

PRELIMINARY DETERMINATION
Weyerhaeuser NR Company
Facility No. 408-S003-X023, X024, X025

Introduction

On May 9, 2016, Weyerhaeuser NR Company submitted a complete Prevention of Significant Deterioration (PSD) permit application, prepared by FC&E Engineering, LLC, for the proposed construction and operation of two new continuous direct-fired kilns (CDKs), a new sawmill and sawdust fuel transport and storage system, and a new planer mill system at its Millport wood products facility located at 14715 Highway 96 East in Millport, Lamar County, Alabama. After the original application was received on February 23, 2016, an addendum providing additional information, clarification, and corrections was received by the Air Division on May 9, 2016. The two proposed CDKs would be in addition to the existing CDK (Air Permit No. X022, issued 12/30/14). The trio would replace the existing 125 MMBtu/hr wood-fired boiler (Unit No. 001) and the three 110 MBF steam-heated lumber dry kilns (Unit Nos. 002/003/008). The new sawmill and planer mill system would serve to modernize the mill and to shift production from only studs (2"x4"x8') to random length dimensional lumber. The production capability would increase from 160,000 MBF/yr (existing prior to X022) to 385,000 MBF/yr once all proposed projects are completed. Air Permit Nos. X023, X024, and X025 would be issued for the CDKs, sawmill and pneumatic sawdust transfer and storage system, and the planer mill operations, respectively, pending the resolution of any comments that may be received during the public comment period. The draft Air Permits are included in Appendix C.

Background

The Millport facility was originally constructed in 1974 and produced both dimensional lumber and veneer from southern yellow pine logs. A plywood mill was added in 1977, followed by a CCA landscape timber treating plant in 1982. In 1994, the facility underwent PSD retroactively for modifications that occurred in 1984, 1987, and 1989. The facility underwent PSD again in 1997 for the two existing steam-heated lumber dry kilns (Nos. 1 and 2). BACT emission limits were set at 0.066 lb/MBF for particulate matter and 4.52 lb/MBF for VOC (4.0 lb/MBF as carbon). The annual combined production was limited to 110,000 MBF. The CCA treating plant was shut down in August 1998 and the plywood mill was shut down in March 2003. At the time of the shutdown, emission sources at the plywood mill included the No. 2, 91 MMBtu/hr wood-fired boiler with a multiclone and a wet venturi scrubber, a log soaking vat, a veneer lathe, two veneer dryers with an RCO, two plywood presses, and several pneumatic wood waste transfer systems with cyclones. In 2007, Weyerhaeuser underwent PSD for a third steam-heated lumber dry kiln for which Air Permit No. X021 was issued on July 10, 2007. The total allowed lumber production was increased to 160,000 MBF and the new kiln had the same BACT limits for particulate and VOC emissions as the two existing kilns. Current emission sources at the facility include the No. 1, 125 MMBtu/hr wood-fired boiler, log

merchandizing and sawing operations, three 110 MBF lumber dry kilns, planing and trimming operations, and several pneumatic wood residuals transfer systems with cyclones.

In 2014, Weyerhaeuser underwent PSD for the proposed construction and operation of a CDK (CDK-4), which had a 35 MMBtu/hr burner and a production capability of 140,000 MBF/yr when drying only stud lumber. The kiln was to replace the existing 125 MMBtu/hr wood-fired boiler (Unit No. 001) and the three existing 110 MBF steam-heated lumber dry kilns (Unit Nos. 002/003/008). No changes to the existing sawmill and planer mill operations were proposed at the time. The pneumatic sawdust fuel transfer and storage system for the CDK burner did not require a permit at the time since Weyerhaeuser only proposed to relocate the existing boiler sawdust fuel cyclone with no changes proposed to the sawdust generating equipment. Air Permit No. X022 was issued for CDK-4 on December 30, 2014. Construction of this CDK was recently completed and Temporary Authorization to Operate was issued on May 2, 2016. Due to the timing and scope of the project, Weyerhaeuser considered the first and proposed CDKs as one project so they included CDK-4 in the application for the new project. In this permitting action, the existing kiln would be re-permitted as Air Permit No. X023a to correct the production capacity in the description and to institute a Synthetic Minor Source emission limit for PM to avoid PSD for this pollutant.

Proposed Project

Weyerhaeuser now proposes to construct two additional CDKs (CDK-5 and CDK-6). Each CDK would have its own dedicated sawdust fuel silo and cyclone (CDKC-4/CDKC-5/CDKC-6). Though each silo would have an associated cyclone, only one silo is physically capable of being loaded at a time. Since the sawmill and sawdust generating equipment would be replaced, an Air Permit will be required for this process. The planer mill and associated residuals handling (i.e. trimming, hogging, and chipping) would be replaced with a new system. The planer shavings would be pneumatically conveyed to a quad cyclone (PM-1) and the other related residuals would be pneumatically conveyed to a dual cyclone (PM-2).

According to the application, CDK-4 has a maximum production rate of 117,000 MBF/yr (106,000 MBF/yr manufacturer guaranteed), and each of the proposed kilns, CDK-5 and CDK-6, have a maximum production rate of 134,000 MBF/yr (121,000 MBF/yr manufacturer guaranteed). The two additional CDKs would be identical to CDK-4 with the exception of the burner size. CDK-4 utilizes a 35 MMBtu/hr sawdust-fired burner and each of the two additional kilns would utilize a 40 MMBtu/hr sawdust-fired burner. According to Weyerhaeuser, this change was necessary for the manufacturer to guarantee the 121,000 MBF/yr capacity. No change to the CDK-4 burner was proposed. The CDK systems would have a reverse flow double track design and incorporate pre-heating, drying, cooling, equalizing, and conditioning phases in one extended chamber. The only emission points of the kilns would be the open ends. There would be no roof vents. Direct heat would be provided to each proposed kiln by a green sawdust fueled/gasification

burner with a capacity of 40 MMBtu/hr. The burners would be equipped with abort stacks for use during startups, shutdowns, and burnouts. Since the CDKs are designed to operate on a continuous basis, startups/shutdowns would be infrequent.

