forming System	Particulate matter	1003	Reverse flow bag filter with 6,924 square feet of surface area	1003
RJB-1	Mat Reject System	Particulate matter	RJC 1004	Simple Cyclone - 168 inches in diameter Reverse flow bag filter with 4680 square feet of surface area	1004
RCB-1	Fiber Reclaim System	Particulate matter	FRC 1002	High efficiency cyclone - 170 inches in diameter Reverse flow bag filter with 5,767 square feet of surface area	1002
WIW- 4000	Fiberboard Press	Particulate matter Carbon monoxide Volatile organic compounds Formaldehyde	N/A	None	4000

SDB-1	Steinemann Calibrating Sander	Particulate matter Volatile organic compounds Formaldehyde	1005	Reverse flow bag filter with 6,924 square feet of surface area	1005
SDB-2	Steinemann Finishing Sander	Particulate matter Volatile organic compounds Formaldehyde	5003	Reverse flow bag filter with 6,924 square feet of surface area	5003
BHB, SB-1, 5407-G, 5407-A, 5407-F	Blow Hog Transfer System, Globe and Radial Arm Saws, Rip and Porter Saws and Sander Dust, and QC Systems Control Devices, Saws and Sander from Mill Works Line	Particulate matter Volatile organic compounds Formaldehyde	CBC-1009A TTC-1009B SC-1 4002	Standard efficiency cyclone - 108 inches in diameter Simple cyclone 96 inches in diameter Simple cyclone 99 inches in diameter Reverse flow fabric filter with 6,720 square feet of surface area	4002
TLS ²	Truck Loading System ^{1,2}	Particulate matter	MW-C11, ^{1,2} MW-B1 ^{1,2}	Simple cyclone 99 inches in diameter Reverse Flow Fabric filter with 2,680 square feet of filter surface area	MW-B1 ²
D-1	Keeler Boiler Dryer Bypass Wood/equivalent No. 2 waste oil/No. 2 fuel oil-fired boiler (145 million BTU per hour maximum heat input)	Particulate matter Sulfur dioxide Nitrogen dioxide Carbon monoxide Volatile organic compounds	ZMC DESP	Multicyclone with eighty eight (88) tubes each 9 inches in diameter Dry electrostatic precipitator with 31,238 square feet of plate area	1001

ST-1	Saw and Sander Dust Transfer System	Particulate matter Volatile organic compounds Formaldehyde	SC FC 1008 (Alternately SC-1 and 4002)	Two (2) simple cyclones - each 72 inches in diameter Reverse flow fabric filter with 1,144 square feet of surface area Simple cyclone 99 inches in diameter Reverse flow fabric filter with 6,720 square feet of surface area	1008 (Alternately 4002 when SC-1 utilized)
HTC	Hog Trim Transport System	Particulate matter Volatile organic compounds	1010	High efficiency cyclone - 48 inches in diameter	1010

Draft Document Particleboard Mill

<p>3501 BACT</p> <p>Formerly identified as 2008</p>	<p>Sawdust Rock and Metal Separator</p>	<p>Particulate matter</p>	<p>SC</p> <p>3501 (old No. RMC)</p>	<p>High efficiency cyclone - 96 inches in diameter</p> <p>Reverse flow fabric filter with 2,410 square feet of surface area</p>	<p>3501</p> <p>Formerly identified as 4003</p>
<p>1430 BACT</p>	<p>Surface Layer Dryer - triple pass, rotary drum dryer with wood suspension dust/natural gas-fired burner (60 million Btu per hour maximum rated heat input),</p>	<p>Particulate matter Sulfur dioxide Nitrogen dioxide Carbon monoxide Volatile organic compounds Formaldehyde Acetaldehyde</p>	<p>1431</p> <p>PB-WESP</p> <p>1515</p>	<p>High efficiency multicyclone with six (6) tubes - each 80 inches in diameter</p> <p>Wet electrostatic precipitator</p> <p>Regenerative oxidizer</p>	<p>1515</p>
<p>1420 BACT</p>	<p>Core Layer Dryer No. 1 - single pass, rotary drum dryer with two wood/natural gas-fired burners (90 million Btu per hour total maximum rated heat input)</p>	<p>Particulate matter Sulfur dioxide Nitrogen dioxide Carbon monoxide Volatile organic compounds Formaldehyde Acetaldehyde</p>	<p>1421</p> <p>PB-WESP</p> <p>1515</p>	<p>High efficiency multicyclone with four (4) tubes - each 80 inches in diameter</p> <p>Wet electrostatic precipitator</p> <p>Regenerative oxidizer</p>	<p>1515</p>
<p>1410 BACT</p>	<p>Core Layer Dryer No. 2 - single pass, rotary drum dryer with two wood/natural gas-fired burners (90 million Btu per hour total maximum rated heat input)</p>	<p>Particulate matter Sulfur dioxide Nitrogen dioxide Carbon monoxide Volatile organic compounds Formaldehyde Acetaldehyde</p>	<p>1411</p> <p>PB-WESP</p> <p>1515</p>	<p>High efficiency multicyclone with four (4) tubes - each 80 inches in diameter</p> <p>Wet electrostatic precipitator</p> <p>Regenerative Oxidizer</p>	<p>1515</p>

<p>3515 BACT</p>	<p>Surface Material Transport (formerly referred to as “Fines Transport”)</p>	<p>Particulate matter</p>	<p>3500 3505 3512-A 3512-B 1810 (old No. 3412) 3510 3515</p>	<p>Five (5) simple cyclones - each 72 inches in diameter Simple cyclone - 48 inches in diameter Reverse flow fabric filter with 6,918 square feet of surface area</p>	<p>3515 (Old No. 2003)</p>
<p>3525 BACT</p>	<p>Surface Formers and Mat Dumps (formerly called “Wet Material Transport System”)</p>	<p>Particulate matter</p>	<p>3520-A 3520-B 3521 3525</p>	<p>Three (3) simple cyclones - each 96 inches in diameter Reverse flow fabric filter with 6,918 square feet of surface area</p>	<p>3525 (old No. 2004)</p>
<p>3535 BACT</p>	<p>Flying Cut Off Saw, Pretrim Saws, & Production Collection (formerly called “Dry Material Transport Systems”)</p>	<p>Particulate matter Volatile organic compounds</p>	<p>3530 3531 3533 3535 (old No. 2005)</p>	<p>Simple cyclone - 84 inches in diameter Simple cyclone - 108 inches in diameter Simple cyclone - 108 inches in diameter Reverse flow fabric filter with 6,918 square feet of filter area</p>	<p>3535 (old No. 2005)</p>
<p>DEF- 2010³ BACT</p>	<p>Particleboard Press³</p>	<p>Volatile organic compounds Formaldehyde Methanol</p>	<p>N/A</p>	<p>None</p>	<p>DEF-2010</p>
<p>PB-BC³ BACT</p>	<p>Particleboard Cooler³</p>	<p>Particulate matter Volatile organic compounds Formaldehyde Methanol</p>	<p>N/A</p>	<p>None</p>	<p>PB-BC</p>
<p>4100 BACT</p>	<p>Particleboard Mill Steinemann Calibrating Sander</p>	<p>Particulate matter</p>	<p>3565</p>	<p>Reverse flow fabric filter with 6,918 square feet of surface area</p>	<p>3565 (old No. 5001)</p>

4110 BACT	Particleboard Mill Steinemann Finishing Sander (formerly called “Sanderdust transport system”)	Particulate matter	3545	Reverse flow fabric filter with 6,918 square feet of surface area	3545 (old No. 2006)
3522 BACT	Schelling Saw Board Trim (formerly called “Board trim transfer system - panel saw”)	Particulate matter	3522 3555	High efficiency cyclone - 120 inches in diameter Reverse flow fabric filter with 6,918 square feet of surface area	3555 (old No. 4005)
3575 BACT	Sander Filter Transport for Filters 3545 & 3565 (formerly called “Sanderdust silo transport system”)	Particulate matter Volatile organic compounds	3540B 3575	High efficiency cyclone - 144 inches in diameter Reverse flow fabric filter with 1,159 square feet of surface area	3575 (old No. 6006)
3585 BACT	PZKR Green Chip Flakers (formerly called “Flakers”)	Particulate matter	3585	Reverse flow fabric filter with 4,880 square feet of surface area	3585 (old No. 6009)
3595 (old No. 3511) BACT	Surface Hammermill and Surface PZKR’s (formerly called “Fines Transport-SL Mills”)	Particulate matter	3511 3595	Simple cyclone - 132 inches in diameter Reverse flow fabric filter with 4,923 square feet of surface area	3595 (old No. 6011)
3577 (old No. 1350) BACT	Dry Waste Hammermill Transport System	Particulate matter	3532 3577	Simple cyclone - 60 inches in diameter Reverse flow fabric filter with 4,068 square feet of surface area	3577

¹ Emission point identity provided in revision to application dated May 21, 2002 and Air Permit 03449R24

² Permitted but not in operation or constructed.

³ In existing air permit (Air Permit 03449R24), particle board press and particle board cooler exhaust are listed as particle board press and board cooler (ID No. DEF-2010)

VI. Emission Source-by-Source Evaluation

A. Common Facilities

1. Description

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Common facilities are facilities that are shared by the medium-density fiberboard lines and the particleboard lines. The two lines share wood furnish receiving operations, fire system supply pumps as well as water and waste systems.

The process rates for the units that comprise the common facilities are as follows:

Emission Source	Emission Source ID No.	Maximum Process Rate ¹
Fire Pump Engine ³ (Diesel fired)	DFP-1	267 horsepower, 1.87 million Btu/hour heat input
Backup Generator Engine ³ (Diesel fired)	ODG	465 horsepower, 3.26 million Btu/hour heat input
Above ground gasoline storage tank ² - 260 gallons capacity	8100	260 gallons per day
Propane storage tank ² - More than 10,000 pounds	Not provided	Not provided

¹ Permit Application (May 21, 2002) Section B

² Determined during review to be an insignificant source (see 15A NCAC 2Q .0503(8)).

³ Air Permit No. 03449R24.

Comments

- < During review of application, above ground gasoline storage tank (ID No. 8100) and propane storage tank were determined to be insignificant sources of air pollutants. Potential emissions from these units are less than 5 tons per year of a criteria pollutant and 1000 pounds of toxic air pollutants

2. An Overview of Applicable Regulatory Requirements

The following table provides a summary of limits and/or standards for the emission units in the common facilities. A review of the information in the application was performed to ensure that the appropriate limits and associated calculations used to show compliance were correct.

Regulated Pollutant	Limits/Standards	Applicable Regulation
sulfur dioxide	2.3 pounds per million Btu heat input Affected facilities: < Fire pump engine (ID No. DFP-1) < Backup generator engine (ID No. ODG) Note limits and discussion in Section VI.A.3.a	15A NCAC 2D .0516(a)

visible emissions	20 percent opacity Affected facilities: < Fire pump engine (ID No. DFP-1) < Backup generator engine (ID No. ODG) Note limits and discussion in Section VI.A.3.b	15A NCAC 2D .0521(d)
odors	Odorous emissions must be controlled - Section VII.B.2 Facility Wide Affected Emission Sources; State-enforceable only	15A NCAC 2D .1806

Other regulations considered for emissions from the units that comprise the common facilities:

- C 15A NCAC 2D .0503: Particulate Emissions from Fuel Burning Indirect Heat Exchangers. Both the fire pump engine (**ID No. DFP**) and the backup generator engine (**ID No. ODG**) are stationary internal combustion engines and are not considered indirect heat exchangers as defined in 15A NCAC 2D .0503(a)(2).
- C 15A NCAC 2D .0958: Work Practices for Sources of Volatile Organic Compounds. Volatile organic compounds in use at these facilities are fuel for vehicles and the Diesel engines for the fire pump and the backup generator and motorized vehicles.
- C 15A NCAC 2D .2100: Risk Management Program. The flammable substances are used as fuel. Thus facility is not subject to requirements.
- C 40 CFR 68: Chemical Accident Prevention Provisions. The flammable substances are used as fuel. Thus facility is not subject to requirements.

3. Specific requirements and affected emission points

a. 15A NCAC 2D .0516: Sulfur Dioxide Emissions from Combustion Sources

Statement of Basis

- i. The existing permit includes a sulfur dioxide emission limit of 2.3 lb per million Btu heat input prescribed in the existing permit (Air Permit No. 03449R24, Specific Conditions and Limitations No. 3). Diesel fuel is utilized in the fire pump engine (**ID No. DFP-1**) and the backup generator (**ID No. ODG**).
- ii. Both the fire pump engine (**ID No. DFP-1**) and the backup generator (**ID No. ODG**) are stationary internal combustion engines operated on a standby basis.

Regulatory Requirements

- iii. Emissions of sulfur dioxide from the fire pump engine (**ID No. DFP-1**) and the backup generator (**ID No. ODG**) shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516(a)].

