

Statement of Basis
Coastal Forest Products, LLC
Chapman, Butler County, Alabama
Facility/Permit No. 203-S001

This draft Title V Major Source Operating Permit (MSOP) renewal is issued 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. The current MSOP was issued on February 10, 2015, and will expire on December 27, 2019. This is the fourth renewal of the facility's Title V MSOP. The following modifications have been made to the current MSOP since its issuance:

- November 6, 2015: 502 (B) 10, flexibility modification for replacement of the sawmill chipper cyclone (EP 018);
- May 16, 2016: Minor modification to incorporate conditions of Air Permits X033 and X034 for the diversion of the hot exhaust gases from three existing veneer dryers to both of the facility's boilers, and for the addition of a new fuel silo with cyclone;
- March 1, 2017: Administrative amendment of MSOP to include the Plyform Oil Station (Unit 029) as a Group 1 coating operation as defined in the Plywood and Composite Wood Products MACT;
- April 27, 2018: 502 (B) 10 flexibility modification for the rearrangement of the Plywood Mill Operations (Units 017, 021 and 022) pneumatic transfer lines to three existing baghouses (Emission Points EU-021, EU-022 and EU-017).

Coastal Forest Products (CFP), Inc. produces southern pine plywood and lumber. The significant sources of air pollutants at this facility are a 121.2 MMBtu/hr wood-fired boiler, a 63.1 MMBtu/hr wood-fired boilers, three steam-heated lumber dry kilns, a planer mill with pneumatic transfer system, three veneer dryers, two plywood presses, sawmill operations, plywood mill operations, miscellaneous coating operations, a 15,000 gallon resin storage tank, a 230 hp diesel fire water pump, and a 682 hp diesel-fired emergency generator. Since the April 2018 Title V MSOP modification, the facility made the following changes which will be incorporated into the MSOP:

- Installed an RCO to control emissions from the existing veneer dryers (Air Permit X035).
- Determined the maximum firing rate of Unit 001 is 121.2 MMBtu/hr instead of 103.5 MMBtu/hr.
- Modified the Compliance Assurance Monitoring to reflect the requirements of 40 CFR Part 63 Subpart DDDDD, the "Boiler MACT".

Title V

Based on the Title V permit application, this facility is a major source for particulate matter,

volatile organic compounds, oxides of nitrogen, carbon monoxide, methanol, hydrogen chloride, and combined total HAP.

PSD

This facility is located in an attainment area for all criteria pollutants, and its operations are not one of the 28 listed major source categories. It is considered a major source for PSD regulations as its facility-wide potential emissions of PM, CO, and VOC are greater than 250 TPY. The following processes have synthetic minor limits which were established to avoid undergoing PSD when the processes were constructed and/or modified:

- Lumber Dry Kiln Nos. 1, 2, and 3 each have a VOC emission limit of 5.36 lb/MBF and a cumulative throughput limit of 90,000 MBF during any consecutive 12-month period;
- Planer Mill has a PM emission limit of 2.83 lb/hr;
- Veneer Dryer Nos. 1, 2 and 3 each have limits as outlined in the following table:

Emission Unit	Pollutant	Limit
20-Section Veneer Dryer	PM	0.90 lb/hr
	PM ₁₀	2.63 lb/hr*
	PM _{2.5}	1.99 lb/hr*
	VOC	6.9 lb/hr
16- Section Veneer Dryer	PM	0.72 lb/hr
	PM ₁₀	2.1 lb/hr*
	PM _{2.5}	1.59 lb/hr*
	VOC	5.52 lb/hr
12-Section Veneer Dryer	PM	0.54 lb/hr
	PM ₁₀	1.58 lb/hr*
	PM _{2.5}	1.2 lb/hr*
	VOC	4.14 lb/hr

*Including condensable particulate matter

- Sawmill Operations-Sawmill Chipper Cyclone has a PM emission limit of 7.0 lb/hr;
- Sawmill Operations-Fuel Silo Cyclone has a PM emission limit of 9.5 lb/hr;
- Plywood presses have a production limit of 280,000 MSF on a 3/8” basis during any consecutive 12-month period;
- 682 Hp Detroit Diesel-Fired Emergency Generator has an operational limit of 500 hours during any consecutive 12-month period.