Applicability: Federal Regulations

Title V

This facility is an existing major source under the Title V regulations because potential emissions of Particulate Matter (PM), 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 more than 25 TPY of combined of HAP. After the project, the facility would be a major source of only CO, VOC, individual HAP (methanol), and combined HAP emissions.

Weyerhaeuser would be required to submit an application for a significant modification of its Major Source Operating Permit within 12 months of commencing operation of CDK-4, which would be May 2, 2017.

Prevention of Significant Deterioration (PSD)

This facility is located in an attainment area for all criteria pollutants, and the facility operations are not one of the listed 28 major source categories. Therefore, the major source threshold of concern is 250 TPY for criteria pollutants. The facility is currently a major source under the PSD regulations for SO₂ (regulatory allowable), CO, and VOC emissions. After the proposed project, the facility would remain a major source under the PSD regulations, but only for VOC emissions.

Since the potential emissions of VOC, NO_x, CO, PM, PM₁₀, and PM_{2.5} from the proposed project would exceed the significant emission rates, Weyerhaeuser provided a netting analysis utilizing the emission decreases from the removal of the 125 MMBtu/hr wood-fired boiler, the three steam-heated batch kilns, and the existing green and dry end operations. In order to avoid PSD for PM due to the State allowable rate based on process weight, Weyerhaeuser requested PM Synthetic Minor emission limits for the pneumatic wood handling processes and the CDKs. Based on this netting analysis (provided as Appendix A), the net VOC emissions increase from the proposed project would be 665.7 TPY, which exceeds the PSD significance level of 40 TPY for VOC. Net increases of all other criteria pollutants are less than their respective significance levels. Therefore, Weyerhaeuser is required to conduct a PSD review only for VOC emissions.

Sources subject to PSD must satisfy the following requirements before being allowed to initiate construction:

1. Provide opportunity for public participation in the permitting process relative to the air quality impact the source would have if it were built.

2. Obtain a permit which sets forth emission limitations.
3. Demonstrate that the emissions from the source would not cause or contribute to a violation of the PSD increment or the NAAQS.
4. Apply best available control technology (BACT), which is defined in terms of an emission limitation, based on the maximum degree of reduction of each pollutant which is determined to be technically and economically achievable for that particular source.
5. Analyze the impairment to visibility, soils, and vegetation that might occur as a result of operation of the source.
6. Analyze the air quality impacts projected due to the growth associated with the facility.
7. Conduct any ambient air quality monitoring necessary to determine the effect of the emissions on air quality.

Public Participation

In order to satisfy the public participation requirement, a copy of the preliminary determination and the permit applications will be sent to the public repository(ies) for at least 30 days of public review. Notification will also be made in a local newspaper of general circulation. After the 30-day public comment period and within 5 days of the PSD permit issuance, the final determination will be made available at the public repository(ies) for 14 days of public review. The final determination consists of copies of the signed permits, any comments received during the public comment period, and any responses made to those comments.

BACT Determination

During a PSD review, new and modified sources must be assessed for Best Available Control Technology, or BACT, if the emissions increase is significant. BACT is an emission limit based on the maximum pollutant reduction achievable considering energy, economic, and environmental impacts. BACT is determined on a unit by unit, pollutant by pollutant basis. The BACT limit can be no less stringent than any applicable New Source Performance Standard (NSPS), National Emission Standard for Hazardous Air Pollutants (NESHAP), or other applicable standard. No applicable NSPS has been promulgated for continuous direct-fired lumber dry kilns. The proposed CDKs would be subject to the Plywood and Composite Wood Products ("PCWP") MACT, 40 CFR 63, Subpart DDDD. This rule was promulgated on July 30, 2004. MACT level of control was determined to be no emissions reduction for lumber dry kilns, whether co-located at a PCWP facility, or stand alone kilns at other facilities that are major sources of HAPs. Under Subpart DDDD, Weyerhaeuser would only need to submit an Initial Notification pursuant to 40 CFR §63.2280(b) no later than 120 calendar days after initial startup of the new kiln. In

accordance with 40 CFR §63.9(b)(1)(iii), the PSD permit application fulfills the Initial Notification requirements under Subpart DDDD for the proposed CDKs.

Wood residuals handling operations

The pneumatic wood residual handling systems associated with the sawdust transfer and planer mill operations are sources of VOC emissions. However, according to Weyerhaeuser, the total VOC emissions (approximately 7 TPY) from the cyclones only represent one percent of the facility VOC emissions. Capture and control feasibility of the VOC emissions from the material handling systems were evaluated by Weyerhaeuser, who determined all to be neither practical nor cost effective. The Air Division concurs with Weyerhaeuser's determination.

BACT must be determined for VOC emissions from the proposed CDKs. Weyerhaeuser utilized the "top-down" approach for the BACT analysis. This approach considers the most stringent control option available and a determination of its technical feasibility for the emission unit in question. If the option is not rejected, the applicant must analyze the option based upon economic, environmental, and energy considerations. Below are the five basic steps of a top-down BACT review procedure as identified by the US EPA in the March 15, 1990, Draft BACT Guidelines:

- Step 1. Identify all control technologies
- Step 2. Eliminate technically infeasible options
- Step 3. Rank remaining control technologies by control effectiveness
- Step 4. Evaluate most effective controls and document results
- Step 5. Select BACT

Step 1. Identify all control technologies:

Weyerhaeuser examined the feasibility of the following five control technologies: oxidation (thermal and catalytic), adsorption (carbon), biofiltration, condensation, and proper maintenance and operating practices.

Thermal and Catalytic Oxidation

Thermal oxidation refers to the complete, gas phase combustion of VOC to carbon dioxide and water vapor. Oxidation is achieved by heating the VOC exhaust in the presence of oxygen. Supplemental fuel is almost always required to maintain minimum combustion conditions. A regenerative thermal oxidizer (RTO) typically operates at a final oxidation temperature between 1400°F and 1500°F. A regenerative catalytic oxidizer (RCO) operates in the same manner as a regenerative thermal oxidizer except that it utilizes a catalytic material rather than ceramic material in the packed bed. This allows for the destruction of VOC at a lower oxidation temperature of approximately 800°F. VOC destruction efficiency

depends upon design criteria. According to the application, typical design efficiencies range from 59% to 99% for regenerative thermal oxidizer systems and 90% to 99% for regenerative catalytic oxidizer systems, depending on system requirements and characteristics of the contaminated gas stream. Lower control efficiencies are generally associated with lower concentration gas streams.