Monitoring/Recordkeeping/Reporting

- iii. No monitoring, record keeping, or reporting is required for sulfur dioxide emissions from the firing of Diesel fuel oil in the fire pump engine (**ID No. DFP-1**) or the backup generator (**ID No. OFG**).

b. 15A NCAC 2D .0521: Control of Visible Emissions

Statement of Basis

- i. Emission limits for visible fugitive emissions from the fire pump engine (**ID No. DFP-1**) and the backup generator (**ID No. OFG**) were prescribed in Air Permit No. 03449R24 (Specific Conditions and Limitations No. 6).
- ii. The backup generator (**ID No. ODG**) is a stationary internal combustion engines operated on a standby basis. The generator starts up to provide power to keep the dryers rotating and to prevent a fire from occurring in the dryers. This generator may operate 5 to 6 times per year.

- iii. The fire pump engine (**ID No. DFP-1**) serves as a backup to their electric generator and is used for emergency purposes only, and thus, only operates a few hours per year.

Regulatory Requirements

- iv. As required by 15A NCAC 2D .0521(d) "Control of Visible Emissions," visible emissions from the fire pump engine (**ID No. DFP-1**) or the backup generator (**ID No. ODG**) manufactured after July 1, 1971, shall not be more than 20 percent opacity when averaged over a six-minute period [15A NCAC 2D .0521(d)]. However, six minute averaging periods may exceed 20 percent opacity if
 - (a) No six-minute period exceeds 87 percent opacity;
 - (b) No more than one six-minute period exceeds 20 percent opacity in any hour; and
 - (c) No more than four six-minute periods exceed 20 percent opacity in any 24-hour period

Monitoring/Recordkeeping/Reporting

- v. No monitoring, record keeping, or reporting is required for visible emissions from the fire pump engine (**ID No. DFP-1**) or the backup generator (**ID No. OFG**).

B. Fugitive Sources

1. Description

Fugitive emissions from the Medium Density Mill and the Particleboard Mill are similar. Particulate emissions dominate the fugitive source category. Sources of fugitive particulate matter include raw material and wood fuel storage piles. Other sources of particulate matter include conveyors, material recovery bunkers, fuel and wood residue handling, new material handling, and process operations.

Sources of fugitive emissions other than particulate matter are the green chip and sawdust storage piles, which emit VOCs, and the waste water treatment ponds, which emit VOCs, formaldehyde, methane, hydrogen sulfide, and phenol via evaporation.

The process rates for the fugitive sources are as follows:

Emission Source	Emission Source ID No.	Maximum Process Rate¹
Truck/Rail Chip handling system	7001 or SP-1	80 tons/hour
Truck/Rail Sawdust handling system	7004 or SP-2	80 tons/hour
Particle Board Mill Truck Dump	7010	80 tons per hour
Dump bunkers and CL dryer dump	7012 7014 7015 7029	4.3 tons/hour 4.3 tons/hour 4.3 tons/hour Emergency only
Wood residue bunkers	7052 7054 7055 7056	4.3 tons/hour each
Wood chip piles - Medium Density Fiberboard Mill	6001 7002-A 7002-B 7002-C 7002-D	80 tons/hour each

Wood fuel pad and boiler transfers	6003 7006 7007 7022	Not provided 10 tons/hour 12.5 tons/hour 10 tons/hour
Sawdust transport to A-frame	7005-D 7005-E 7005-F 7005-G	80 tons/hour each
Boiler fuel house	7008	.625 tons/hour
Scale transfer conveyors	7025	36 tons/hour
Fiber dump and reject filter bins	7019 7026	2.5 tons/hour 2.5 tons/hour
Hog fuel hopper	7027	60 tons/hour
Medium Density Fiberboard Mill feed bins	7003	34.4 tons/hour
Particleboard Mill chip transfer	7040 7044 7046 7048 7050	31.3 tons/hour each
Particleboard Mill feed bins	7024	18 tons/hour

¹ Permit Application (May 21, 2002) Section B

Comments

C Fugitive sources are located throughout the facility.

2. An Overview of Applicable Regulatory Requirements

The following table provides a summary of limits and/or standards for the fugitive sources. A review of the information in the application was performed to ensure that the appropriate limits and associated calculations used to show compliance were correct.

Regulated Pollutant	Limits/Standards	Applicable Regulation
visible emissions	20 percent opacity Note limits and discussion in Section VI.B.3.a	15A NCAC 2D .0521(d)
odors	Odorous emissions must be controlled - Section VII.B.2 Facility Wide Affected Emission Sources; State-enforceable only	15A NCAC 2D .1806

Other regulations considered for emissions from the fugitive sources:

C 15A NCAC 2D .0515: Particulate Emissions from Miscellaneous Industrial Processes. As the emission points are all considered fugitive, this regulation does not apply.

- C 15A NCAC 2D .0958: Work Practices for Sources of Volatile Organic Compounds. Volatile organic compounds are not used or manufactured at this facility and the volatile organic compounds that are emitted are not products of chemical reactions. This regulation does not apply to the fugitive sources at this facility.

3. Specific requirements and affected emission points

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

Analysis

- i. Emission limits for visible emissions from the fugitive sources were prescribed in Air Permit No. 03449R24 (Specific Conditions and Limitations No. 6).
- ii. As no compliance issues have been noted, the facility has no history of violations, the expected amount of emissions from each unit is small (potential emissions of particulate matter from each emission point is less than 1 ton per year), some of the conveyors are enclosed, and the storage facilities are enclosed no monitoring, recordkeeping, or reporting is necessary.

Regulatory Requirements

- iii. As required by 15A NCAC 2D .0521(d) "Control of Visible Emissions," visible emissions from the fugitive sources manufactured after July 1, 1971, shall not be more than 20 percent opacity when averaged over a six-minute period [15A NCAC 2D .0521(d)]. However, six minute averaging periods may exceed 20 percent opacity if
 - (a) No six-minute period exceeds 87 percent opacity;
 - (b) No more than one six-minute period exceeds 20 percent opacity in any hour; and
 - (c) No more than four six-minute periods exceed 20 percent opacity in any 24-hour period

Monitoring/Recordkeeping/Reporting

- iv. No monitoring, record keeping, or reporting is required for visible emissions from the following fugitive sources: chip handling system (**ID No. 7001 or SP-1**); sawdust handling system (**ID No. 7004 or SP-2**); Particleboard Mill truck dump (**ID No. 7010**); dump bunkers and CL dryer dump (**ID Nos. 7012, 7014, 7015, 7029**); wood residue bunkers (**ID Nos. 7052, 7054, 7055, and 7056**); wood chip piles - Medium Density Fiberboard Mill (**ID Nos. 6001, 7002-A, 7002-B, 7002-C, and 7002-D**); wood fuel pad and boiler transfers (**ID Nos. 6003, 7006, 7007, 7022**); sawdust transport to A-frame (**ID Nos. 7005-D, 7005-E, 7005-F, 7005-G**); boiler fuel house (**ID No. 7008**); scale transfer conveyors (**ID No. 7025**); fiber dump and reject filter bins (**ID Nos. 7019 and 7026**); hog fuel hopper (**ID No. 7027**); Medium Density Fiberboard Mill feed bins (**ID No. 7003**); Particleboard Mill chip transfer (**ID Nos. 7040, 7044, 7046, 7048, and 7050**); and Particleboard Mill feed lines (**ID No. 7024**).

C. **Medium-Density Fiberboard Mill (ID No. MDF)**

1. Description

Medium Density Fiberboard is made from softwood and/or hardwood chips, shavings and other fiber sources, mixed with urea formaldehyde resin which serves as the glue, wax to keep it water resistant, and a ammonium sulfate catalyst to speed up the process. (This facility also uses MDI resin for some MDF production. This description does not reference the use of this approved resin and only references the UF resin).

Wood furnish for the medium-density fiberboard facility is received from the unloading area and stored in piles. Front end loaders transport the furnish from storage to the process feed bins, where it is screened to remove large contaminants, oversized and fine material. The screened furnish is washed to remove dirt and debris and conveyed to pre-steaming bins where it is heated to loosen the wood fibers. From the presteaming bins, fibers are sent to the refiners to be mechanically pulped.

The processed wood fibers enter a blow line and are blended with resin, wax and a formaldehyde scavenger. After blending, the fibers enter a dryer, where the fibers are dried. The dried fibers are then collected by a cyclone, weighed, and sent to a dry fiber storage bin.

From the dry fiber storage bin, fiber is sent to the formers, which lay the fiber onto a conveyor belt. The formed fiber is then pre-compressed into a mat, cut into sections by a cut-off saw, conveyed to the press loader, and fed into the press. Emissions from the curing of the resin are withdrawn from the press, unloader, and board cooler by exhaust fans.

Panels exiting the press are sent to a board cooler. Once cooled, the panels are sanded, inspected, and cut to various sizes. Panels not meeting specifications are labeled and sold as second-grade product, or are sent to the hammer mill to be hogged for fuel or recycled as furnish. Sanderdust and wood residue are also utilized as fuel.

The existing boiler provides steam to the dryers, refiners, and press. This unit fires with a varying combination of wood residues, used oil, and Number 2 fuel oil. The used oil is a mixture of hydraulic oil, thermal oil, and a small amount (up to 25 gallons per week) of transmission fluid and engine oil.

The proposed expansion of the MDF plant and Particleboard plant never occurred including new construction of System C Fiber Dryer and associated production increases that originally triggered PSD. For this reason the PSD/BACT limits do not apply. The only BACT affected emissions unit subsequently constructed and permitted was the Truck Loading System ID No. TLS; construction of this emissions unit alone did not trigger a modification under a minor source NSR review by DAQ. The DAQ requires a permit application if the proposed expansion is anticipated.

The process rates for the units that comprise the medium-density fiberboard mill facilities are as follows:

Emission Source	Emission Source ID No.	Maximum Process Rate
Green chip and board trim transport system	HCB	35.8 tons/hour
Refiners	RDS	11.6 tons/hour
System A fiber dryer	DA	15 million Btu/hour maximum firing rate - natural gas fired 14.5 tons/hour
System B fiber dryer	DB	15 million Btu/hour maximum firing rate - natural gas fired 14.5 tons/hour
Fiber conveying system	RCB-2	24.2 tons/hour
Fiber forming system	FB-1	1.7 tons/hour
Mat reject system	RJB-1	19 tons/hour
Fiber reclaim system	RCB-1	11.0 tons/hour
Fiberboard press	WIW-4000	19.94 MSF/hour

Steinemann Calibrating Sander	SDB-1	9.9 tons/hour
Steinemann Finishing Sander	SDB-2	2.4 tons/hour
Blow Hog Transfer System, Globe and Radial Arm Saws, Rip and Porter Saws and Sander Dust, and QC Systems Control Devices, Saws and Sander from Mill Works Line	BHB, SB-1, 5407-G, 5407-A, 5407-F	21.7 tons/hour
Truck Loading System ²	TLS ²	12 tons/hour
Keeler Boiler Dryer Bypass (Wood/equivalent No. 2 waste oil/No. 2 fuel oil-fired boiler)	D-1	145 million BTU per hour maximum heat input ³
Saw and sander dust transfer system	ST-1	12.4 tons/hour
Hog trim transport system	HTC	21.7 tons/hour

¹ Permit Application (May 21, 2002) Section B

² Originally permitted as new emissions unit included in the PSD/BACT permit. Recently approved as a minor source under NSR review for construction and operation under the State's 2Q .0300 permits program.

³ Emission point information and identity provided in 03449R24

Comments

- C The applicant identified several alternative operating scenarios for consideration; one scenario reflects current conditions, that is no expansion and therefore PSD/BACT limits and controls in effect on the MDF plant. The second scenario, as described in the current permit, allows for expansion of both the Particleboard and the MDF plant with the associated PSD/BACT limits and controls.
 - C This permit action incorporates the first scenario in the operating permit and eliminates the PSD/BACT limits and controls from the operating permit for the MDF plant because the expansion never took place. Therefore, the PSD/BACT limits for the MDF were moved to the construction permit which requires the submittal of a permit application before construction is allowed.
2. An Overview of Applicable Regulatory Requirements

The following table provides a summary of limits and/or standards for the emission units in the medium-density fiberboard facilities. A review of the information in the application was performed to ensure that the appropriate limits and associated calculations used to show compliance were correct.

particulate matter	<p>$E = 4.10P^{0.67}$ Draft Document where E = allowable emission rate in pounds per hour P = process weight in tons per hour</p> <p>Affected facilities < System A fiber dryer (ID No. DA) < System B fiber dryer (ID No. DB) < Truck Loading System (ID No. TLS)</p> <p>Note limits and discussion in Section VI.C.3.d</p>	15A NCAC 2D .0515
sulfur dioxide	<p>2.3 pounds per million Btu heat input</p> <p>Affected facilities < System A fiber dryer (ID No. DA) < System B fiber dryer (ID No. DB) < Keeler Boiler Dryer Bypass (ID No. D-1)</p> <p>Note limits and discussion in Section VI.C.3.e</p>	15A NCAC 2D .0516(a)
visible emissions	<p>20 percent opacity Note limits and discussion in Section VI.C.3.f</p>	15A NCAC 2D .0521(d)
volatile organic compounds	<p>Work Practice Standards Section VII.B.1 Facility Wide Affected Emission Sources</p>	15A NCAC 2D .0958
odors	<p>Odorous emissions must be controlled - Section VII.B.2 Facility Wide Affected Emission Sources; State-enforceable only</p>	15A NCAC 2D .1806

Other regulations considered for emissions from the medium-density fiberboard facilities:

- C 15A NCAC 2D .0519: Control of Nitrogen Dioxide and Nitrogen Oxides Emissions. The facility is not a producer of nitric acid and does not utilize a boiler with a capacity of 250 million Btu per hour of heat input.
- C 15A NCAC 2D .0524: New Source Performance Standards. The regulations are not applicable to medium-density fiberboard systems.
- C 2D .1100: Control of Toxic Air Pollutants. Emissions of toxic air pollutants are below 15A NCAC thresholds.
- C 15A NCAC 2D .1111: Maximum Achievable Control Technology. The Plywood and Composite Wood Products MACT rule has not been promulgated.
- C 15A NCAC 2Q .0711: Emission Rates Requiring a Permit. As emission rates are below thresholds, no permit is required.