MACT

PCWP MACT

As a major source of HAP, all of the processes associated with the plywood manufacturing at this facility (except the boilers) are considered affected sources under the National Emission Standards for Hazardous Air Pollutants for Plywood and Composite Wood Products, 40 CFR

Part 63, Subpart DDDD [adopted by reference at ADEM Admin. Code r. 335-3-11-.06(81)], the “PCWP MACT”. The facility was required to be in compliance with the applicable standards by October 1, 2008. The only PCWP processes subject to any compliance or work practice standards are the veneer dryers and miscellaneous coating operations.

Veneer Dryers

On January 8, 2019, Air Permit X035 (*Three Steam-Heated Veneer Dryers with RCO*) was issued to CFP for the construction of a ducting system that would route the emissions from the hot section of the veneer dryers to a Regenerative Catalytic Oxidizer. The emissions were previously routed to the boiler fireboxes. On August 26, 2019, the facility conducted Method 25A testing on the unit which demonstrated the RTO had an average Destruction and Removal Efficiency (DRE) of 92.3%, which is greater than the minimum DRE (90%) required by Subpart DDDD.

On November 7, 2008, the facility submitted a Notice of Compliance Status and Softwood Veneer Dryer Fugitive Emissions Minimization Plan, indicating they were in compliance with all applicable requirements. The facility submitted an updated Notice of Compliance Status on September 5, 2019, to include the results of the August 26, 2019, testing. The performance test established a minimum 3-hour operating temperature for the RCO at or above 725 °F which the facility would be required to monitor. The facility would be required to demonstrate continuous compliance with Subpart DDDD for the veneer dryers in accordance with the following:

- Minimize fugitive emissions,
- Check the activity level of the RCO catalyst at least every 12 months,
- Develop and maintain a written startup, shutdown, and malfunction plan (SSMP) in accordance with the requirements of §63.6(e)(3),
- Maintain all of the applicable records specified in 40 CFR §63.2282 and Tables 7 and 8 to Subpart DDDD,
- Submit all of the applicable reports specified in 40 CFR §63.2281 and Table 9 to Subpart DDDD,
- Report each instance in which the selected compliance option or operating requirement was not met as specified in 40 CFR §63.2271(b),
- Report any deviation in accordance with 40 CFR §63.2281,
- Comply with the applicable notification requirements in 40 CFR §63.2280, reporting requirements in 40 CFR §63.2281 and Table 9 to Subpart DDDD, and the recordkeeping requirements in 40 CFR §63.2282 and §63.2283.

Miscellaneous Coating Operations

The moldicide station, plyform oil station, logo painting station, plywood patch station, and grade stamping are affected sources under Subpart DDDD as they would be classified as miscellaneous coating operations. Subpart DDDD requires that Group 1 miscellaneous coating operations utilize non-HAP coatings as defined in § 63.2292 (a

coating with HAP contents below 0.1 percent by mass for Occupational Safety and Health Administration-defined carcinogens as specified in 29 CFR 1910.1200(d)(4), and below 1.0 percent by mass for other HAP compounds) and keep records showing that the facility is using non-HAP coatings. Provisions would be included in the MSOP for the logo painting station, plyform oil station, and grade stamping that would include these requirements. The remaining processes are not subject to the Group 1 miscellaneous coating operation requirements. The facility submitted a Notification of Compliance Status for the Miscellaneous Coating Operation processes on November 21, 2007.

RICE MACT

This facility utilizes an emergency 250 Hp diesel-fired water pump engine and a 682 Hp diesel-fired emergency generator. The facility is therefore subject to 40 CFR 63, Subpart ZZZZ, the *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines* (the “RICE MACT”) as a major source of HAP. The engines are affected sources under Subpart ZZZZ; however, in accordance with 40 CFR §63.6590(b)(3) an existing emergency stationary RICE has no applicable requirements under Subpart ZZZZ or 40 CFR 63 Subpart A provided the facility complies with the following criteria:

- (a) The permittee shall operate this engine in accordance with the criteria specified in the definition of “emergency stationary RICE” in §63.6675;
- (b) The permittee shall operate this engine only for the purposes and durations described in §63.6640(f)(1) through (3), which include: 1) emergency situations (no time limit under Subpart ZZZZ), 2) maintenance checks and readiness testing, emergency demand response (up to 100 hours per calendar year), and 3) operation in non-emergency situations (up to 50 hours per calendar year which shall be counted towards the 100 hours per calendar year allowed for maintenance, and testing and emergency demand response provided in §63.6640(f)(2)); and
- (c) The permittee shall not operate or shall not contractually obligate the engine to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii).
- (d) If the permittee does not operate this engine according to the requirements in paragraphs §63.6640(f)(1) through (3) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

Boiler MACT

The boilers at this facility are subject to 40 CFR 63 Subpart DDDDD, the *National Emission Standards for Major Sources: Industrial/Commercial/Institutional Boilers and Process Heaters*. The facility submitted an Initial Notification as required by Subpart DDDDD on February 2, 2012. The boilers are considered existing sources as they were constructed prior to June 4, 2010. Each boiler is equipped with a wet scrubber and an O₂ trim system.

The boilers are classified as existing hybrid suspension/grate burners designed to burn wet biomass/bio-based solid. CFP has elected to demonstrate continuous compliance through initial and ongoing performance stack testing, performing 5-year tune-ups, conducting required monitoring, and the submittal of required notifications and reports as specified under the Boiler MACT.

The wood-fired boilers are subject to emission limitations for CO and PM as listed in Table 2. The CO emissions must not exceed 3500 ppm by volume on a dry basis corrected to 3 percent oxygen. The PM emissions must not exceed 0.44 lb per MMBtu of heat input. As units designed to burn solid fuel, the boilers are subject to an emissions limitation for hydrochloric acid (HCl) and mercury (Hg). The HCl emissions must not exceed 0.022 pounds per MMBtu of heat input and Hg must not exceed 0.000057 pounds per MMBtu of heat input. CFP has elected to demonstrate compliance with these limitations through stack testing, using the methods listed in Table 2 of Subpart DDDDD, or through fuel analysis in accordance with Table 6 of Subpart DDDDD.

The wood-fired boilers are subject to the work practice standards listed in Table 3 of the subpart. CFP must conduct a tune-up of the boilers every five years as specified in 40 CFR §63.7540. Each tune-up must be conducted no more than 61 months after the previous tune-up according to 40 CFR §63.7515(d). Additionally, CFP must conduct a one-time energy assessment performed by a qualified energy assessor. These assessments were performed on January 11-12, 2016, in accordance with 40 CFR §63.7510(e) and Table 3 of Subpart DDDDD.

The wood-fired boilers are subject to the operating limitations listed in Table 4 of Subpart DDDDD. For the PM scrubber control, CFP must maintain the 30-day rolling average pressure drop and the 30-day rolling average liquid flow rate at or above the lowest one-hour average pressure drop and the lowest one-hour average liquid flow rate, respectively, measured during the performance test demonstrating compliance with the PM, Hg, and HCl emission limitation according to 40 CFR §63.7530(b) and Table 7 of Subpart DDDDD. The facility must maintain the 30-day rolling average operating load of each unit such that it does not exceed 110 percent of the highest hourly average operating load recorded during the performance test. CFP utilizes an oxygen trim system for the wood-fired boilers as specified in 40 CFR §63.7525(a)(7). The facility must operate the oxygen trim system with the oxygen level set at or above the lowest hourly average oxygen concentration measured during the CO performance test.

Performance testing must be completed in accordance with 40 CFR §63.7520 and Table 5 of Subpart DDDDD, on an annual basis. Annual performance tests must be completed no more than 13 months after the previous performance test, except as specified in 40 CFR §63.7515(b) through (e). Performance stack testing will be used to establish site-specific operating limits that apply to CFP in accordance with 40 CFR §63.7530(b). The facility must complete and submit the Notification of Compliance Status according to 40 CFR §63.7530 (e) and (f), and 40 CFR §63.7545(e). A Notification of Intent to conduct performance testing must be submitted at least 60 days before the performance test is scheduled to begin. CFP has completed the initial testing for compliance with the Subpart.