Adsorption

Adsorption is the use of a solid material to trap a gas. The most commonly used material is carbon, a highly porous material. Adsorption occurs in two ways: (1) physical adsorption in which van der Waal's forces attract and hold gas molecules to the adsorbent surface, and (2) chemical adsorption in which gas molecules are chemically bonded to the adsorbent. Additionally, within the capillaries of the porous solid, surface adsorption is supplemented by capillary condensation. The VOC is usually recovered by stripping the organic from the carbon by heating with steam. Depending on the application carbon adsorption efficiencies can be at least 95%.

Biofiltration

In biofiltration, off-gasses containing biodegradable organic compounds are vented under controlled temperature and humidity through a biologically active material. The process uses a biofilm containing a population of microorganisms immobilized on a porous substrate such as peat, soil, sand, wood, compost, or synthetic media. As an air stream passes through the biofilter, the contaminants in the air stream partition from the gaseous phase to the liquid phase of the biofilm. Once contaminants pass into the liquid phase, they become available for the complex oxidative process by the microorganisms inhabiting the biofilm.

Condensation

Condensation is the physical change from the vapor to liquid phase. Condensers operate in either of two ways: (1) the most common is a constant pressure system where the temperature of the gas stream is reduced to cause the desired condensible materials to liquefy, or (2) less common is the technique of increasing the pressure of the gas stream to cause the combustible material to liquefy. Condensation is also commonly applied to a gas stream to reduce VOC concentrations before the stream is routed to other add-on control devices. The VOC efficiency achieved by a condenser is a function of the heat capacity and temperature of the inlet exhaust stream, the heat transfer characteristics of the condenser, and the outlet temperature of the exhaust gas exiting the condenser. Condensers are most effective in single component systems involving emission streams with a high percentage of condensable VOC, because less heat must be removed from the exhaust gas to reduce the sensible heat of noncondensable gases and the required condenser temperature to achieve the highest levels of recovery. Since the control efficiency of a condenser is dynamic based on the outlet temperature and inlet concentration

of VOC in the exhaust stream, condensers exhibit a wide range of VOC control efficiency from as low as 50% to as high as 99%.

Wet Scrubbing

Scrubbing of gas or vapor pollutants from a gas stream is usually accomplished in a packed column where pollutants are absorbed by countercurrent flow of a scrubbing liquid. Scrubbing liquid can be water, caustic solution, or other liquid media.

Proper Maintenance and Operating Practices

Proper maintenance and operating practices are comprised of work practice and operational standards and recordkeeping and reporting requirements. The establishment of these good operating practices is intended to minimize VOC emissions from the kilns to the extent practicable. This method involves no add-on pollution controls. The application stated that written procedures of best management practices and proper maintenance and operating activities can be an effective abatement technique when combined with training of employees and recordkeeping.

Step 2. Eliminate technically infeasible options:

Thermal Oxidation and Catalytic Oxidation

Several factors make the use of RTO and RCO units technically infeasible for controlling VOC emissions from lumber kilns. First, the installation of emissions collection equipment can affect the quality of the lumber product by disrupting the ventilation and circulation patterns required to maintain the proper moisture content and temperature. Potential back-pressure from a blower generated vacuum may disrupt the controlled drying environment and adversely affect the lumber product quality.

The low temperature and the high moisture content of kiln's exhaust streams would likely make an RTO a technically infeasible method of VOC control for the kiln. While an RCO can operate at lower temperatures than an RTO, the temperatures of the kiln's exhaust streams would likely still be too low for this option to be feasible. Furthermore, the particulate matter and other contaminants in the exhaust stream would cause a loss of catalytic activity. Based on the reasons stated above and the fact that there are no lumber dry kilns reported in the RBLC utilizing thermal or catalytic oxidation, the applicant concluded that oxidation is not a feasible option for VOC control for the proposed kilns.

Adsorption

The kiln's exhaust contains water vapor that has evaporated from the wood during the drying process (at or near 100% relative humidity). At high moisture contents, the water vapor and VOC compounds would compete with each other for the adsorption media's active sites; therefore, greatly reducing the capture efficiency of the adsorber. Therefore, this control technology would not be a feasible means of VOC control for the proposed kilns.

Condensation

Condensation requires that the exhaust leaving the kiln be cooled to a low enough temperature to allow for the VOCs to go from a gas phase to a liquid phase. The VOCs in the kiln's exhaust stream are primarily terpenes; therefore, the temperature at which these compounds would start to become liquid is 0°F. At that temperature, the water vapor in the exhaust stream would freeze, which would clog the unit. Therefore, this control technology would not be a feasible means of VOC control for the proposed kilns.

Biofiltration

Microbial activity within the filter media is readily affected by temperature conditions. Mesophilic conditions (25-40°C) are ideal for biofiltration operations and most biofilters consequently operate in ambient temperatures. Some microbes are known to function effectively in thermophilic conditions (40-55°C). In cases of extreme temperatures, cell components can begin to decompose and proteins within enzymes can become denatured and ineffective. The temperature of the exhaust stream from the kiln would be approximately 65°C which exceeds the typical operational temperatures of biofilters.

The primary constituent of the VOC in the exhaust stream is terpenes, which are highly viscous and would cause the biofilter to easily foul. Because of the nature of the long-chained hydrocarbons in the exhaust stream, a biofilter with a reasonable footprint/retention time, would have a reduced control efficiency. The microorganisms require a much longer retention time/size of a unit in order to provide an increased efficiency.

The application of biofiltration technology for VOC removal from lumber kiln emissions has not been demonstrated. Due to the temperature requirement, large footprint requirement, and the unproven application of biofiltration to this type of process, this technology would not be a feasible means of VOC control for the proposed kilns.