Comments:

- C An alternative operating scenario (AOS) is in use for the Keeler Boiler Dryer Bypass (**ID No. D-1**). Although the boiler primarily utilizes wood and wood residue, the boiler is also capable of burning No. 2 fuel oil and waste oil. When the boiler is burning No. 2 fuel oil or waste oil, the applicable requirements for particulate emissions are prescribed in 15A NCAC 2D .0503: Particulates from Fuel Burning Indirect Heat Exchangers. When the boiler is burning wood and wood residue, the applicable requirements for particulate emissions are prescribed in 15A NCAC 2D .0504: Particulates from Wood Burning Indirect Heat Exchangers.
- C An alternative operating scenario (AOS) is described for those sources that have triggered PSD/BACT.

3. Specific requirements and affected emission points

AOS -firing No. 2 fuel oil, or used oil

a. **15A NCAC 2D .0503: Particulates from Fuel Burning Indirect Heat Exchangers**

Statement of Basis

- i. The emission limit for particulate matter from the fuel burning indirect heat exchanger (i.e., the boiler) was prescribed in the Air Permit No. 03449R24 (Specific Conditions and Limitations No. 2).
- < For the Keeler Boiler Dryer Bypass (**ID No. D-1**) which burns a varying combination of wood residues, used oil, and Number 2 fuel oil, a multicyclone (**ID No. ZMC**), connected in series with a dry electrostatic precipitator (**ID No. DESP**), is used to remove particulate matter from the gas stream. The used oil is a mixture of hydraulic oil, thermal oil, and a small amount (up to 25 gallons per week) of transmission fluid and engine oil.
- < As indicated in the most recent inspection report (May 12, 2000), recycled or waste fuel oil is no longer used in the boiler due to the fact that it clogs the fuel guns.
- < When burning wood residues, the emission limits for the facility are prescribed in 15A NCAC 2D .0504.
- < When No. 2 fuel oil is used in the boiler minimal emissions of particulate matter are expected from this combustion operation.
- vi. A stack test to evaluate emissions from the Keeler Boiler Dryer Bypass (**ID No. D-1**) was performed on February 17 - 18, 1997. Compliance with emission limitations was demonstrated. Specific results from the test were as follows: 0.026 lb/mmBtu when firing No. 2 fuel oil.

Regulatory Requirements

- vii. Alternative Operating Scenarios: The Permittee, contemporaneously with making a change from one alternate operating scenario to another, shall record in a log the scenario under which it is operating.
- viii. The allowable emissions of particulate matter shall be calculated by the equation $E = 1.090 \text{ times } Q \text{ to the } -0.2594 \text{ power}$. E = allowable emission limit in lb/million Btu. Q = maximum heat input in million Btu/hour (See 15A NCAC 2D .0503(c)). Emissions of particulate matter from the combustion of No. 2 fuel oil or waste oil as discharged from each indirect heat exchanger into the atmosphere shall not exceed the following limitations:

<u>Source</u>	<u>Pollutant</u>	<u>Emission Limit</u>	<u>Maximum Firing Rate</u>	<u>Allowable Emission Rate</u>
D-1	Particulate matter	0.300 lbs/mmBtu	145.0 million Btu/hour	43.5 lbs/hour

Monitoring/ Recordkeeping/Reporting

- ix. No monitoring, record keeping, or reporting is required for particulate emissions from the firing of No. 2 fuel oil in the Keeler Boiler Dryer Bypass (**ID No. D-1**).

POS -firing wood and wood residues in combination with used oil or No. 2 fuel oil

b. **15A NCAC 2D .0504: Particulates from Wood Burning Indirect Heat Exchangers**

Statement of Basis

- i. The emission limit for particulate matter from the wood burning indirect heat exchangers (i.e., the boiler) was prescribed in the Air Permit No. 03449R24 (Specific Conditions and Limitations No. 2).
- ii. For the Keeler Boiler Dryer Bypass (**ID No. D-1**) which burns a varying combination of wood residues, used oil, and Number 2 fuel oil, a multicyclone (**ID No. ZMC**), connected in series with a dry electrostatic precipitator (**ID No. DESP**), is used to remove particulate matter from the gas stream.
- iii. When burning oil, the emission limits for the facility are prescribed in 15A NCAC 2D .0503.
- iv. A stack test to evaluate emissions from the Keeler Boiler Dryer Bypass (**ID No. D-1**) was performed on February 17 - 18, 1997. Compliance with emission limitations was demonstrated. Specific results from the test were as follows: 0.027 lb/mmBtu when firing wood.
- v. The allowable emissions of particulate matter shall be calculated by the equation $E = 1.1698 \text{ times } Q \text{ to the } -0.2230 \text{ power}$. E = allowable emission limit in lb/million Btu. Q = maximum heat input in million Btu/hour (See 15A NCAC 2D .0504(c)). For the Keeler Boiler Dryer Bypass (**ID No. D-1**), the value Q is 145 million Btu/hour. The value for "E" is calculated to be 0.386 lb/million Btu.

Regulatory Requirements

- vi. Alternative Operating Scenarios: The Permittee, contemporaneously with making a change

from one alternate operating scenario to another, shall record in a log the scenario under which it is operating.

- vii. The emission limit for fuel burning equipment that burns both wood and other fuels in combination, or for wood and other fuel burning equipment that is operated such that emissions are measured on a combined basis, shall be calculated by the equation

$$E_c = [(E_w)(Q_w) + (E_o)(Q_o)]/Q_t \text{ (See 15A NCAC 2D .0504(f)).}$$

- (a) E_c = the emission limit for combination or combined emission source(s) in lb/million Btu.
- (b) E_w = plant site emission limit for wood only as determined by this rule in lb/million Btu. (For this facility, $E_w = 0.386$ lb/million Btu.)
- (c) E_o = the plant site emission limit for other fuels only as determined by 15A NCAC 2D .0503 in lb/million Btu. (For this facility, $E_o = 0.300$ lb/million Btu [from Section VI.C.3.a.viii])
- (d) Q_w = the actual wood heat input to the combination or combined emission sources in Btu/hour
- (e) Q_o = the actual other fuels heat input to the combination or combined emission sources in Btu/hr.
- (f) $Q_t = Q_w + Q_o$ and is the actual total heat input to combination or combined emission source(s) in Btu/hour.

Emissions of particulate matter from the combustion of wood products, only, as discharged from each indirect heat exchanger into the atmosphere shall not exceed the following limitations:

<u>Source</u>	<u>Pollutant</u>	<u>Emission Limit</u>	<u>Maximum Firing Rate</u>	<u>Allowable Emission Rate</u>
Boiler (ID No. D-1)	Particulate matter	0.386 lbs/mmBtu	145 million Btu/hour	55.9 lbs/hour

Monitoring and Recordkeeping Requirements

- viii. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit above by testing the wood fuel-fired Keeler Boiler Dryer Bypass (ID Nos. D-1) for particulate matter with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in Section 3 - General Condition JJ. Testing shall be completed and the results submitted within one year of following the effective date of the permit or by **Xxx, xx, 2004**, unless an alternate date is approved by the DAQ. Thereafter the testing shall be performed every 5 years. If the results of this test are above the limit given in Section VI.C.3.b.vii., above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0504.
- ix. To comply with the provisions of the permit and ensure compliance with the limitations prescribed in 15A NCAC 2D .0504(c), the Permittee shall establish an inspection and maintenance schedule/checklist and perform such inspections and maintenance on the indirect heat exchangers on the Keeler Boiler Dryer Bypass (ID No. D-1). As a minimum, the inspection and maintenance program will include a monthly inspection of the indirect heat exchangers, boilers, fans, and duct work for leaks and to ensure structural integrity. In addition, Permittee shall perform maintenance and cleaning at least once per year. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0504 if the indirect heat exchangers are not inspected, cleaned, and maintained.
- x. Particulate matter emissions from the Keeler Boiler Dryer Bypass (ID No. D-1) shall be controlled by a multicyclone (ID No. ZMC) in series with a dry electrostatic precipitator (ID No. DESP). To ensure compliance and effective operation, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer’s inspection and maintenance recommendations, or if there is no manufacturer’s inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include:
 - (a) a weekly external visual inspection of critical components of the dry electrostatic precipitator such as rappers, dust removal equipment, the system duct work, and the material collection units.
 - (b) a weekly check for any equipment that does not generate an alarm in the turned-off state,

- Draft Document
- (c) to ensure it is switched on;
 - (c) a weekly measurement of average particulate deposits on discharge and collecting electrodes, for comparison with past and future inspections;
 - (d) a weekly external check for signs of plugging of gas distribution plates, and excessive buildup on inlet and outlet plenum floor surfaces;
 - (e) a weekly check for signs of hopper plugging; and
 - (f) a weekly check for broken rapper rod insulators, cracked support bushing insulators, and broken or loose stabilizer bar insulators (if installed), and replacement as required.
 - (g) a monthly external visual inspection of the system ductwork and material collection unit for leaks; and
 - (h) an annual (for each 12 month period from initial inspection) internal inspection of the multicyclone's structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0504 if the multicyclones, the electrostatic precipitator, and duct work are not inspected and maintained.

- xi. To ensure compliance and the effective operation of the dry electrostatic precipitator (**ID No. DESP**), the Permittee shall continuously monitor and record, the primary and secondary voltage drops across the precipitator. The readings shall be electronically recorded in a log book (written or electronic format), maintained on-site, and made available to an authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0504 if the monitoring devices are not calibrated, operated, and maintained using procedures that take into account manufacturer's specifications. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0504 if the monitoring records are not maintained.
- xii. The Permittee shall establish a "normal range" for primary and secondary voltage drops across the dry electrostatic precipitator (**ID No. DESP**) to ensure good operating practices in the first 30 days following the effective date of the permit. The Permittee shall evaluate the primary and secondary voltage drops across the dry electrostatic precipitator (**ID No. DESP**) on a daily basis. If the primary and secondary voltage drops are observed to be outside the normal range, the Permittee shall inspect the dry electrostatic precipitator for malfunctions and repair, as necessary, in accordance to manufacturer's inspection and maintenance recommendations. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0504 if the inspections and repairs are not performed.
- xiii. The results of inspection and maintenance activities, discussed above for the dry electrostatic precipitator, shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative of DAQ upon request. The logbook shall record the following:
 - (a) the date and time of each recorded action;
 - (b) the results of each inspection;
 - (c) the causes for any variance from the normal operating range for the dry electrostatic precipitator; and
 - (d) corrective actions taken.

To ensure quality, entries in the logbook should be signed by personnel responsible for the effective operation of the boiler and the dry electrostatic precipitator. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0504 if these records are not maintained

Reporting

- xiv. The Permittee shall submit the results of any maintenance performed on the multicyclone (**ID No. ZMC**), the dry electrostatic precipitator (**ID No. DESP**), and Keeler Boiler Dryer Bypass (**ID No. D-1**) within 30 days of a written request by the DAQ.
- xv. The Permittee shall submit a summary report of monitoring and record keeping activities by January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. All instances of deviations from the manufacturers' recommendations for maintenance of the multicyclone and the dry electrostatic precipitator must also be clearly identified.

c. 15A NCAC 2D .0512: Particulates from Wood Products Finishing Plants Statement of Basis

- Draft Document
- i. The regulation applies to emissions of particulate matter from the working, sanding, and finishing of wood.
 - ii. Provisions regarding this requirement were not prescribed in the Air Permit No. 03449R24.

Regulatory Requirements

- iv. 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.

