

STATEMENT OF BASIS

**Weyerhaeuser NR Company
Millport Wood Products Facility
Millport, Lamar County, Alabama
Facility/Permit No. 408-S003**

This draft renewal Title V Major Source Operating Permit (MSOP) is proposed under the provisions of ADEM Admin. Code r. 335-3-16. The above named applicant has requested authorization to perform the work or operate the facility shown on the application and drawings, plans, and other documents attached hereto or on file with the Air Division of the Alabama Department of Environmental Management, in accordance with the terms and conditions of this permit. This permit would be a renewal of the current MSOP, which was issued/effective on June 10, 2015. This would be the fourth renewal of the MSOP.

Weyerhaeuser NR Company's Millport Wood Products Facility is an existing facility that produces finished dimensional lumber from southern yellow pine logs. The significant sources of air pollutants listed in the current MSOP include a 125 MMBtu/hr wood-fired boiler (Emission Unit 001), three steam-heated lumber dry kilns (Emission Units 002, 003, and 008), several processes with pneumatic wood residual transfer systems and cyclone separators (Emission Units 004, 005, 006, and 007), and a 175 Hp diesel emergency fire pump engine (Emission Unit 009). The mill underwent an extensive modernization project in 2016, which ultimately resulted in the construction of three Continuous Direct-Fired Kilns (CDK-4 (B), CDK-5 (A), CDK-6 (C)), a new sawmill with three pneumatic sawdust fuel transport and storage systems and cyclones (CDKC-4 (B), CDKC-5 (A), CDKC-6 (C)), a new planer mill and reject chipping operations with two quad cyclones (PM-1, PM-2), and a dry fuel silo with a baghouse (PM-3). A new 315 Hp emergency diesel fire pump was installed in 2018. All emission units in the current MSOP are no longer in operation and were decommissioned and removed.

Insignificant emission sources at this facility include log and lumber sawing and storage; log debarking and bark hogging; non-pneumatic green lumber chipping; propane storage; brazing, soldering, and welding equipment; water tanks; ash storage and handling; wastewater ponds; lumber cooling; lumber sorting, stacking, grading, packaging, storage, and shipping; planer shavings truck loading bin; mold inhibitor application; QA electric kiln; and gasoline and diesel storage tanks.

Proposed Modifications

The renewal MSOP would include the following changes to the current permit:

- The deletion of the following emission units:

Emission Unit No. 001 (Boiler No. 1)

Emission Unit Nos. 002, 003, and 008 (Nos. 1, 2, and 3 Lumber Dry Kilns)

Emission Unit Nos. 004-007 (Wood Residual Transfer Systems)

Emission Unit No. 009 (Emergency Fire Water Pump Engine)

- The deletion of General Permit Proviso No. 35 – Compliance Assurance Monitoring (CAM).
- The addition of the following emission units:
 Emission Unit Nos. 001, 002, 003 (CDK-4, CDK-5, CDK-6)
 Emission Unit Nos. 004 (Sawmill and Pneumatic Sawdust Fuel Transport and Storage)
 Emission Unit Nos. 005 (Planer Mill and Reject Chipping Operations; Dry Fuel Silo)
 Emission Unit No. 006 (Emergency Diesel Fire Pump Engine)

Applicability: Federal Regulations

Title V

This facility is a major source under the Title V regulations because potential emissions for carbon monoxide (CO) and volatile organic compounds (VOC) exceed the 100 TPY major source threshold. The facility is also a major source of hazardous air pollutants (HAP). It has the potential to emit more than 10 TPY of methanol and formaldehyde, and more than 25 TPY of combined HAP.

Prevention of Significant Deterioration (PSD)

The facility is currently a major source under the PSD regulations for VOC emissions. It is located in an attainment area for all criteria pollutants, and the facility operations are not one of the listed major source categories. Therefore, the major source threshold of concern is 250 TPY.

Weyerhaeuser last underwent PSD in 2016 for an extensive modernization project that included the construction and operation of three direct-fired CDKs, a new sawmill, and a new planer mill and reject chipping system. The project resulted in an increase in the potential dried lumber production from 160 MMBf/yr to 385 MMBf/yr. Air Permit Nos. X023 (CDKs), X024 (sawmill), and X025 (planer mill) were issued on August 30, 2016, and these units replaced all existing units, which were decommissioned and removed. Air Permit Nos. X024 and X025 were re-issued on August 1, 2017, to add a dry fuel silo and baghouse to X025 and to adjust the synthetic minor emission limits for PM in both permits. As of October 21, 2020, Authorization to Operate has been issued for all units.

Air Permit No. X023 contains a BACT limit for VOC of 4.70 lb/MBF, reported as WPP1 (as VOC expressed as propane, determined as $VOC_{as\ C} \times 1.225 + [(1-0.65) \times \text{Methanol}] + \text{Formaldehyde}$). It also contains a synthetic minor PM emission limit of 3.4 lb/hr per kiln. Air Permit Nos X024 and X025 contain synthetic minor PM emission limits of 2.5 lb/hr and 4.4 lb/hr, respectively.