Wet Scrubbing

While some VOCs that would be present in the exhaust stream are highly soluble in water, other VOCs, most notably α -pinene, are only slightly soluble in water.

Lower solubility VOCs would require a much longer residence time within a scrubber packed column and would eliminate this as a technically viable solution for the constant stream that would need to be handled by a continuous kiln.

Wet scrubbing for VOC removal is also technically infeasible for application in dry kilns due to the probable disruption in air flow created by this type of add-on control. A vacuum blower would be necessary to route the kiln emissions to the wet scrubber. As previously discussed, the use of a vacuum blower would affect the temperature and moisture content of the kiln atmosphere and degrade the quality of the dried lumber. Based on the above conditions, this technology would not be a feasible means of VOC control for the proposed kilns.

Proper Maintenance and Operating Practices

Proper maintenance and operating practices is a technically feasible option for minimizing VOC emissions and is considered further in the BACT determination.

Step 3 Rank remaining control technologies by control effectiveness:

Rank	Control Technology	Potential Control Efficiency
1	Proper Maintenance and Operation Practices	Base Case

Step 4. Evaluate most effective controls and document results:

Proper Maintenance and Operating Practices

Proper maintenance and operating practices can effectively minimize VOC formation and would be considered BACT for the kiln.

Step 5. Select BACT:

Weyerhaeuser proposed the following emission level as BACT:

Pollutant	BACT Determination	BACT Emission Limit	Equivalent Emissions
VOC	Proper Maintenance and Operating Procedures	4.70 lb/MBF, as WPP1 VOC* [VOC _{as c} x 1.225 + (1-0.65) x Methanol + Formaldehyde]	905 TPY (based on a maximum capacity of 385 MMBF/yr)

*“WPP1 VOC” is an acronym for Wood Products Protocol 1 VOC. WPP1 VOC refers to VOC emissions expressed in accordance with the document “Interim VOC Measurement Protocol for the Wood Products Industry – July 2007.” This EPA document established procedures and emission

measurement methods to approximate VOC emissions for determining applicability with Federal programs and to establish consistency across State programs for the forest products industry.

A search of EPA RACT/BACT/LAER Clearinghouse indicated that no facilities are utilizing add-on controls for dry kilns, and the proposed VOC emission limit of 4.70 lb/MBF (as WPP1 VOC) is slightly higher than other BACT determinations for continuous kilns in the wood products industry. However, none of the BACT limits in the RBLC for continuous kilns have been verified by testing. Weyerhaeuser based its limit on NCASI data for batch kilns due to the larger emissions data set versus that available for continuous kilns, plus the addition of 10% to account for emissions variability.

The Air Division concurs that proper maintenance and operating practices and 4.70 lb/MBF (as WPP1 VOC) represents BACT for the proposed kilns.

In addition to the BACT emission limit, the following operating practices and manufacturer recommended maintenance would be incorporated into the permit as enforceable conditions:

Proper Operating Practices

- Within six (6) months of issuance of Temporary Authorization to Operate the 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.

Proper Maintenance

- Daily routine maintenance to include cleaning debris from around kiln and pusher tracks;
- Weekly routine maintenance to include greasing the kiln fan shafts;
- Quarterly routine maintenance to include greasing and lubricating fan motors and bearings;
- Semiannual routine maintenance to include checking and retightening (if needed) motor mount bolts and taper lock bolts;
- Annual routine maintenance to include the following:
 - Inspect controller cabinet for dust and small debris;
 - Inspect all sensors for proper operation;

- Inspect and adjust (if needed) all intake vent lids to assure they are opening and closing in unison and that they close tightly;
- Inspect all rods and linkage bolts for tightness, wear, and necessary maintenance or replacement;
- Grease each rod support bearing for smooth rotation; and
- Remove cover and inspect motor wiring box for moisture or corroded connections. Clean and repair as needed.

Modeling

Air Toxics modeling was not required for this application. Although the VOC (ozone precursor) increase is expected to exceed the 100 TPY PSD de minimus impact level, the Air Division accepted the use of representative regional ozone data from a Tuscaloosa County, AL monitor in lieu of site-specific monitoring for ozone.

Additional Impacts

An additional impact analysis assesses the impacts of air, ground, and water pollution on soils, vegetation, and visibility caused by any increase in emissions of any regulated pollutant resulting from the modification under review and from associated growth. The depth of the analysis depends on existing air quality, the quantity of emissions, and the sensitivity of local soils, vegetation, and visibility in the source's impact area. Weyerhaeuser addressed the impacts of the proposed kiln project with respect to growth, soils and vegetation, and visibility.

VOCs are regulated as precursors to tropospheric ozone. Elevated ground-level ozone concentrations can damage plant life and crop production. VOCs interfere with the ability of plants to produce and store food, making them more susceptible to disease, insects, and other pollutants and harsh weather. Ozone is formed by the interaction of NO_x, VOCs, and sunlight in the atmosphere. As the project would reduce the potential for ozone formation due to emissions from the facility, no adverse impacts on soils and vegetation is anticipated.

Regarding growth, the application indicates that the project would result in an increase in the facility workforce by 70 positions. The majority of positions are expected to be filled from the local workforce and additional demand on housing or public utilities is not anticipated. The increase in capacity for the facility would not result in the growth of support facilities in the area.

No adverse impact on visibility is expected. The Sipsey Wilderness Area, a PSD Class I Area, is located approximately 94 km from the Millport facility. According to the application, the total potential emissions for visibility impairing pollutants from the facility divided by the distance to the Class 1 Area (Q/D) is 2.75 tons/km. Facilities with Q/D

values of less than 10 are not required to perform a Class 1 Air Quality Related Values Analysis. Therefore, no adverse impact on the Sipsey Wilderness Area is anticipated.

Applicability: State Regulations

Particulate Matter

The transport of wood residuals to the new fuel storage silos and from the proposed planing and reject chipping operations would be subject to the State particulate matter emission standards for process industries as provided in ADEM Admin. Code r. 334-3-4-.04(1). The new sawdust fuel generating process would replace the existing equipment and sawdust fuel would be conveyed to any one of three sawdust silos and cyclones (CDKC-4, CDKC-5, and CDKC-6). Only one pneumatic system would be capable of operating at a time. The wood residuals from the replacement planer mill and reject chipper would be pneumatically conveyed to a new quad cyclone (PM-1) and a new dual cyclone (PM-2), respectively.