Monitoring/Record keeping

- v. Particulate matter emissions from the units in the medium-density fiberboard mill [ID No. MDF] (including the green chip and board trim transport system [ID No. HCB], refiners [ID No. RDS], fiber conveying system [ID No. RCB-2], mat reject system [ID No. RJB-1], fiber forming system [ID No. FB-1], fiber reclaim system [ID No. RCB-1], fiberboard press [ID No. WIW-4000], sanders [ID Nos. SDB-1 and SDB-2], blow hog transfer system with QC lab equipment, radial arm saw, and globe saw dust collection systems [ID No. BHB], globe saw sawdust system [ID No. SB-1], rip and porter saw dust collection system [ID Nos. 5407-G and 5407-A], sander dust collection system [ID No. 5407-F], saw and sander dust collection system [ID No. ST-1], and hog trim transport system [ID No. HTC]) shall be controlled by 18 (eighteen) cyclones (ID Nos. CCB, CCC, CCD, CCE, 5002, RCA, RCB, RJC, FRC, CBC-1009A, TTC-1009B, SC-1, SC, FC, and 1010), and 9 (nine) fabric filters (ID Nos. 4001, 3003, 1003, 1004, 1002, 1005, 5003, 4002, and 1008). To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer, if any. As a minimum, the inspection and maintenance program shall include:
 - (a) monthly external inspection of the duct work and cyclones, noting the structural integrity; and
 - (b) internal inspection of the fabric filters, every 12 months, noting the structural integrity and the condition of the filtersThe Permittee shall be deemed in noncompliance with 15A NCAC 2D .0512 if the ductwork, cyclones, and fabric filters are not inspected and maintained.
- vi. The results of inspection and maintenance for the cyclones and fabric filters 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:
 - (a) the date and time of each recorded action;
 - (b) the results of each inspection; and
 - (c) the results of maintenance performed on any control device.The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0512 if these records are not maintained.

Reporting

- vii. The Permittee shall submit the results of any maintenance performed on the 18 (eighteen) cyclones (ID Nos. CCB, CCC, CCD, CCE, 5002, RCA, RCB, RJC, FRC, CBC-1009A, TTC-1009B, SC-1, SC, FC, and 1010), and 9 (nine) fabric filters (ID Nos. 4001, 3003, 1003, 1004, 1002, 1005, 5003, 4002, and 1008) within 30 days of a written request by the DAQ.
- viii. The Permittee shall submit a summary report of monitoring and record keeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

d. 15A NCAC 2D .0515: Particulate Emissions from Miscellaneous Industrial Processes

Statement of Basis

- i. The methods for calculating the emission limits for particulate matter from the units in the medium-density fiberboard were prescribed in Air Permit No. 03449R24 (Specific Conditions and Limitations number 4).
- ii. Stack testing will be required to ensure compliance with this regulation. In addition, the test method condition will be put in the permit in the event that DAQ or EPA finds that due to

improper operation, violations, etc., source testing is required. Testing requirements are specified in 2D .0501(c).

Regulatory Requirements

- iv. Emissions of particulate matter from the units in the medium-density fiberboard mill that are discharged into the atmosphere shall not exceed an allowable emission rate as calculated by the following equations: [15A NCAC 2D .0515(a)].

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

Where E = allowable emission rate in pounds per hour calculated to three significant figures
 P = process weight rate in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight. In no case shall the following emission limitations be exceeded:

<u>Source</u>	<u>Pollutant</u>	<u>Process Weight Rate</u>	<u>Emission Limit</u>	<u>Emission Rate after Controls</u>
System A fiber dryer (ID No. DA)	Particulate matter	14.5 tons/hour	24.6 lbs/hour	49.0 lbs/hour
System B fiber dryer (ID No. DB)	Particulate matter	14.5 tons/hour	24.6 lbs/hour	49.0 lbs/hour

Testing

- vi. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limits, above by testing the fiber dryers (ID Nos. DA and DB) for particulate matter in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in Section 3 - General Condition JJ of the permit. Testing shall be completed and the results submitted within one year of issuance of permit, or **Xxx, xx, 2004**, unless an alternate date is approved by the DAQ. Thereafter the testing shall be performed on a biennial basis. If the results of this test for particulate matter are above the limit identified above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping

- vii. Particulate emissions from the system A fiber dryer (ID No. DA) with its 204 inches in diameter high efficiency cyclone (ID No. CA), the system B fiber dryer (ID No. DB) with its 204 inches in diameter high efficiency cyclone (ID No. CB)

For the cyclones (ID Nos. CA and CB):

- vii. To ensure compliance and effective operation, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include a monthly external visual inspection of the cyclones, the system duct work, and the material collection unit for leaks. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the cyclones and duct work are not inspected and maintained.
- viii. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - (a) the date and time of each recorded action;
 - (b) the results of each inspection;
 - (c) the results of any maintenance performed on the cyclones and duct work; and
 - (d) any variance from manufacturer's recommendations, if any, and corrections made.
 To ensure quality, entries in the logbook should be signed by personnel responsible for the effective operation of the cyclones. The Permittee shall be deemed in noncompliance with

For the fabric filter (**ID No. MW-B1**):

- ix. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
 - (a) a semi-annual internal inspection of the fabric filters and associated duct work for deterioration;
 - (b) analysis of representative fabric samples for deterioration;
 - (c) bi-annual fabric replacement; and
 - (d) a weekly external visual inspection of the system duct work, and material collection unit for deterioration, damage, and leaks.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the fabric filter and duct work are not visually inspected for deterioration and fabric samples are not taken to determine fabric condition and remaining fabric life.

- x. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - (a) the date and time of each recorded action;
 - (b) the results of each inspection;
 - (c) the results of any maintenance performed on the fabric filter; and
 - (d) any variance from manufacturer's recommendations, if any, and corrections made.

To ensure quality, entries in the logbook should be signed by personnel responsible for the effective operation of the fabric filters. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

- xi. To ensure compliance and the effective operation of the fabric filters (**ID No. MW-B1**), the Permittee shall monitor and record, once each week, the pressure drop across the inlet and outlet of the fabric filter. The pressure drop shall be measured in inches of water column (in. w.c.) or pounds per square inch, using pressure transducers, differential pressure gauges, manometers, or other methods or alternative instrumentation as appropriate. The pressure drop shall be recorded in a log book (written or electronic format) on-site and made available to an authorized representative upon request. To ensure quality, monitoring device will be calibrated, operated, and maintained using procedures that take into account manufacturer's specifications. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained. Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if monitoring devices are not calibrated, operated, and maintained using procedures that take into account manufacturer's specifications.
- xii. The Permittee shall establish a "normal range" for pressure drops across the inlet and outlet of the fabric filters (**ID No. MW-B1**) in the first 30 days following the effective date of the permit. If the pressure drop across the inlet and outlet of the fabric filter are observed to be outside the normal range, the Permittee shall inspect the fabric filter for leaks or malfunctions and repair or replace filter media as necessary in accordance to manufacturer's inspection and maintenance recommendations. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the inspections and repairs are not performed.

Reporting

- xvii. The Permittee shall submit the results of any maintenance performed on the cyclones (**ID Nos. CA, CB**) within 30 days of a written request by the DAQ.
 - xviii. The Permittee shall submit a summary report of monitoring and record keeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.
- e. **15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES**
Statement of Basis

- i. The method for calculating the emission limit for sulfur dioxide from the fuel combustion units in the medium density fiberboard mill was prescribed in Air Permit No. 03449R24 (Specific Conditions and Limitations No. 3). SierraPine utilizes natural gas, No. 2 fuel oil, and wood to fire the boiler and dryers. No control devices are used to remove sulfur dioxide from the gas streams before being exhausted to the atmosphere.

Regulatory Requirements

- ii. Sulfur dioxide from the boiler and dryers shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516(a)]. Emissions of sulfur dioxide from the combustion of coal, natural gas, or No. 2 fuel oil as discharged from the following emission points shall not exceed the following limitations:

<u>Source</u>	<u>Pollutant</u>	<u>Emission Limit</u>	<u>Maximum Firing Rate</u>	<u>Allowable Emission Rate</u>
System A fiber dryer (ID No. DA)	Sulfur dioxide	2.3 lbs/million Btu	15million Btu/hour	34.5 lbs/hour
System B fiber dryer (ID No. DB)	Sulfur dioxide	2.3 lbs/million Btu	15million Btu/hour	34.5 lbs/hour
Wood/equivalent No. 2 waste oil/No. 2 fuel oil-fired boiler (ID No. D-1)	Sulfur dioxide	2.3 lbs/million Btu	145 million Btu/hour	333.5 lbs/hour

Monitoring/Record keeping/Reporting

- iii. No monitoring, record keeping, or reporting is required for sulfur dioxide emissions from the firing of wood, natural gas, or No. 2 fuel oil in System A Fiber Dryer (**ID No. DA**), System B Fiber Dryer (**ID No. DB**), or the Keeler Boiler Dryer Bypass (**ID No. D-1**).

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

Statement of Basis

- i. Emission limits for visible emissions from the units in the medium-density fiberboard mill (**ID No. MDF**) were prescribed in Air Permit No. 03449R24 (Specific Conditions and Limitations No. 6).
- ii. For visible emissions, fabric filters, a dry electrostatic precipitator are utilized to control emissions of particulate matter (the pollutant that makes up the visible emissions) from the various units of the medium-density fiberboard mill. If visible emissions are observed at the fabric filter or the electrostatic precipitators, the control devices may not be functioning properly. To ensure proper operation of the fabric filter and the electrostatic precipitators and in turn compliance with this requirement, weekly observations for visible emissions are necessary.
- iii. As discussed in the most recent inspection report, dated May 12, 2000, "several observations were made during the May 11 and 12, 2000 inspections that seem to indicate improper operation and maintenance of the facility's control equipment. The specific items observed indicating improper operation and maintenance were as follows: (1) the improperly seated abort gate on the fiber reclaim system; (2) noticeable visible emissions observed from eight of the facility's twenty fabric filters, (3) magnehelic gauges that appeared to be either stuck or improperly connected on eight of the facility's twenty fabric filters, (4) excessive visible emissions from the MDF dryers due to a malfunction caused by human error, (5) the extensive history of malfunctions associated with the regenerative oxidizer installed on the PB dryers included one malfunction on the day of inspection resulting in a temporary bypass of the oxidizer system, and (6) poor housekeeping practices especially around the large fabric filter bank in the PB plant where it appeared that particulate matter that should have been collected in the facility's fabric filters was covering the ground." Weekly observations will be necessary to ensure compliance.

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Regulatory Requirements

- iv. As required by 15A NCAC 2D .0521(d) "Control of Visible Emissions," visible emissions from the units in the medium-density fiberboard mill (**ID No. MDF**) manufactured after July 1, 1971, shall not be more than 20 percent opacity when averaged over a six-minute period [15A NCAC 2D .0521(d)]. However, six minute averaging periods may exceed 20 percent opacity if
- (a) No six-minute period exceeds 87 percent opacity;
 - (b) No more than one six-minute period exceeds 20 percent opacity in any hour; and
 - (c) No more than four six-minute periods exceed 20 percent opacity in any 24-hour period
- v. Visible emissions from the boilers shall not exceed the following limitations:

<u>Source</u>	<u>Emission Point ID No.</u>	<u>Pollutant</u>	<u>Opacity Limit</u>
Green chip and board trim transport system (ID No. HCB)	4001	Visible Emissions	20%
Refiners (ID No. RDS)	5002	Visible Emissions	20%
System A fiber dryer (ID No. DA)	3001	Visible Emissions	20%
System B fiber dryer (ID No. DB)	3001	Visible Emissions	20%
Fiber conveying system (ID No. RCB-2)	3003	Visible Emissions	20%
Fiber forming system (ID No. FB-1)	1003	Visible Emissions	20%
Mat reject system (ID No. RJB-1)	1004	Visible Emissions	20%
Fiber reclaim system (ID No. RCB-1)	1002	Visible Emissions	20%
Fiberboard press (ID No. WIW-4000)	4000	Visible Emissions	20%
Sander (ID No. SDB-1)	1005	Visible Emissions	20%
Sander (ID No. SDB-2)	5003	Visible Emissions	20%
Blow hog transfer system, QC lab equipment, radial arm saw, and globe saw dust collection systems (ID No. BHB)	4002 1008	Visible Emissions	20%
Globe saw sawdust system (ID No. SB-1)	4002 1008	Visible Emissions	20%
Rip and porter saw dust collection system (ID Nos. 5407-G and 5407-A)	4002 1008	Visible Emissions	20%
Sander dust collection system (ID No. 5407-F)	4002 1008	Visible Emissions	20%
Truck Loading System (ID No. TLS)	MW-B1	Visible Emissions	20%
Wood/equivalent No. 2 waste oil/No. 2 fuel oil-fired boiler (ID No. D-1)	1001	Visible Emissions	20%
Saw and sander dust transfer system (ID No. ST-1)	1008 4002	Visible Emissions	20%
Hog trim transport system (ID No. HTC)	1010	Visible Emissions	20%

Monitoring/Recordkeeping

- vi. To ensure compliance, the Permittee shall observe, on a weekly basis, the emission points in

the medium-density fiberboard mill (ID No. MDF), listed in Section VI.C.3.f.v., above or ID Nos. 4001, 5002, 3001, 3003, 1003, 1004, 1002, 4000, 1005, 5003, 4002, MW-B1, 1001, 1008, and 1010, for any visible emissions above normal. The Permittee shall establish "normal" for the source in the first 30 days following the effective date of the permit. If visible emissions from the emission points in the medium-density fiberboard mill are observed to be above normal, the Permittee shall either:

- (a) be deemed to be in noncompliance with 15A NCAC 2D .0521 or
- (b) demonstrate that the visible emissions from the medium-density fiberboard mill, in accordance with 15A NCAC 2D .0501(c)(8), is below 20 percent opacity.