The requirements of Air Permit Nos. X023, X024, and X025 would be codified in the Unit Specific Provisos of Emission Unit Nos. 001-003, 004, and 005, respectively.

NSPS

The facility has one source that is subject to the New Source Performance Standards (NSPS), as referenced in 40 CFR Part 60. Weyerhaeuser replaced the existing 175 Hp emergency diesel fire pump engine in 2018 with a new 315 Hp emergency diesel fire pump engine, for which Air Permit No. X026 was issued on June 28, 2018. The new engine is subject to 40 CFR Part 63,

Subpart ZZZZ, which defers to the regulatory requirements of 40 CFR Part 60, Subpart IIII for this engine. The engine is certified to meet the applicable emission standards in Table 4 to Subpart IIII as required by §60.4205(c) and §60.4202(d) for the engines with a displacement of less than 30 liters per cylinder. The NSPS also has fuel requirements for the sulfur content of the fuel (≤ 15 ppm) and the Cetane index (≥ 40) or aromatic content ($\leq 35\%$ by volume). The engine is equipped with a non-resettable hour meter. The NSPS also limits the operation of the engine to emergency situations and 100 hours per year for maintenance checks and readiness testing.

In accordance with Table 4 to this subpart, the engine must meet a NO_x + NMHC emission standard of 3.0 g/Hp-hr, and a PM emission standard of 0.15 g/Hp-hr. The engine must be operated and maintained in a manner that meets these emission standards over the certified emissions life of the engine. There are no testing requirements for the fire pump engine since it is certified by the manufacturer.

Weyerhaeuser is required to make a record of the operation of the engine in emergency and non-emergency service as recorded by the non-resettable hour meter. They are also required to record the date, time, duration, and purpose of operation of the engine each time the engine operates. To demonstrate compliance with the fuel limitations, the Weyerhaeuser is required to maintain records of the sulfur content and either the Cetane index or aromatic content of the diesel fuel that is burned in the engine. The requirements of Air Permit No. X026 would be codified in the Unit Specific Provisos of Emission Unit No. 006.

MACT

This facility is a major source of HAPs, as listed in ADEM Admin. Code r. 335-3, Appendix G, and the three CDKs are affected sources under 40 CFR Part 63, Subpart DDDD, National Emission Standards for Hazardous Air Pollutants for Plywood and Composite Wood Products (the "PCWP MACT"). However, there are currently no specific requirements for lumber dry kilns under Subpart DDDD.

The 315 Hp emergency diesel fire pump engine is an affected source under 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (the "RICE MACT"). To comply with Subpart ZZZZ, the engine must comply with the requirements of 40 CFR Part 60, IIII, as detailed in the NSPS applicability discussion above.

Applicability: State Regulations

Particulate Matter

Although also subject to anti-PSD synthetic minor emission limits for PM, the three CDKs (001-003), the sawmill and pneumatic sawdust fuel transport systems (004), and the planer mill/reject chipping/dry fuel silo (005) are each subject to the particulate matter emission limitations of ADEM Admin. Code r. 335-3-4-.04(1) for Process Industries-General. The allowable emission rate for each process is calculated using one of the following process weight equations:

$$E = 3.59P^{0.62} \text{ (P < 30 tons per hour) OR}$$

$$E = 17.31P^{0.16} \text{ (P } \geq 30 \text{ tons per hour)}$$

where E = Emissions in pounds per hour
P = Process weight in tons per hour

In addition to the above limitations, ADEM Admin. Code r. 335-3-4-.01(1) sets forth a visible emissions standard which states that any source of particulate emissions shall not discharge more than one 6-minute average opacity greater than 20% in any 60-minute period. At no time shall any source discharge a 6-minute average opacity of particulate emissions greater than 40%.

Sulfur Oxides (SO_x)

The facility has no sources of indirect heat subject to the sulfur oxides (as SO₂) emission limitations of ADEM Admin. Code r. 335-3-5-.01(b).

Emission Monitoring

Emission monitoring requirements were established during the PSD permitting process in Air Permit Nos. X023, X024, and X025. These emission monitoring requirements are codified in the draft Title V MSOP. The emission monitoring requirements for each unit is discussed below:

001 – 117,000 MBF/yr Continuous Direct-Fired Lumber Dry Kiln No. 4 (CDK-4); 002 – 134,000 MBF/yr Continuous Direct-Fired Lumber Dry Kiln No. 5 (CDK-5); 003 – 134,000 MBF/yr Continuous Direct-Fired Lumber Dry Kiln No. 6 (CDK-6)

The PSD BACT determination for the CDKs was “proper maintenance and operating procedures”, and a BACT-VOC emission limit of 4.7 lb/MBF (as WPP1) was established in Air Permit No. X023. Each CDK is also subject to a synthetic minor PM emission limit of 3.4 lb/hr. The CDKs do not utilize any add-on air pollution control devices. Proper maintenance and operating practices established in the Air Permit were:

- (a) Proper Maintenance Practices
 - i) Conduct daily routine maintenance to include cleaning debris from around kiln and pusher tracks;
 - ii) Conduct weekly routine maintenance to include the greasing kiln fan shafts;
 - iii) Conduct quarterly routine maintenance to include greasing and lubricate fan motors and bearings;
 - iv) Conduct semiannual routine maintenance to include checking and retightening (if needed) motor mount bolts and taper lock bolts;
 - v) Conduct annual routine maintenance to include the following:
 - (1) Inspect controller cabinet for dust and small debris;
 - (2) Inspect all sensors for proper operation;
 - (3) Inspect and adjust (if needed) all intake vent lids to assure they are opening and closing in unison and that they close tightly;
 - (4) Inspect all rods and linkage bolts for tightness, wear, and necessary maintenance or replacement;

- (5) Grease each rod support bearing for smooth rotation; and
- (6) Remove cover and inspect motor wiring box for moisture or corroded connections. Clean and repair as needed.

(b) Proper Operating Practices

Within six (6) months of issuance of Temporary Authorization to Operate each continuous direct-fired kiln (CDK), the Permittee shall develop and submit to the Air Division a site-specific operating and maintenance plan for the CDK. The plan shall identify key parameters to be monitored which are related to VOC emissions from the kiln and the frequency and/or averaging period of the monitoring. Upon Air Division concurrence with the plan, the Permittee shall begin implementation of the proposed monitoring and recordkeeping.

Weyerhaeuser developed and submitted a site-specific CDK operating and maintenance plan to the Air Division on October 31, 2016. A revised plan was submitted on December 21, 2016 to include a minimum lumber moisture content parameter (12%, measured at the planer mill). Another revision was submitted on September 6, 2018, to correct content errors in the previous submittals.

Weyerhaeuser is required to maintain records documenting compliance with its CDK operating and maintenance plan, as well as kiln production. Records are required to be maintained in a permanent form suitable and readily available for inspection, and to be retained for a period of five years from the date of generation. Semiannual monitoring reports are required, and any exceedance of any applicable limit must be reported to the Air Division in writing within two working days of determining that the exceedance occurred.

004 - (Sawmill and Pneumatic Sawdust Fuel Transport and Storage), 005 (Planer Mill and Reject Chipping Operations; Dry Fuel Silo)

These processes utilize cyclone separators in the pneumatic transfer of wood residuals to storage. The only exception is that the dry fuel silo utilizes a baghouse. They are subject to the State allowable particulate emission rate as determined by the process weight equation (ADEM Admin. Code r. 335-3-4-.04(1)) and to the State opacity standard of 20% opacity. They are also subject to synthetic minor PM emission limits. For compliance with the particulate and visible emission standards, emission monitoring for the cyclones and baghouse would include:

- a) While the process is operating, someone familiar with the process shall observe the visible emissions from the cyclones and the baghouse at least weekly during daylight hours for greater than normal visible emissions as determined by previous observations of normal operation for the cyclones, and for the presence of visible emissions from the baghouse.
- b) Whenever observed visible emissions are greater than normal from the cyclones, or any visible emissions are noted from the baghouse, corrective action shall be initiated as soon as practicable but no longer than 24 hours from the time of observation, followed by an additional observation to confirm that emissions have been reduced to normal from the cyclone, or eliminated from the baghouse.

- c) The cyclones and baghouse shall be inspected for proper operation and cleaned, if needed, at least annually, but more frequently if greater than normal visible emissions are observed.

Weyerhaeuser would be required to maintain records, including dates, times, and results of all visible emissions observations; corrective actions taken for greater than normal visible emissions from the cyclones, or the presence of visible emissions from the baghouse; and cyclone/baghouse inspections, cleanings, and emissions-related maintenance in a permanent form suitable for inspection for a period of five years from the date of generation of each record. Semiannual monitoring reports would also be required.

006 - 315 hp John Deere Diesel Emergency Fire Pump Engine

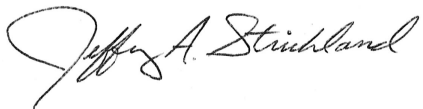
This engine is subject to the emission standards, monitoring, and recordkeeping requirements of 40 CFR Part 60, Subpart III. No additional monitoring requirements would be necessary.

CAM

The cyclones and the baghouse utilized in the wood residual transfer operations are material separators and considered to be inherent parts of the processes, and therefore, are not considered control devices under the CAM regulations.

Recommendation

Based on the above analysis, I recommend Weyerhaeuser NR Company's Major Source Operating Permit (408-S003) be renewed with the conditions noted above, pending the resolution of any comments received during the 30-day public comment period and 45-day EPA review period.



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January 5, 2021
Date