The CDKs would also be subject to the State particulate matter emission standards for process industries as provided in ADEM Admin. Code r. 334-3-4-.04(1). The process weight would consist of the amount of wood fuel burned in the wood-fired burners. As the burners would supply direct heat to the kilns, they would not be considered “fuel burning equipment”, and therefore not subject to ADEM Admin. Code r. 335-3-4-.03(1).

Visible Emissions

The proposed kilns and wood residuals handling cyclones would be subject to the State visible emission standards of ADEM Admin. Code r. 335-3-4-.01(1), which states that no air emission source may emit particulate of an opacity greater than 20% (as measured by a six-minute average) more than once during any 60-minute period and at no time shall emit particulate of an opacity greater than 40% (as measured by a six-minute average). Based on the design and operating practices of the proposed kilns and wood residuals handling cyclones, these sources would be expected to be able to comply with these standards.

Sulfur Dioxide

Since the burners for the proposed continuous kilns provide direct heat, they would not be subject to the State SO₂ emission standard for fuel burning equipment found in ADEM Admin. Code r. 335-3-5-.01(1).

Emission Testing and Monitoring

I recommend that no emission testing be required for the proposed CDKs at this time since it is expected that the kiln would be able to comply with the proposed BACT limitation,

testing for continuous kilns is not easily conducted, and there are no emission control devices. I also recommend that no emission testing be required for the proposed wood residuals handling cyclones at this time since calculations in the application indicate the capability of complying with the State allowable particulate emission rates and Synthetic Minor emission limits. If emission problems are observed in the future from these emission sources, testing may be required at that time.

To ensure that the maximum capacity of the proposed CDKs are not exceeded, Weyerhaeuser would be required to calculate the kiln production on a monthly and 12-month rolling total basis, to be updated within ten (10) days of the end of each calendar month.

To ensure proper operation of the pneumatic wood residuals handling cyclones, minimum weekly visual observations would be required, with corrective action required to be initiated as soon as practicable but no longer than 24 hours if visible emissions are determined to be greater than normal. Minimum annual physical inspections would be required.

Recordkeeping and Reporting

Recordkeeping

Weyerhaeuser would be required to maintain records of its actions taken to comply with its proper maintenance and operating practices, as well as dried lumber production, for the kilns. Records of visual observations and physical inspections of the cyclones would also be required. These records shall be maintained on-site in a permanent form readily available for inspection.

Reporting

Weyerhaeuser would be required to submit Semiannual Monitoring Reports for the proposed processes and units, which would include a certification that all emission monitoring and proper maintenance and operating practices were accomplished as required during the reporting period, and if not, describe the date and reason any required action was not accomplished.

Conclusions and Recommendations

This analysis indicates that the facility would meet the requirements of all applicable federal and State rules and regulations. Therefore, I recommend that Weyerhaeuser NR Company be issued the following Air Permits, pending the resolution of any comments received during the 30-day public comment period:

X023 - a) 117,000 MBF/yr Continuous Direct-Fired Lumber Dry Kiln No. 4 (CDK-4)
with 35 MMBtu/hr Wood-Fired Burner

b) 134,000 MBF/yr Continuous Direct-Fired Lumber Dry Kiln No. 5 (CDK-5)
with 40 MMBtu/hr Wood-Fired Burner

c) 134,000 MBF/yr Continuous Direct-Fired Lumber Dry Kiln No. 6 (CDK-6)
with 40 MMBtu/hr Wood-Fired Burner

X024 - Sawmill and Pneumatic Sawdust Fuel Transport and Storage with Three Storage
Silos and Three Cyclones (CDKC-4/CDKC-5/CDKC-6) (SMS)

X025 - Planer Mill and Reject Chipping Operations with a Quad Cyclone (PM-1) and a
Dual Cyclone (PM-2) (SMS)