If the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

- vii. The results of the monitoring for visible emissions shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. To ensure quality, entries in the logbook should be signed by personnel responsible for the effective operation of the units in the medium-density fiberboard mill and their air pollution control devices. The logbook shall record the following:

- (a) the date and time of each recorded action;
- (b) 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
- (c) the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

Reporting

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

D. Particleboard Mill (ID No. PB)

1. Description

Particleboard is made of 100% hardwood flakes, mixed with urea formaldehyde resin which serves as the glue, wax to keep it water resistant, and an ammonium sulfate catalyst to speed up the process. Particleboard consists of three layers: surface layer, core layer, and surface layer. The outside surface layer is comprised of sawdust which is 50% hardwood/50% pine. The core layer is comprised of pine chip flakes.

Pine and hardwood sawdust for the particleboard mill is stored in piles. Front-end loaders transfer the sawdust from the storage piles to the process feed bins. The sawdust is then sifted to remove dirt and other debris.

After receipt, pine and hardwood chips are conveyed to a storage pile, screened, and sent to flakers, which reduce the chips to thin flakes. Holding silos store the flakes in preparation for drying.

The sawdust and flakes are dried in rotary drum dryers. Heat for the existing dryers is provided by the exhaust gases from a wet cell burner and suspension dust burners. Bark is used as fuel in the wet cell burner. Natural gas is also used as back-up fuel for the wet cell and one of the dust burners. The wet cell burner is also used to heat thermal oil for use by the press.

Exhaust gases exiting the dryers are sent through a furnish drop-out box and multicyclones to remove wood furnish and particulate from the air stream.

After being dried, flakes are conveyed directly to storage silos while sawdust is screened to separate various sizes before being stored in storage silos. Furnish materials are then resinated in mechanical

blenders and sent to the formers, which deposit the furnish/resin mix on moving caul screens.

After the mat is formed, it is cut into lengths by a cut-off saw. The individual mats are loaded into the press. Heating and pressing achieves the desired density and cures the resin, binding the wood particles. Exhaust fans vent the hot gases exiting the pres and board coolers out of the building.

Once removed from the press, the panels are pre-trimmed, sent to a board cooler, stored for further cooling, sanded, and cut by a panel saw into various sizes as ordered by the customer.

The process rates for the units that comprise the particleboard mill are as follows:

Emission Source	Emission Source ID No.	Maximum Process Rate¹
Sawdust Rock and Metal Separator	3501 (old # 2008) BACT	17.9 tons/hour
Surface Layer Dryer - triple pass, rotary drum dryer with wood suspension dust/natural gas-fired burner	1430 BACT	19 tons/hour 60 million Btu per hour maximum rated heat input
Core Layer Dryer No. 1 - single pass, rotary drum dryer with two wood/natural gas-fired burners	1420 BACT	15.5 tons/hour 90 million Btu per hour total maximum rated heat input
Core Layer Dryer No. 2 - single pass, rotary drum dryer with two wood/natural gas-fired burners	1410 BACT	15.5 tons/hour 90 million Btu per hour total maximum rated heat input
Surface Material Transport (formerly "Fines Transport System")	3515 BACT	56.7 tons/hour
Surface Formers and Mat Dumps (formerly "Wet Material Transport System")	3525 BACT	9.8 tons/hour
Flying Cut Saw, Pretrim Saws, & Production Collection (formerly "Dry Material Transport System")	3535 BACT	5.4 tons/hour
Particleboard Press	DEF-2010 BACT	43.7 tons/hour
Particleboard Cooler	PB-BC BACT	43.7 tons/hour

Particleboard Mill Steinemann Calibrating Sander	4100 BACT	8.0 tons/hour
Particleboard Mill Steinemann Finishing Sander (formerly "Particleboard Sanderdust Transport System")	4110 BACT	2.5 tons/hour
Schelling Saw Board Trim (formerly "Board Trim Transfer System - Panel Saw")	3522 BACT	10.2 tons/hour
Sander Filter Transport for Filters 3545 and 3565 (formerly "Sanderdust Silo Transport System")	3575 BACT	10.0 tons/hour
PZKR Green Chip Flakers (formerly "Flakers")	3585 BACT	5.0 tons/hour
Surface Hammermill and Surface PZKR's (formerly "Fines Transport-SL Mills	3595 (old # 3511) BACT	16.0 tons/hour
Dry Waste Hammermill Transport System	3577 (old # 1350) BACT	10.0 tons/hour

¹ Permit Application (November 18, 1996) Section B

² Emission point information and identity provided in 03449R24

Comments:

- C Information on identification of emission sources and emission points is different in application than current permit. In description, above, both sets of names and identification numbers are used. In the following discussion and in the subsequent permit, only the new emission source names, new identification numbers, and new emission point identification numbers will be used.
- 2. An Overview of Applicable Regulatory Requirements

The following table provides a summary of limits and/or standards for the emission units in the particleboard mill. A review of the information in the application was performed to ensure that the appropriate limits and associated calculations used to show compliance were correct.

Regulated Pollutant	Limits/Standards	Applicable Regulation
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<p>particulate matter</p>	<p>adequate duct work and properly designed collectors</p> <p>Affected facilities:</p> <ul style="list-style-type: none"> < Sawdust Rock and Metal Separator (ID No. 3501) < Surface Material Transport (ID No. 3515) < Surface Formers and Mat Dumps (ID No. 3525) < Flying Cut Saw, Pretrim Saws, & Production Collection (ID No. 3535) < Particleboard Press (ID No. DEF-2010) < Particleboard Cooler (ID No. PB-BC) < Particleboard Mill Steinemann Calibrating Sander (ID No. 4100) < Particleboard Mill Steinemann Finishing Sander (ID No. 4110) < Schelling Saw Board Trim (ID No. 3522) < Sander Filter Transport for Filters 3545 and 3565 (ID No. 3575) < PZKR Green Chip Flakers (ID No. 3585) < Surface Hammermill and Surface PZKR's (ID No. 3595) < Dry Waste Hammermill Transport System (ID No. 3577) <p>Note limits and discussion in Section VI.D.3.a</p>	<p>15A NCAC 2D .0512</p>
<p>particulate matter</p>	<p>$E = 4.10P^{0.67}$ where E = allowable emission rate in pounds per hour P = process weight in tons per hour</p> <p>Affected facilities:</p> <ul style="list-style-type: none"> < Surface Layer Dryer (ID No. 1430) < Core Layer Dryer No. 1 (ID No. 1420) < Core Layer Dryer No. 2 (ID No. 1410) <p>Note limits and discussion in Section VI.D.3.b</p>	<p>15A NCAC 2D .0515</p>
<p>sulfur dioxide</p>	<p>2.3 pounds per million Btu heat input</p> <p>Affected facilities:</p> <ul style="list-style-type: none"> < Surface Layer Dryer (ID No. 1430) < Core Layer Dryer No. 1 (ID No. 1420) < Core Layer Dryer No. 2 (ID No. 1410) <p>Note limits and discussion in Section VI.D.3.c</p>	<p>15A NCAC 2D .0516(a)</p>
<p>visible emissions</p>	<p>20 percent opacity</p> <p>Note limits and discussion in Section VI.D.3.d</p>	<p>15A NCAC 2D .0521(d)</p>

particulate matter volatile organic compounds visible emissions nitrogen dioxide carbon monoxide	For PSD purposes, "Best Available Control Technology" (BACT) permit limitations shall not be exceeded: Note limits and discussion in Section VI.D.3.e.	15A NCAC 2D .0530
volatile organic compounds	Work Practice Standards Section VII.B.1 Facility Wide Affected Emission Sources	15A NCAC 2D .0958
odors	Odorous emissions must be controlled - Section VII.B.1 Facility Wide Affected Emission Sources; State-enforceable only	15A NCAC 2D .1806

Other regulations considered for emissions from the units that comprise the particleboard mill:

- C 15A NCAC 2D .0503: Particulates from Fuel Burning Indirect Heat Exchangers. Dryers are direct fired and are not subject to these requirements.
- C 15A NCAC 2D .0504: Particulates from Wood Burning Indirect Heat Exchangers. Dryers are direct fired and are not subject to these requirements
- C 15A NCAC 2D .0519: Control of Nitrogen Dioxide and Nitrogen Oxides Emissions. The facility is not a producer of nitric acid and does not utilize a boiler with a capacity of 250 million Btu per hour of heat input.
- C 15A NCAC 2D .0524: New Source Performance Standards. The regulations are not applicable to particleboard manufacturer
- C 15A NCAC 2D .1111: Maximum Achievable Control Technology. The Plywood and Composite Wood Products MACT rule has not been promulgated.
- C 15A NCAC 2Q .0711: Emission Rates Requiring a Permit. As emission rates are below thresholds, no permit is required.

3. Specific requirements and affected emission points

a. **15A NCAC 2D .0512: Particulates from Wood Products Finishing Plants**

Statement of Basis

- i. The regulation applies to emissions of particulate matter from the working, sanding, and finishing of wood.
- ii. Provisions regarding this requirement were not prescribed in the Air Permit No. 03449R24.
- iii. No controls were identified in Air Permit Number 03449R24 for the particleboard press (**ID No. DEF-2010**) and board cooler (**ID No. PB-BC**). Although no controls were identified in Air Permit Number 03449R24 for the particleboard press (**ID No. DEF-2010**) and the board cooler (**ID No. PB-BC**), a production limit for the particleboard press was provided in a Special Order for Consent modeling analyses, dated October 6, 1994, which indicated that "annual press production shall be limited to 180,000,000 square feet on a 3/4 inch basis."

Regulatory Requirements

- iv. 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.

Monitoring/Record keeping

- v. Particulate matter emissions from the units in the particleboard mill [**ID No. PB**] (including the

sawdust rock and metal separator [ID No. 3501], surface material transport [ID No. 3515], surface formers and mat dumps [ID No. 3525], flying cut off saws, pretrim saws, and production collection [ID No. 3535], particleboard press [ID No. DEF-2010], particleboard cooler [ID No. PB-BC], Steinemann calibrating sander [ID No. 4100], particleboard mill Steinemann finishing sander [ID No. 4110], Schelling saw board trim [ID Nos. 3522], sander filter transport for filters 3545 and 3565 [ID No. 3575], PZKR green chip flakers [ID No. 3585], surface hammermill and surface PZKR's [ID Nos. 3595], and dry waste hammermill transport system [ID No. 3577] shall be controlled by 18 (eighteen) cyclones (ID Nos. SC, 3500, 3505, 3512-A, 1810, 3512-B, 3510, 3520-A, 3520-B, 3521, 3530, 3531, 3533, 3522, 3540-B, 3511, 3590, and 3532), and 11 (eleven) fabric filters (ID Nos. 3501, 3515, 3525, 3535, 3565, 3545, 3555, 3575, 3585, 3595, and 3577).

- vi. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer, if any. As a minimum, the inspection and maintenance program shall include:
- monthly external inspection of the duct work and cyclones, noting the structural integrity; and
 - internal inspection of the fabric filters, every 12 months, noting the structural integrity and the condition of the filters

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0512 if the ductwork, cyclones, and fabric filters are not inspected and maintained.

- vii. The results of inspection and maintenance for the cyclones, and fabric filters shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- the date and time of each recorded action;
 - the results of each inspection; and
 - the results of maintenance performed on any control device.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0512 if these records are not maintained.

Reporting

- vii. The Permittee shall submit the results of any maintenance performed on the 18 (eighteen) cyclones (ID Nos. SC, 3500, 3505, 3512-A, 1810, 3512-B, 3510, 3520-A, 3520-B, 3521, 3530, 3531, 3533, 3522, 3540-B, 3511, 3590, and 3532), and 11 (eleven) fabric filters (ID Nos. 3501, 3515, 3525, 3535, 3565, 3545, 3555, 3575, 3585, 3595, and 3577) within 30 days of a written request by the DAQ.
- viii. The Permittee shall submit a summary report of monitoring and record keeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

b. 15A NCAC 2D .0515: Particulate Emissions from Miscellaneous Industrial Processes

Statement of Basis

- The methods for calculating the emission limits for particulate matter from the units in the medium-density fiberboard were prescribed in Air Permit No. 03449R24 (Specific Conditions and Limitations number 4).
- Stack testing is not required to ensure compliance with this regulation. However the test method condition will be put in the permit in the event that DAQ or EPA finds that due to improper operation, violations, etc., source testing is required. Testing requirements are specified in 2D .0501(c).
- As indicated in the most recent inspection report, prepared May 12, 2000, "According to the report for compliance testing conducted on March 20, 1997, the surface layer dryer was operating at an average production rate of 72,700 pounds per hour. Per 2D .0515, the particulate emission limit at this production rate would be 41.66 pounds per hour. The core

layer dryers (**ID Nos. 1410 and 1420**) were operating at average production rates of 52,500 and 53,000 pounds per hour, respectively, during the compliance test. Therefore, the allowable emission limits for these two dryers would be 36.61 and 36.84, respectively. Since the emissions from all three dryers are emitted through a common stack, the three emission limits have to be combined to compare to the particulate emission test results on the outlet of the wet ESP. The combined dryer emission limit is 115.11 pounds per hour. The particulate emissions at the outlet of the wet ESP were measured to be 47.9 pounds per hour. Compliance with 2D .0515 should be met as long as the Wet ESP is in operation.” This differs from the information provided in the permit application and below.

Regulatory Requirements

iv. Emissions of particulate matter from the units in the particleboard mill that are discharged into the atmosphere shall not exceed an allowable emission rate as calculated by the following equations: [15A NCAC 2D .0515(a)].

$E = 4.10 \times P^{0.67}$ for units with process weight rate less than 30 tons per hour
 Where E = allowable emission rate in pounds per hour calculated to three significant figures
 P = process weight rate in tons per hour

or $E = 55.0(P)^{11} - 40$ for units with process weight rates greater than 30 tons per hour
 Where E = allowable emission rate in pounds per hour calculated to three significant figures
 P = process weight rate in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight. In no case shall the following emission limitations be exceeded:

<u>Source</u>	<u>Pollutant</u>	<u>Process Weight Rate</u>	<u>Emission Limit</u>	<u>Emission Rate After Controls</u>
Surface Layer Dryer (ID No. 1430)	Particulate matter	19.0 tons/hour	29.5 lbs/hour	11.4 lbs/hour
Core Layer Dryer No. 1 (ID No. 1420)	Particulate matter	15.5 tons/hour	25.7 lbs/hour	9.3 lbs/hour
Core Layer Dryer No. 2 (ID No. 1410)	Particulate matter	15.5 tons/hour	25.7 lbs/hour	9.3 lbs/hour

Monitoring/Recordkeeping

- v. Particulate emissions from the following units are combined and controlled by a wet electrostatic precipitator (**PD-WESP**).
- the surface layer dryer (**ID No. 1430**), its associated multicyclone (**ID No. 1431**) with six tubes, each 80 inches in diameter,
 - the core layer dryer # 1 (**ID No. 1420**), its associated multicyclone (**ID No. 1421**) with 4 tubes, each 80 inches in diameter, and
 - the core layer dryer #2 (**ID No. 1410**), its associated multicyclone (**ID No. 1411**) with 4 tubes, each 80 inches in diameter.

For the multicyclones (**ID Nos. 1411, 1421, and 1431**):

- vi. To ensure compliance and effective operation, the Permittee shall perform inspections and

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maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include:

- (a) a monthly external visual inspection of the multicyclones, the system duct work, and the material collection unit for leaks and
- (b) an annual (for each 12 month period from initial inspection) internal inspection of the multicyclone's structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the multicyclones and duct work are not inspected and maintained.

- vii. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request.

The logbook shall record the following:

- (a) the date and time of each recorded action;
- (b) the results of each inspection;
- (c) the results of any maintenance performed on the multicyclones and duct work; and
- (d) any variance from manufacturer's recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

For the wet electrostatic precipitator (**ID No. PB-WESP**)

- viii. To ensure compliance and effective operation of the wet electrostatic precipitator (**ID No. PB-WESP**), the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include:

- (a) a weekly external visual inspection of critical components of the wet electrostatic precipitator such as voltmeters, quench inlet temperature gauges, outlet temperature gauges, nozzles, pumps, and piping;
- (b) a weekly check for any equipment that does not generate an alarm in the turned-off state, to ensure it is switched on;
- (c) a weekly external check for signs of plugging and buildup; and
- (d) a monthly external visual inspection of the system ductwork and material collection unit for leaks and corrosion.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the wet electrostatic precipitator and duct work are not inspected and maintained.

- ix. To ensure compliance and the effective operation of the wet electrostatic precipitator (**ID No. PB-WESP**) in accordance with good operating practices, the Permittee shall continuously monitor and record secondary voltage, quench inlet temperatures, and stack outlet temperatures. The quench inlet temperatures, stack outlet temperatures, and secondary voltage readings shall be electronically recorded, maintained on-site, and made available to an authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the monitoring devices are not properly calibrated, operated, and maintained using procedures that take into account manufacturer's specifications and if the temperature and voltage records are not maintained.

- x. The Permittee shall establish a "normal range" for quench inlet temperature, stack outlet temperature, and secondary voltage readings for the wet electrostatic precipitator (**ID No. PB-WESP**) in the first 30 days following the effective date of the permit. The Permittee shall evaluate, on a daily basis, the recorded pH, temperature, and voltage readings. If the quench inlet temperature, stack outlet temperature, and secondary voltage readings are observed to be outside the normal range, the Permittee shall inspect the wet electrostatic precipitator for malfunctions and repair, as necessary, in accordance to manufacturer's inspection and maintenance recommendations. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the inspections and repairs are not performed.

- xi. The results of inspection and maintenance activities, discussed above for the wet electrostatic

precipitator, shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative of DAQ upon request. The logbook shall record the following:

- (a) the date and time of each recorded action;
- (b) the results of each inspection;
- (c) the causes for any variance from the normal operating range for the wet electrostatic precipitator; and
- (d) corrective actions taken.

To ensure quality, entries in the logbook should be signed by personnel responsible for the effective operation of the fiber dryers and the wet electrostatic precipitator. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained

Reporting

- xii. The Permittee shall submit the results of any maintenance performed on the multicyclones (**ID Nos. 1411, 1421, and 1431**) and wet electrostatic precipitator (**ID No. PB-WESP**) within 30 days of a written request by the DAQ.
- xiii. The Permittee shall submit a summary report of monitoring and record keeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

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

Statement of Basis

- i. The method for calculating the emission limit for sulfur dioxide from the fuel combustion units in the particle board mill (**ID No. PB**) was prescribed in Air Permit No. 03449R24 (Specific Conditions and Limitations No. 3). SierraPine utilizes natural gas, No.2 fuel oil, and wood to fire the boiler and dryers. No control devices are used to remove sulfur dioxide from the gas streams before being exhausted to the atmosphere.

Regulatory Requirements

- ii. Sulfur dioxide from the dryers shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516(a)]. Emissions of sulfur dioxide from the combustion of coal, natural gas, or No. 2 fuel oil as discharged from the following emission points shall not exceed the following limitations:

<u>Source</u>	<u>Pollutant</u>	<u>Emission Limit</u>	<u>Maximum Firing Rate</u>	<u>Allowable Emission Rate</u>
surface layer dryer (ID No. 1430)	Sulfur dioxide	2.3 lbs/million Btu	60 million Btu/hour	138 lbs/hour
core layer dryer #1 (ID No. 1420)	Sulfur dioxide	2.3 lbs/million Btu	90 million Btu/hour	207 lbs/hour
core layer dryer #2 (ID No. 1410)	Sulfur dioxide	2.3 lbs/million Btu	90 million Btu/hour	207 lbs/hour

Monitoring/Record keeping/Reporting

- iii. No monitoring, record keeping, or reporting is required for sulfur dioxide emissions from the firing of wood, natural gas, or No. 2 fuel oil in rotary drum dryers (**ID Nos. 1410, 1420, and 1430**).

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

Statement of Basis

- i. Emission limits for visible emissions from the units in the particleboard mill (**ID No. PB**) were prescribed in Air Permit No. 03449R24 (Specific Conditions and Limitations No. 6).
- ii. For visible emissions, fabric filters and a wet electrostatic precipitator are utilized to control emissions of particulate matter (the pollutant that makes up the visible emissions) from the various units of the particleboard mill. If visible emissions are observed at the fabric filter or the wet electrostatic precipitator, the control devices may not be functioning properly. To ensure proper operation of the fabric filter and the wet electrostatic precipitator and in turn compliance with this requirement, weekly observations for visible emissions are necessary
- iii. As discussed in the most recent inspection report, dated May 12, 2000, "several observations were made during the May 11 and 12 inspections that seem to indicate improper operation and maintenance of the facility's control equipment. The specific items observed indicating improper operation and maintenance were as follows: (1) the improperly seated abort gate on the fiber reclaim system; (2) noticeable visible emissions observed from eight of the facility's twenty fabric filters, (3) magnehelic gauges that appeared to be either stuck or improperly connected on eight of the facility's twenty fabric filters, (4) excessive visible emissions from the MDF dryers due to a malfunction caused by human error, (5) the extensive history of malfunctions associated with the regenerative oxidizer installed on the PB dryers included one malfunction on the day of inspection resulting in a temporary bypass of the oxidizer system, and (6) poor housekeeping practices especially around the large fabric filter bank in the PB plant where it appeared that particulate matter that should have been collected in the facility's fabric filters was covering the ground." Weekly observations will be necessary to ensure compliance.

Regulatory Requirements

- iv. As required by 15A NCAC 2D .0521(d) "Control of Visible Emissions," visible emissions from the units in the particleboard mill (**ID No. PB**) manufactured after July 1, 1971, shall not be more than 20 percent opacity when averaged over a six-minute period [15A NCAC 2D .0521(d)]. However, six minute averaging periods may exceed 20 percent opacity if
 - (a) No six-minute period exceeds 87 percent opacity;
 - (b) No more than one six-minute period exceeds 20 percent opacity in any hour; and
 - (c) No more than four six-minute periods exceed 20 percent opacity in any 24-hour period
- v. Visible emissions from the boilers shall not exceed the following limitations:

<u>Source</u>	<u>Emission Point ID No.</u>	<u>Pollutant</u>	<u>Opacity Limit</u>
Sawdust Rock and Metal Separator (ID No. 3501)	3501	Visible Emissions	20%
Surface Layer Dryer (ID No. 1430)	1515	Visible Emissions	20%
Core Layer Dryer #1 (ID No. 1420)	1515	Visible Emissions	20%
Core Layer Dryer #2 (ID No. 1410)	1515	Visible Emissions	20%
Surface Material Transport (ID No. 3515)	3515	Visible Emissions	20%
Surface Formers and Mat Dumps (ID No. 3525)	3525	Visible Emissions	20%
Flying Cut Off Saw, Pretrim Saws, and Production Collection (ID No. 3535)	3535	Visible Emissions	20%
Particleboard Press (ID No. DEF-2010)	DEF-2010	Visible Emissions	20%
Board Cooler (ID No. PB-BC)	PB-BC	Visible Emissions	20%

Particleboard Mill Steinemann Calibrating Sander (ID No. 4100)	3565	Visible Emissions	20%
Particleboard Mill Steinemann Finishing Sander (ID No. 4110)	3545	Visible Emissions	20%
Schelling Saw Board Trim (ID No. 3522)	3555	Visible Emissions	20%
Sander Filter Transport for Filters 3545 and 3565(ID No. 3575)	3575	Visible Emissions	20%
PZKR Green Chip Flakers (ID No. 3585)	3585	Visible Emissions	20%
Surface Hammermill and Surface PZKR's (ID No. 3595)	3595	Visible Emissions	20%
Dry Waste Hammermill Transport System (ID No. 3577)	3577	Visible Emissions	20%

Monitoring/Recordkeeping

- vi. To ensure compliance, the Permittee shall observe, on a weekly basis, the emission points in the particleboard mill (**ID Nos. 3501, 1515, 3515, 3525, 3535, DEF-2010, PB-BC, 3565, 3545, 3555, 3575, 3585, 3595, and 3577**) for any visible emissions above normal. The Permittee shall establish “normal” for the source in the first 30 days following the effective date of the permit. If visible emissions from the emission points in the particleboard mill are observed to be above normal, the Permittee shall either:
 - (a) be deemed to be in noncompliance with 15A NCAC 2D .0521 or
 - (b) demonstrate that the percent opacity from the particleboard mill, in accordance with 15A NCAC 2D .0501(c)(8), is below the limits given in Section VI.D.3.d.iv and v. above.
 If the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.
- vii. The results of the monitoring for visible emissions shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. To ensure quality, entries in the logbook should be signed by personnel responsible for the effective operation of the units in the particleboard mill and their air pollution control devices. The logbook shall record the following:
 - (a) the date and time of each recorded action;
 - (b) 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
 - (c) the results of any corrective actions performed.
 The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

Reporting

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

**e. 15A NCAC 2D .0530: Prevention of Significant Deterioration
Statement of Basis**

- i. Requirements regarding “prevention of significant deterioration” for the particleboard mill (**ID No. PB**) were prescribed in Air Permit No. 03449R24 (Specific Conditions and Limitations Nos.

10, 11, 13, and 14). A production limit for the particleboard press was provided in a Special Order for Consent modeling analyses, dated October 6, 1994, which indicated that “annual press production shall be limited to 180,000,000 square feet on a 3/4 inch basis.”