Jeffrey A. Strickland
Chemical Branch
Air Division

July 5, 2016
Date

APPENDIX A

Netting Analysis

Table 4 - PSD Applicability Calculations

	Pollutant	Emission Factor	Reference	(A) Future Potential (TPY)	(B) Baseline Emissions (TPY)	(C) Project Emissions Increase (TPY)	(A-B) Net Emissions Increase (TPY)
	Plantwide Production Rate (MBF) =====>>			385,000	106,470	278,530	278,530
	CDK Throughput (MBF) =====>>			385,000	0	385,000	385,000
	Annual Heat Input (MMBTU/YR) =====>>			1,007,400	0	1,007,400	1,007,400
3-CDKs	CO	0.322 lb/MMBTU	NCASI	162.2	0.0	162.2	162.2
	NO _x	0.18 lb/MMBTU	NCASI	90.7	0.0	90.7	90.7
	SO ₂	0.025 lb/MMBTU	AP-42	12.6	0.0	12.6	12.6
	PM	10.24 lb/hr	Requested Limit	44.9	0.0	44.9	44.9
	PM ₁₀	0.0950 lb/MMBTU	See Calculations	47.9	0.0	47.9	47.9
	PM _{2.5}	0.0950 lb/MMBTU	See Calculations	47.9	0.0	47.9	47.9
	VOC	4.70 lb/MBF	NCASI	904.8	0.0	904.8	904.8
	CO ₂	206.79 lb/MMBTU	Part 98	104,160.2	0.0	104,160.2	104,160.2
	CO ₂ e (CH ₄)	0.40 lb/MMBTU	Part 98	199.9	0.0	199.9	199.9
	CO ₂ e (N ₂ O)	2.37 lb/MMBTU	Part 98	1191.3	0.0	1191.3	1191.3
3-CDKs Excess Startup Emissions	CO	See Emissions Calculations		0.85	0.0	0.9	0.9
	PM	See Emissions Calculations		1.29	0.0	1.3	1.3
	PM ₁₀	See Emissions Calculations		0.91	0.0	0.9	0.9
	PM _{2.5}	See Emissions Calculations		0.68	0.0	0.7	0.7
3-CDK Cyclones	PM	1.4 lb/hr	Requested Limit	6.13	0.0	6.13	6.13
	PM ₁₀	0.19 lb/BDT	AQ-EF03	5.26	0.0	5.26	5.26
	PM _{2.5}	0.16 lb/BDT	AQ-EF03	4.43	0.0	4.43	4.43
	VOC	0.31 lb/BDT	WeyCO TV	8.58	0.0	8.58	8.58
Planer/Trim Hog/Reject Cyclone	PM	See Emissions Calculations		21.9	0.0	21.90	21.90
	PM ₁₀	See Emissions Calculations		9.07	0.0	9.07	9.07
	PM _{2.5}	See Emissions Calculations		4.01	0.0	4.01	4.01
	VOC	See Emissions Calculations		12.17	0.0	12.17	12.17
002, 003 & 008 (Kilns)	Steam Kilns Throughput (MBF) =====>>			0	106,470		-106,470
	PM	0.066 lb/MBF	6	0.0	3.5		-3.5
	PM ₁₀	0.066 lb/MBF	1	0.0	3.5		-3.5
	PM _{2.5}	0.066 lb/MBF	1	0.0	3.5		-3.5
	VOC	4.700 lb/MBF	NCASI	0.0	250.2		-250.2
001 (No. 1 Boiler 125 MMBTU/HR)	Annual Heat Input (MMBTU/YR) =====>>			0	648,190		-648,190
	CO	0.6 lb/MMBTU	AP-42	0.0	194.5		-194.5
	NO _x	0.17 lb/MMBTU	1	0.0	55.1		-55.1
	SO ₂	0.025 lb/MMBTU	AP-42	0.0	8.1		-8.1
	PM	0.145 lb/MMBTU	Stack Test	0.0	47.0		-47.0
	PM ₁₀	0.159 lb/MMBTU	Stack Test	0.0	51.6		-51.6
	PM _{2.5}	0.159 lb/MMBTU	Stack Test	0.0	51.6		-51.6
	VOC	0.017 lb/MMBTU	AP-42	0.0	5.5		-5.5
	CO ₂	206.79 lb/MMBTU	7	0.0	67,019.7		-67,019.7
	CO ₂ e (CH ₄)	0.40 lb/MMBTU	8	0.0	128.6		-128.6
CO ₂ e (N ₂ O)	2.37 lb/MMBTU	8	0.0	766.5		-766.5	
004-Dry lumber planer with cyclone	PM	0.0079 lb/MBF	4	0.00	0.42		-0.42
	PM ₁₀	0.0075 lb/MBF	1	0.00	0.40		-0.40
	PM _{2.5}	0.0017 lb/MBF	1	0.00	0.09		-0.09
	VOC	0.12 lb/MBF	1	0.00	6.39		-6.39
005-Dry lumber trimmer with cyclone	PM	0.014 lb/MBF	4	0.00	0.73		-0.73
	PM ₁₀	0.013 lb/MBF	1	0.00	0.69		-0.69
	PM _{2.5}	0.0030 lb/MBF	1	0.00	0.16		-0.16
	VOC	0.0046 lb/MBF	1	0.00	0.24		-0.24
006-Green lumber chip-saw, vertical gang saw, board edger process with truck loadout cyclone and sawdust fuel cyclone	PM	0.001 lb/MBF	4	0.00	0.04		-0.04
	PM ₁₀	0.0008 lb/MBF	1	0.00	0.04		-0.04
	PM _{2.5}	0.0002 lb/MBF	1	0.00	0.01		-0.01
	VOC	0.051 lb/MBF	1	0.00	2.71		-2.71
007-Rechipper and conveying system with cyclone	PM	0.00069 lb/MBF	4	0.00	0.04		-0.04
	PM ₁₀	0.000657 lb/MBF	5	0.00	0.03		-0.03
	PM _{2.5}	0.000152 lb/MBF	5	0.00	0.01		-0.01
	VOC	0.00657 lb/MBF	5	0.00	0.35		-0.35
Totals	CO			163.0	194.5	163.0	-31.4
	NO _x			90.7	55.1	90.7	35.6
	SO ₂			12.6	8.1	12.6	4.5
	PM			74.2	51.7	74.2	22.4
	PM ₁₀			63.1	56.2	63.1	6.8
	PM _{2.5}			57.0	55.3	57.0	1.6
	VOC			925.5	265.4	925.5	660.1
	CO ₂			104,160.2	67,019.7	104,160.2	37,140.5
	CO ₂ e (CH ₄)			199.9	128.6	199.9	71.3
CO ₂ e (N ₂ O)			1191.3	766.5	1191.3	424.8	

APPENDIX B

Draft Air Permits

AIR PERMIT

PERMITTEE: WEYERHAEUSER NR COMPANY
FACILITY NAME: MILLPORT WOOD PRODUCTS FACILITY
LOCATION: MILLPORT, LAMAR COUNTY, ALABAMA

PERMIT NUMBER

408-S003-X023

DESCRIPTION OF EQUIPMENT, ARTICLE OR DEVICE

- a) 117,000 MBF/yr Continuous Direct-Fired Lumber Dry Kiln No. 4 (CDK-4) with 35 MMBtu/hr Wood-Fired Burner
- b) 134,000 MBF/yr Continuous Direct-Fired Lumber Dry Kiln No. 5 (CDK-5) with 40 MMBtu/hr Wood-Fired Burner
- c) 134,000 MBF/yr Continuous Direct-Fired Lumber Dry Kiln No. 6 (CDK-6) with 40 MMBtu/hr Wood-Fired Burner

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, as amended, Ala. Code §§22-28-1 to 22-28-23 (2006 Rplc. Vol. and 2007 Cum. Supp.) (the "AAPCA") and the Alabama Environmental Management Act, as amended, Ala. Code §§22-22A-1 to 22-22A-15 (2006 Rplc. Vol. and 2007 Cum. Supp.), and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: Draft