- ii. For particulate matter, cyclones followed by fabric filters for most of the units are used to meet the BACT requirements. For emissions from the rotary drum dryers, cyclones are used to remove large particles and the cyclone exhausts are vented to a wet electrostatic precipitator for further cleaning.
- iii. For emissions of volatile organic compounds from the rotary drum dryers, a regenerative oxidizer is used to meet the BACT requirements.
- iv. For emissions of volatile organic compounds from the material handling and wood processing, no add-on control measures were necessary to meet BACT requirements.
- v. For nitrogen dioxide or carbon monoxide, no add-on control measures were necessary to meet BACT requirements.
- vi. For visible emissions, fabric filters and a wet electrostatic precipitator are utilized to control emissions of particulate matter (the pollutant that makes up the visible emissions) from the various units of the particleboard mill. If visible emissions are observed at the fabric filter or the wet electrostatic precipitator, the control devices may not be functioning properly. To ensure proper operation of the fabric filter and the wet electrostatic precipitator and in turn compliance with this requirement, weekly observations for visible emissions are necessary.

Regulatory Requirements

- vii. For PSD purposes, the following "Best Available Control Technology" (BACT) permit limitations shall not be exceeded for units in the particleboard mill (**ID No. PB**):

Source	Pollutants	Emission Limits
Sawdust Rock and Metal Separator (ID No. 3501)	PM ₁₀	0.02 lbs/hr
	Volatile Organic Compounds	5.56 lbs/hr, as C
	Opacity	20 percent
Surface Layer Dryer (ID No. 1430) Core Layer Dryer #1 (ID No. 1420) Core Layer Dryer #2 (ID No. 1410)	PM ₁₀	29.8 lbs/hr
	Volatile Organic Compounds	39.5 lbs/hr, as C
	Opacity	20 percent
	Carbon Monoxide	350 lbs/hr
	Nitrogen Oxides	133.7 lbs/hr
Surface Material Transport (ID No. 3515)	PM ₁₀	0.02 lbs/hr
	Volatile Organic Compounds	46.5 lbs/hr, as C
	Opacity	20 percent
Surface Formers and Mat Dumps (ID No. 3525)	PM ₁₀	0.06 lbs/hr
	Volatile Organic Compounds	1.95 lbs/hr, as C
	Opacity	20 percent
Flying Cut Off Saw, Pretrim Saws, and Production Collection (ID No. 3535)	PM ₁₀	0.005 lbs/hr
	Volatile Organic Compounds	1.77 lbs/hr, as C
	Opacity	20 percent
Particleboard Press (ID No. DEF-2010) and Board Cooler (ID No. PB-BC)	PM ₁₀	3.29 lbs/hour
	Volatile Organic Compounds	32.1 lbs/hour as C
	Opacity	20 percent
Particleboard Mill Steinemann Calibrating Sander (ID No. 4100)	PM ₁₀	0.02 lbs/hour
	Volatile Organic Compounds	1.08 lbs/hour as C
	Opacity	20 percent
Particleboard Mill Steinemann Finishing Sander (ID No. 4110)	PM ₁₀	1.2 lbs/hour
	Volatile Organic Compounds	0.35 lbs/hour as C
	Opacity	20 percent

Schelling Saw Board Trim (ID No. 3522)	PM ₁₀	0.01 lbs/hour
	Volatile Organic Compounds	0.72 lbs/hour as C
	Opacity	20 percent
Sander Filter Transport for Filters 3545 and 3565 (ID No. 3575)	PM ₁₀	4.0 lbs/hour
	Volatile Organic Compounds	1.77 lbs/hour as C
	Opacity	20 percent
PZKR Green Chip Flakers (ID No. 3585)	PM ₁₀	1.0 lbs/hour
	Volatile Organic Compounds	0.64 lbs/hour as C
	Opacity	20 percent
Surface Hammermill and Surface PZKR's (ID No. 3595)	PM ₁₀	0.005 lbs/hour
	Volatile Organic Compounds	1.77 lbs/hour as C
	Opacity	20 percent
Dry waste hammermill transport system (ID No. 3577)	PM ₁₀	0.005 lbs/hour
	Volatile Organic Compounds	1.77 lbs/hour as C
	Opacity	20 percent

Monitoring/Recordkeeping for Emissions of Particulate Matter

- viii. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limits, above by testing the rotary drum dryers (ID Nos. 1410, 1420, and 1430) for particulate matter in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in Section 3 - General Condition JJ of the permit. Testing shall be completed and the results submitted within one year of issuance of permit, or ~~xxx, xx, 2004~~, unless an alternate date is approved by the DAQ. Thereafter the testing shall be performed on a biennial basis. If the results of this test for particulate matter are above the limit identified in Section VI.D.3.e.vii., above, or 29.8 lbs/hour, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.
- ix. Particulate matter emissions from the units in the particleboard mill [ID No. PB] shall be controlled as follows:
- < In the sawdust rock and metal separator (ID No. 3501), raw materials are sorted to remove unusable material and transported through a high efficiency cyclone (ID No. SC) which is 96 inches in diameter. Emissions from the cyclone are exhausted to a fabric filter (ID No. 3501) with 2,410 square feet of filter surface area.
 - < Emissions from the following units are combined and controlled by a wet electrostatic precipitator (PD-WESP).
 - the surface layer dryer (ID No. 1430), its associated multicyclone (ID No. 1431) with six tubes, each 80 inches in diameter,
 - the core layer dryer #1 (ID No. 1420), its associated multicyclone (ID No. 1421) with 4 tubes, each 80 inches in diameter, and
 - the core layer dryer #2 (ID No. 1410), its associated multicyclone (ID No. 1411) with

- 4 tubes, each 80 inches in diameter.
- < In the surface material transport (**ID No. 3515**), emissions are controlled by 5 (five) simple cyclones (**ID Nos. 3500, 3505, 3512-A, 3512-B, and 1810**), each 72 inches in diameter, a simple cyclone (**ID No. 3510**) which is 48 inches in diameter. The cyclones are followed by fabric filter (**ID No. 3515**) with 6,918 square feet of filter surface area.
 - < In the surface formers and mat dumps (**ID No. 3525**), emissions are controlled by 3 (three) simple cyclones (**ID Nos. 3520-A, 3520-B, and 3521**), each 96 inches in diameter. Emissions from the cyclones are captured by a fabric filter (**ID No. 3525**) with 6,918 square feet of filter surface area.
 - < In the flying cut off saw, pretrim saws, and production collection (**ID No. 3535**), emissions are controlled by one simple cyclone (**ID No. 3530**), which is 84 inches in diameter, and two simple cyclones (**ID Nos. 3531 and 3533**), each 108 inches in diameter, followed by a fabric filter (**ID No. 3535**) with 6,918 square feet of filter surface area.
 - < Emissions from the particleboard mill Steinemann calibrating sander (**ID No. 4100**), are captured by a fabric filter (**ID No. 3565**) with 6,918 square feet of filter surface area. Emissions from the fabric filter (**ID No. 3565**) are vented to a simple cyclone (**ID No. 3540-B**) and in turn by another fabric filter (**ID No. 3575**).
 - < Emissions from the particleboard mill Steinemann finishing sander (**ID No. 4110**), are filtered by a fabric filter (**ID No. 3545**) with 6,918 square feet of filter surface area. Emissions from the fabric filter (**ID No. 3545**) are vented to a simple cyclone (**ID No. 3540-B**) and in turn by another fabric filter (**ID No. 3575**).
 - < Emissions from the Schelling saw board trim (**ID No. 3522**) are captured by a simple cyclone (**ID No. 3522**), which is 120 inches in diameter, followed by a fabric filter (**ID No. 3555**) with 6,918 square feet of filter surface area.
 - < Emissions from the sander filter transport for filters **3545** and **3565** (**ID No. 3575**) are captured by a simple cyclone (**ID No. 3540-B**), which is 144 inches in diameter, followed by a fabric filter (**ID No. 3575**) with 1,159 square feet of filter surface area.
 - < Emissions from the PZKR green chip flakers (**ID No. 3585**), are collected by a fabric filter (**ID No. 3585**) with 4,880 square feet of filter surface area.
 - < Emissions from the surface hammermill and surface PZKR's (**ID No. 3595**) are captured by one simple cyclone (**ID Nos. 3511**) which is 132 inches in diameter, followed by a fabric filter (**ID No. 3595**) with 4,923 square feet of filter surface area.
 - < For the dry waste hammermill transport system (**ID No. 3577**), emissions are routed through a high efficiency cyclone (**ID No. 3532**), which is 60 inches in diameter, to a fabric filter (**ID No. 3577**) with 4,068 square feet of surface area.

For the cyclones (**ID Nos. SC, 3500, 3505, 3512-A, 1810, 3512-B, 3510, 3520-A, 3520-B, 3521, 3530, 3531, 3533, 3522, 3540-B, 3511, 3595, and 3532**):

- x. To ensure compliance and effective operation, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include a weekly external visual inspection of the cyclones, the system duct work, and the material collection unit for leaks. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the cyclones and duct work are not inspected and maintained.
- xi. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - (a) the date and time of each recorded action;
 - (b) the results of each inspection;
 - (c) the results of any maintenance performed on the cyclones and duct work; and
 - (d) any variance from manufacturer's recommendations, if any, and corrections made.
 The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

- For the multicyclones (**ID Nos. 1411, 1421, and 1431**):
- xii. To ensure compliance and effective operation, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include:
 - (a) a weekly external visual inspection of the cyclones, the system duct work, and the material collection unit for leaks, and
 - (b) an annual (for each 12 month period from initial inspection) internal inspection of the multicyclone's structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the multicyclones and duct work are not inspected and maintained.

- xiii. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - (a) the date and time of each recorded action;
 - (b) the results of each inspection;
 - (c) the results of any maintenance performed on the multicyclones and duct work; and
 - (d) any variance from manufacturer's recommendations, if any, and corrections made.The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if these records are not maintained.

For the fabric filters (**ID Nos. 3501, 3515, 3525, 3535, 3565, 3545, 3555, 3575, 3585, 3595, and 3577**):

- xiv. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
 - (a) a semi-annual internal inspection of the fabric filters and associated duct work for deterioration, and
 - (b) analysis of representative fabric samples for deterioration, and
 - (c) bi-annual fabric replacement, and
 - (d) a weekly external visual inspection of the system duct work, and material collection unit for deterioration, damage, and leaks.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the fabric filter and duct work are not visually inspected for deterioration and fabric samples are not taken to determine fabric condition and remaining fabric life.

- xvi. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - (a) the date and time of each recorded action;
 - (b) the results of each inspection;
 - (c) the results of any maintenance performed on the fabric filter; and
 - (d) any variance from manufacturer's recommendations, if any, and corrections made.

To ensure quality, entries in the logbook should be signed by personnel responsible for the effective operation of the fabric filters. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if these records are not maintained.

- xvii. To ensure compliance and the effective operation of the fabric filters (**ID Nos. 3501, 3515, 3525, 3535, 3565, 3545, 3555, 3575, 3585, 3595, and 3577**), the Permittee shall monitor and record, once each week, the pressure drop across the inlet and outlet of the fabric filter. The pressure drop shall be measured in inches of water column (in. w.c.) or pounds per square inch, using pressure transducers, differential pressure gauges, manometers, or other methods or alternative instrumentation as appropriate. The pressure drop shall be recorded in a log book (written or electronic format) on-site and made available to an authorized representative

upon request. To ensure quality, monitoring device will be calibrated, operated, and maintained using procedures that take into account manufacturer's specifications. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if these records are not maintained. Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if monitoring devices are not calibrated, operated, and maintained using procedures that take into account manufacturer's specifications..

- xviii. The Permittee shall establish a "normal range" for pressure drops across the inlet and outlet of the fabric filters (**ID Nos. 3501, 3515, 3525, 3535, 3565, 3545, 3555, 3575, 3585, 3595, and 3577**) in the first 30 days following the effective date of the permit. If the pressure drop across the inlet and outlet of the fabric filter are observed to be outside the normal range, the Permittee shall inspect the fabric filter for leaks or malfunctions and repair or replace filter media as necessary in accordance to manufacturer's inspection and maintenance recommendations. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the inspections and repairs are not performed.

For the wet electrostatic precipitator (**ID No. PB-WESP**)

- xix. To ensure compliance and effective operation of the wet electrostatic precipitator (**ID No. PB-WESP**), the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include:
- i. a weekly external visual inspection of critical components of the wet electrostatic precipitator such as voltmeters, quench inlet temperature gauges, outlet temperature gauges, nozzles, pumps, piping.
 - ii. a weekly check for any equipment that does not generate an alarm in the turned-off state, to ensure it is switched on;
 - iii. a weekly check for signs of plugging and buildup;
 - iv. a monthly external visual inspection of the system ductwork and material collection unit for leaks and corrosion;

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the wet electrostatic precipitator and duct work are not inspected and maintained.

- xx. To ensure compliance and the effective operation of the wet electrostatic precipitator (**ID No. PB-WESP**) in accordance with good operating practices, the Permittee shall continuously monitor and record secondary voltage, quench inlet temperatures, and stack outlet temperatures. The quench inlet temperatures, stack outlet temperatures, and secondary voltage readings shall be electronically recorded, maintained on-site, and made available to an authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the monitoring devices are not properly calibrated, operated, and maintained using procedures that take into account manufacturer's specifications and if the temperature and voltage records are not maintained.