WEYERHAEUSER NR COMPANY
MILLPORT, ALABAMA
(PERMIT NO. 408-S003-X023)
PROVISOS

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.
2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.
3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.
4. The Permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.
5. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.
6. In the event there is a breakdown of equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within an additional 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.
7. This process, including all air pollution control devices and capture systems for which this permit is issued, shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.
8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.
9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.
11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.
12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.
13. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

- (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.
- (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).
- (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.
- (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

14. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

15. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.
16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

- (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;
- (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;
- (c) by paving;
- (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. Precautions shall be taken by the Permittee and its personnel to ensure that no person shall ignite, cause to be ignited, permit to be ignited, or maintain any open fire in such a manner as to cause the Department's rules and regulations applicable to open burning to be violated.
18. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.
19. The Permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.
20. The Permittee shall not cause or permit the emissions of particulate matter in any 1-hour period from this process to exceed the amount determined by use of the following equation:

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

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

21. The Permittee shall not cause or allow these sources of particulate emissions to discharge more than one 6-minute average opacity greater than 20% in any 60-minute period. At no time shall these sources discharge a 6-minute average opacity of particulate emissions greater than 40%. Opacity will be determined by 40 CFR Part 60, Appendix A, Method 9.

PSD Synthetic Minor Source Limitation

22. The Permittee shall not cause or allow the particulate matter emission rate from each kiln to exceed 3.4 lb/hr, as measured in accordance with 40 CFR Part 60, Appendix A, Method 5. Alternate test methods may be used provided prior approval by the Air Division is granted.

BACT Requirements

23. The Permittee shall not cause or allow the VOC emissions from each kiln to exceed 4.70 lb/MBF as WPP1 (as VOC expressed as propane, determined as $VOC_{as\ C} \times 1.225 + [(1 - 0.65) \times \text{Methanol}] + \text{Formaldehyde}$).
24. The Permittee shall proper maintenance and operating practices as recommended by the manufacturer, which include but may not be limited to the following:
- (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.

Monitoring, Recordkeeping, and Reporting

25. The Permittee shall maintain records documenting its compliance with the proper maintenance and operating practices required by Proviso 24 of this permit.
26. If these kilns should exceed an applicable limit at any time, the Permittee shall notify the Air Division in writing within two working days of determining that the exceedance occurred.
27. The Permittee shall maintain records of individual kiln and total kiln production, including monthly production and 12-month rolling totals. Within ten (10) days of the end of each calendar month, records of the total throughput for the last calendar month shall be recorded and the rolling 12-month total updated.
28. The Permittee shall retain all required records in a permanent form suitable and readily available for inspection for a period of five (5) years from the date of generation of each record.
29. The Permittee shall submit a Semiannual Monitoring Report for the kilns to the Air Division as part of the Semiannual Monitoring Report required by the Permittee's Major Source Operating Permit. This report shall include a certification that all proper maintenance and operating practices were accomplished as required during the reporting period, and if not, describe the date and reason any required action was not accomplished.
30. The Permittee shall submit an Annual Compliance Certification for the kilns to the Air Division as part of the Annual Compliance Certification required by the Permittee's Major Source Operating Permit. This report shall include the following for these kilns:

- (a) The identification of each term or condition of this permit that is the basis of the certification.
- (b) The compliance status, whether continuous or intermittent.
- (c) The method(s) used for determining the compliance status of the source, currently and over the reporting period.
- (d) Other facts the Department may require to determine the compliance status of the source.

The compliance certification shall contain certification by a responsible official of truth, accuracy and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

Draft
Date



AIR PERMIT

PERMITTEE: WEYERHAEUSER NR COMPANY
FACILITY NAME: MILLPORT WOOD PRODUCTS FACILITY
LOCATION: MILLPORT, LAMAR COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE OR DEVICE
408-S003-X024	Sawmill and Pneumatic Sawdust Fuel Transport and Storage with Three Storage Silos and Three Cyclones (CDKC-4/CDKC-5/CDKC-6) (SMS)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, as amended, Ala. Code §§22-28-1 to 22-28-23 (2006 Rplc. Vol. and 2007 Cum. Supp.) (the "AAPCA") and the Alabama Environmental Management Act, as amended, Ala. Code §§22-22A-1 to 22-22A-15 (2006 Rplc. Vol. and 2007 Cum. Supp.), and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: DRAFT

WEYERHAEUSER NR COMPANY
MILLPORT, ALABAMA
(PERMIT NO. 408-S003-X024)
PROVISOS

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.
2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.
3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.
4. The Permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.
5. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.
6. In the event there is a breakdown of equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within an additional 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.
7. This process, including all air pollution control devices and capture systems for which this permit is issued, shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.
8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.
9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.
11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.
12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.
13. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

- (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.
- (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).
- (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.
- (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

14. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

15. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.
16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

- (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;
- (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;
- (c) by paving;
- (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. Precautions shall be taken by the Permittee and its personnel to ensure that no person shall ignite, cause to be ignited, permit to be ignited, or maintain any open fire in such a manner as to cause the Department's rules and regulations applicable to open burning to be violated.
18. The Permittee shall not cause or permit the emissions of particulate matter in any 1-hour period from this process to exceed the amount determined by use of the following equation:

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

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

19. The Permittee shall not cause or allow these sources of particulate emissions to discharge more than one 6-minute average opacity greater than 20% in any 60-minute period. At

no time shall these sources discharge a 6-minute average opacity of particulate emissions greater than 40%. Opacity will be determined by 40 CFR Part 60, Appendix A, Method 9.

20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.
21. The Permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.

PSD Synthetic Minor Source Limitation

22. The Permittee shall not cause or allow the particulate matter emission rate from the cyclones (Emission Points CDKC-4, CDKC-5, and CDKC-6) to exceed 1.4 lb/hr, as measured in accordance with 40 CFR Part 60, Appendix A, Method 5. Alternate test methods may be used provided prior approval by the Air Division is granted.

Monitoring, Recordkeeping, and Reporting

23. The following "emission monitoring" requirements apply to this process:
 - a) While the process is operating, someone familiar with the process shall observe the visible emissions from the cyclones at least weekly during daylight hours for greater than normal visible emissions as determined by previous observations of normal operation.
 - b) Whenever observed visible emissions are greater than normal, 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.
 - c) The cyclones shall be inspected for proper operation and cleaned, if needed, at least annually, but more frequently if greater than normal visible emissions are observed.
24. The Permittee shall maintain records, including dates, times, and results of all visible emissions observations; corrective actions taken for greater than normal visible emissions; and cyclone inspections, cleanings, and emissions-related maintenance in a permanent form suitable for inspection for a period of 5 years from the date of generation of each record. The records shall be made available for inspection upon request.
25. The Permittee shall submit a Semiannual Monitoring Report, as required by General Permit Proviso No. 22(a), no later than 60 days after the end of each semiannual reporting period (January 1st to June 30th and July 1st to December 31st). The report shall:

- a) Certify whether the emission monitoring requirements were accomplished as required, and if not, describe the date and reason any required monitoring was not accomplished;
 - b) Provide the date, time, and duration of any instance that greater than normal visible emissions were observed from the cyclone;
 - c) Provide the nature and date of any corrective actions taken or preventative measures adopted following an observation of greater than normal visible emissions; and
 - d) Provide the dates of any inspections and/or cleanings performed during the reporting period.
26. The Permittee shall submit an Annual Compliance Certification for this process to the Air Division as part of the Annual Compliance Certification required by the Permittee's Major Source Operating Permit. This report shall include the following for this process:
- a) The identification of each term or condition of this permit that is the basis of the certification.
 - b) The compliance status, whether continuous or intermittent.
 - c) The method(s) used for determining the compliance status of the source, currently and over the reporting period.
 - d) Other facts the Department may require to determine the compliance status of the source.

The compliance certification shall contain certification by a responsible official of truth, accuracy and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

DRAFT
Date



AIR PERMIT

PERMITTEE: WEYERHAEUSER NR COMPANY
FACILITY NAME: MILLPORT WOOD PRODUCTS FACILITY
LOCATION: MILLPORT, LAMAR COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE OR DEVICE
408-S003-X025	Planer Mill and Reject Chipping Operations with a Quad Cyclone (PM-1) and a Dual Cyclone (PM-2) (SMS)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, as amended, Ala. Code §§22-28-1 to 22-28-23 (2006 Rplc. Vol. and 2007 Cum. Supp.) (the "AAPCA") and the Alabama Environmental Management Act, as amended, Ala. Code §§22-22A-1 to 22-22A-15 (2006 Rplc. Vol. and 2007 Cum. Supp.), and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: DRAFT

WEYERHAEUSER NR COMPANY
MILLPORT, ALABAMA
(PERMIT NO. 408-S003-X025)
PROVISOS

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.
2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.
3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.
4. The Permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.
5. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.
6. In the event there is a breakdown of equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within an additional 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.
7. This process, including all air pollution control devices and capture systems for which this permit is issued, shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.
8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.
9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.
11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.
12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.
13. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

- (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.
- (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).
- (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.
- (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

14. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

- 15. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.
- 16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

- (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;
- (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;
- (c) by paving;
- (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

- 17. Precautions shall be taken by the Permittee and its personnel to ensure that no person shall ignite, cause to be ignited, permit to be ignited, or maintain any open fire in such a manner as to cause the Department's rules and regulations applicable to open burning to be violated.
- 18. The Permittee shall not cause or permit the emissions of particulate matter in any 1-hour period from this process to exceed the amount determined by use of the following equation:

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

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

- 19. The Permittee shall not cause or allow these sources of particulate emissions to discharge more than one 6-minute average opacity greater than 20% in any 60-minute period. At

no time shall these sources discharge a 6-minute average opacity of particulate emissions greater than 40%. Opacity will be determined by 40 CFR Part 60, Appendix A, Method 9.

20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.
21. The Permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.

PSD Synthetic Minor Source Limitation

22. The Permittee shall not cause or allow the particulate matter emission rate from the cyclones (Emission Points PM-1 and PM-2) to exceed 5.0 lb/hr, as measured in accordance with 40 CFR Part 60, Appendix A, Method 5. Alternate test methods may be used provided prior approval by the Air Division is granted.

Monitoring, Recordkeeping, and Reporting

23. The following “emission monitoring” requirements apply to this process:
 - a) While the process is operating, someone familiar with the process shall observe the visible emissions from the cyclones at least weekly during daylight hours for greater than normal visible emissions as determined by previous observations of normal operation.
 - b) Whenever observed visible emissions are greater than normal, 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.
 - c) The cyclones shall be inspected for proper operation and cleaned, if needed, at least annually, but more frequently if greater than normal visible emissions are observed.
24. The Permittee shall maintain records, including dates, times, and results of all visible emissions observations; corrective actions taken for greater than normal visible emissions; and cyclone inspections, cleanings, and emissions-related maintenance in a permanent form suitable for inspection for a period of 5 years from the date of generation of each record. The records shall be made available for inspection upon request.
25. The Permittee shall submit a Semiannual Monitoring Report, as required by General Permit Proviso No. 22(a), no later than 60 days after the end of each semiannual reporting period (January 1st to June 30th and July 1st to December 31st). The report shall:

- a) Certify whether the emission monitoring requirements were accomplished as required, and if not, describe the date and reason any required monitoring was not accomplished;
 - b) Provide the date, time, and duration of any instance that greater than normal visible emissions were observed from the cyclone;
 - c) Provide the nature and date of any corrective actions taken or preventative measures adopted following an observation of greater than normal visible emissions; and
 - d) Provide the dates of any inspections and/or cleanings performed during the reporting period.
26. The Permittee shall submit an Annual Compliance Certification for this process to the Air Division as part of the Annual Compliance Certification required by the Permittee's Major Source Operating Permit. This report shall include the following for this process:
- a) The identification of each term or condition of this permit that is the basis of the certification.
 - b) The compliance status, whether continuous or intermittent.
 - c) The method(s) used for determining the compliance status of the source, currently and over the reporting period.
 - d) Other facts the Department may require to determine the compliance status of the source.

The compliance certification shall contain certification by a responsible official of truth, accuracy and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

DRAFT
Date