- xxi. The Permittee shall establish a "normal range" for quench inlet temperature, stack outlet temperature, and secondary voltage readings for the wet electrostatic precipitator (**ID No. PB-WESP**) in the first 30 days following the effective date of the permit. The Permittee shall evaluate, on a daily basis, the recorded temperature and voltage readings. If the quench inlet temperature, stack outlet temperature, and secondary voltage readings are observed to be outside the normal range, the Permittee shall inspect the wet electrostatic precipitator for malfunctions and repair, as necessary, in accordance to manufacturer's inspection and maintenance recommendations. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the inspections and repairs are not performed.

- xxii. The results of inspection and maintenance activities, discussed above for the wet electrostatic precipitator, shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative of DAQ upon request. The logbook shall record the following:
- (a) the date and time of each recorded action;
 - (b) the results of each inspection;

- (c) the causes for any variance from the normal operating range for the wet electrostatic precipitator; and
- (d) corrective actions taken.

To ensure quality, entries in the logbook should be signed by personnel responsible for the effective operation of the wet electrostatic precipitator. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if these records are not maintained

Monitoring/Recordkeeping for Emissions of Volatile Organic Compounds and Carbon Monoxide

- xxiii. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limits, above by testing the dryers (**ID Nos. 1410, 1420, and 1430**) and the regenerative oxidizer (**ID No. 1515**) for volatile organic compounds and carbon monoxide in accordance with testing protocols approved by the DAQ. Details of the emissions testing and reporting requirements can be found in Section 3 - General Condition JJ of the permit. Testing shall be completed and the results submitted within 12 months of issuance of permit, or **Xxx, xx, 2004**, unless an alternate date is approved by the DAQ. Thereafter the testing shall be performed on an biennial basis. If the results of these tests for volatile organic compounds and carbon monoxide are above the limits identified in Section VI.D.3.e.vii., above, or 39.5 lbs/hour and 350 lbs/hour, respectively, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.
- xxiv. Emissions of volatile organic compounds and carbon monoxide from the dryers (**ID Nos. 1410, 1420, and 1430**) will be controlled by a regenerative oxidizer (**ID No. 1515**). To comply with this permit and ensure that optimum control efficiency is maintained, the Permittee shall establish an inspection and maintenance schedule/checklist based on the manufacturers recommendations. At a minimum, the inspection and maintenance program will include an annual internal inspection of the primary heat exchanger and associated inlet/outlet valves to ensure structural integrity.
- xxv. The results of this inspection, and any maintenance performed shall be recorded in a log book (in written or electronic form) which shall be kept on site and made available to the DAQ upon request. The logbook shall record the following:
- (a) the date and time of each recorded action;
 - (b) the results of each inspection; and
 - (c) corrective actions taken.
- To ensure quality, entries in the logbook should be signed by personnel responsible for the effective operation of the dryers and the regenerative oxidizer. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if these records are not maintained.
- xxvi. To ensure compliance, the Permittee shall continuously monitor the regenerative oxidizer's (**ID No. 1515**) combustion chamber temperature and shall maintain the combustion chamber temperature at or above 1200EF. The combustion chamber readings shall be electronically recorded, maintained on-site, and made available to an authorized representative upon request. To ensure quality, the monitoring device will be calibrated, operated, and maintained using procedures that take into account manufacturer's specifications. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if:
- (a) the combustion chamber temperature falls below 1200EF; or
 - (b) the monitoring devices are not properly calibrated, operated, and maintained using procedures that take into account manufacturer's specifications; or
 - (c) if the records of combustion chamber temperatures are not maintained.

Monitoring/Recordkeeping for Visible Emissions

- xxvii. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit(s) above by testing the dryers (**ID Nos. 1410, 1420, and 1430**) for visible emissions utilizing EPA Reference Method No. 9, contained in 40 CFR Part 60 Appendix A or in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and requirements can be found in Section 3 - General Condition JJ. Testing shall be completed and the results submitted within one year of the effective date of the permit, or **Xxx, xx, 2004**,

unless an alternate date is approved by the DAQ. Thereafter the testing shall be performed on a biennial basis. If the results of this tests are above the limit given in Section VI.D.3.e.vi. above (or 20 % opacity), the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

- xxviii. To ensure compliance, the Permittee shall observe, on a weekly basis, the emission points in the particleboard mill (**ID Nos. 3501, 1515, 3515, 3525, 3535, DEF-2010, PB-BC, 3565, 3545, 3555, 3575, 3585, 3595, and 3577**) for any visible emissions above normal. The Permittee shall establish “normal” for the source in the first 30 days following the effective date of the permit. If visible emissions from the emission points in the particleboard mill are observed to be above normal, the Permittee shall either:
- (a) be deemed to be in noncompliance with 15A NCAC 2D .0530 or
 - (b) demonstrate that the visible emissions from the emission points in the particleboard mill, in accordance with 15A NCAC 2D .0501(c)(8), are below twenty percent opacity.
- If the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0530.
- xxix. The results of the monitoring for visible emissions shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. To ensure quality, entries in the logbook should be signed by personnel responsible for the effective operation of the units in the particleboard mill and their air pollution control devices. The logbook shall record the following:
- (a) the date and time of each recorded action;
 - (b) 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
 - (c) the results of any corrective actions performed.
- The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if these records are not maintained

Monitoring/Recordkeeping for Emissions of Nitrogen Dioxide

- xxx. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limits, above, by testing the dryers (**ID Nos. 1410, 1420, and 1430**) and the regenerative oxidizer (**ID No. 1515**) for nitrogen dioxide in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in Section 3 - General Condition JJ of the permit. Testing shall be completed and the results submitted within one year (12 months) of the effective date of the permit, or **Xxx, xx, 2004**, unless an alternate date is approved by the DAQ. Thereafter the testing shall be completed annually. If the results of this test for nitrogen dioxide are above the limit identified in **Section VI.D.3.e.vii.**, above, or 133.7 lbs/hour, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

Reporting

- xxxi. The Permittee shall submit the results of any maintenance performed on the cyclones (**ID Nos. SC, 3500, 3505, 3512-A, 1810, 3512-B, 3510, 3520-A, 3520-B, 3521, 3530, 3531, 3533, 3522, 3540-B, 3511, 3595, and 3532**), the multicyclones (**ID Nos. 1411, 1421, and 1431**) the fabric filters (**ID Nos. 3501, 3515, 3525, 3535, 3565, 3545, 3555, 3575, 3585, 3595, and 3577**), the wet electrostatic precipitator (**ID No. PD-WESP**), and the regenerative oxidizer (**ID No. 1515**) within 30 days of a written request by the DAQ.
- xxxii. The Permittee shall submit a summary report of monitoring and record keeping activities within 30 days after each calendar year quarter, due and postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 for the calendar year for the preceding three-month period between July and September. All instances of deviations from the requirements of this permit must be clearly identified. All instances of deviations from the manufacturers' recommendations for

maintenance of the cyclones, multicyclones, fabric filters, wet electrostatic precipitator, and regenerative oxidizer must also be clearly identified.

- xxxiii. To afford the Regional Supervisor, Division of Air Quality, the opportunity to have an observer present, the Permittee shall provide the Regional Office in writing, at least fifteen (15) days notice of any required performance test(s). The test results must be submitted to the Regional Supervisor, Division of Air Quality, in accordance with the approved procedures of the Environmental Management Commission within ninety (90) days of the initial operation date.
- xxxiv. Within thirty (30) days after each calendar year quarter, the Permittee shall report the following to the Regional Supervisor, Division of Air Quality:
 - (a) the quarterly production rate from particle board press operation (**ID No. DEF-2010**) in square feet (3/4 inch basis). The quarterly production rate must be calculated for each unit for each of the three-month periods over the previous 5 months and each of the three twelve month periods over the previous fourteen months.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the total oriented strand board production for any consecutive 12 month period exceeds 180,000,000 square feet on a 3/4 inch basis.

VII. Facility-wide affected emission sources

A. Overview of Applicable Regulatory Requirements

The following table provides a summary of limits and standards applicable facility wide:

Regulated Pollutant	Limits/Standards	Applicable Regulation
volatile organic compounds	Work Practice Standards Facility Wide Affected Emission Sources	15A NCAC 2D .0958
odors	odorous emissions must be controlled; State enforceable only	15A NCAC 2D .1806

B. Specific requirements and affected emission points

8. 15A NCAC 2D .0958: Work Practices for Sources of Volatile Organic Compounds

- a. Pursuant to 15A NCAC 2D .0958 and 2D .0902, for all sources that use volatile organic compounds (VOC) as solvents, carriers, material processing media, or industrial chemical reactants, or in similar uses that mix, blend, or manufacture volatile organic compounds, or emit volatile organic compounds as a product of chemical reactions, and whose emissions of VOC are greater than 15 pounds per day; the Permittee shall:
 - i. store all material, including waste material, containing volatile organic compounds in tanks or in containers covered with a tightly fitting lid that is free of cracks, holes, or other defects, when not in use,
 - ii. clean up spills of volatile organic compounds as soon as possible following proper safety procedures,
 - iii. store wipe rags containing volatile organic compounds in closed containers,
 - iv. not clean sponges, fabric, wood, paper products, and other absorbent materials with volatile organic compounds,
 - v. transfer solvents containing volatile organic compounds used to clean supply lines and other coating equipment into closable containers and close such containers immediately after each use, or transfer such solvents to closed tanks, or to a treatment facility

regulated under section 402 of the Clean Water Act, and
vi. clean mixing, blending, and manufacturing vats and containers containing volatile organic compounds by adding cleaning solvent and close the vat or container before agitating the cleaning solvent. The spent cleaning solvent shall then be transferred into a closed container, a closed tank or a treatment facility regulated under section 402 of the Clean Water Act. [15A NCAC 2D .0958(c)]

- b. When cleaning parts with a solvent containing a volatile organic compound, the Permittee shall:
- i. flush parts in the freeboard area,
 - ii. take precautions to reduce the pooling of solvent on and in the parts,
 - iii. tilt or rotate parts to drain solvent and allow a minimum of 15 seconds for drying or until all dripping has stopped, whichever is longer,
 - iv. not fill cleaning machines above the fill line, and
 - v. not agitate solvent to the point of causing splashing. [15A NCAC 2D .0958(d)]

Monitoring

- c. To ensure compliance with paragraphs (a) and (b) above, the Permittee shall, at a minimum, perform a visual inspection once per month of all operations and processes utilizing volatile organic compounds. The inspections shall be conducted during normal operations. If the required inspections are not conducted the permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0958.

Recordkeeping

- d. The results of the inspections 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 inspection; and
 - ii. the results of each inspection noting whether or not noncompliant conditions were observed.

If the required records are not maintained the permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0958.

Reporting

- e. The Permittee shall submit a summary report of the observations by January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .1806: Control and Prohibition of Odorous Emissions (State only requirement)

- 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.

VIII. MACT Applicability and Requirements

Based on a review of the facility's current operations and emission sources, it is determined that the Permittee utilizes substances listed as hazardous air pollutants under the Clean Air Act. Though these hazardous substances are being utilized in the coating operations, the facility does not operate sources which are currently subject to any MACT standards.

IX. Permit Shield (including non-applicable requirements)

In accordance with 2Q .0512 the permit will contain a provision stating that compliance with the terms, conditions, and limitations of the Title V permit shall be deemed in compliance with applicable requirements specifically identified in the permit, as of the date of permit issuance. If the permit does not expressly state that a permit shield exists then it shall be presumed not to provide such a shield.

X. General Conditions

The “General Conditions” section of the Title V Operating Permits lists additional applicable rule requirements that the permittee must adhere to, as with any other permit condition. These requirements in general are common to all Title V facilities. The general conditions include provisions such as annual fee payment, permit renewal and expiration, transfer of ownership or operation, property rights, submission of documents, inspections and entry procedures, reopen for cause, and severability.

XI. Insignificant Activities

The insignificant activities listed in the application have been reviewed and verified. Because an emission source or activity is insignificant does not mean that the emission source or activity is exempted from any applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement. Following are the items on the insignificant activities list:

Roof ventilators
Gasoline storage tanks
Propane storage tanks

XII. Public Notice

Pursuant to 15A NCAC 2Q .0521, a notice of the draft Title V Operating Permit shall be placed in a newspaper of general circulation in the area where the facility is located. The notice will provide for a 30 day comment period, with an opportunity for a public hearing. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA.

XIII. Recommendations

The initial Title V application for SierraPine Limited - Moncure Facility, has been reviewed by the DAQ to determine compliance with all procedures and requirements under 15A NCAC 2Q .0500 and 40 CFR Part 70. The DAQ has made a preliminary determination that the facility is complying or will achieve compliance as specified in the draft permit with all applicable requirements. Therefore, the DAQ is proposing to issue the Title V Operating Permit upon completion of the public comment period and the EPA review.