CFP must monitor and collect data according to 40 CFR §63.7535 and the site-specific monitoring plan. 40 CFR §63.7540 and Table 8 of Subpart DDDDD provides detailed monitoring requirements for continuous compliance monitoring. Deviations must be reported according to the requirements in 40 CFR §63.7550. Reporting requirements listed in 40 CFR §63.7550 and Table 9 of Subpart DDDDD requires semiannual reporting for the wood-fired boilers. Each compliance report must cover the semiannual reporting period from January 1st through June 30th or July 1st through December 31st. Each semiannual compliance report must be postmarked or submitted no later than July 30th or January 30th, whichever is the first date following the end of the semiannual reporting period. Each semiannual report must contain the information outlined by 40 CFR §63.7550(c).

NSPS

The boilers are not subject to NSPS, Subpart Dc as they were installed prior to the June 1989 applicability date. The resin tank is not subject to NSPS Subpart Kb since its capacity is less than 19,813 gallons.

State Regulations

The particulate matter (as TSP) from each boiler is limited to 0.20 gr/dscf, adjusted to 50% excess air, as outlined in ADEM Admin. Code 335-3-4-.08(2)(d). The sulfur dioxide emissions from each boiler are limited to 4 lb/MMBtu as outlined in ADEM Admin. Code 335-3-5-.01(b).

The lumber dry kilns, planer mill, veneer dryers, plywood presses, sawmill operations, and plywood mill operations are each subject to the particulate matter (as TSP) emission limitations of ADEM Admin. Code 335-3-4-.04 for Process Industries-General. The allowable emission rate for each process is calculated using one of the following process weight equations:

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

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

where E = Emissions in pounds per hour

P = Process weight per hour in tons per hour

ADEM Admin. Code r. 335-3-4-.01(1) sets forth a visible emissions standard which states that each stationary source at the facility shall not emit particulate of an opacity greater than twenty percent (20%) more than once during any 60-minute period; as determined by a six-minute average, and at no time shall emit particulate of an opacity greater than 40%, as determined by a six-minute average.

Emission Testing and Monitoring

Boilers

PM

CAM

The boilers are equipped with Ducon Venturi Scrubbers to control particulate emissions. Since the post-controlled particulate emissions from the boilers are greater than the applicable major source thresholds, the boilers would be subject to the requirements of 40 CFR 64, Compliance Assurance Monitoring for large pollutant-specific emission units. As the boilers would be subject to 40 CFR Part 63, Subpart DDDDD, the Boiler MACT, the monitoring requirements for CAM would be satisfied by the MACT monitoring requirements.

If CFP determines through emission testing that indicator values other than those specified above are more appropriate, they shall submit a notification of the fact to the Air Division within 30 days of determining that a new indicator value(s) should be established. The notification shall include the data supporting the validity of the newly established indicator value(s).

The scrubbers shall be equipped with audible alarms which sound if the scrubber differential pressure or water flow rate drops below the minimum established parametric rates.

Upon detecting an excursion or exceedance of any operating parameter as indicated by the required monitoring, CFP shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

The response to any excursion or exceedance of the required monitoring parameters shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operation returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

Determination of whether the owner or operator has used acceptable procedures in response to an excursion or exceedance shall be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

Properly maintained devices shall be utilized to monitor the pressure differential across and water flow to the wet scrubber. The devices shall be calibrated in accordance with manufacturer's recommendations and necessary parts maintained for routine repair.

Records of excursions and exceedances, the causes of the events, and the corrective action measures taken shall be maintained in a form suitable for inspection for a period of five years from the date of generation.

Periodic Monitoring

The requirements for periodic monitoring for the boilers regarding PM emissions would be satisfied by the monitoring and reporting requirements as discussed in the CAM section of this document. No other periodic monitoring would be required for the boilers.

Testing

During testing conducted on the boilers on February 8 and 10, 2017, the facility demonstrated compliance with the applicable standards for particulate matter

(PM), carbon monoxide (CO), mercury (Hg), and hydrogen chloride (HCL). The facility also established parametric monitoring action levels for the scrubber. The testing indicated the following emission rates during the testing period:

Unit 001

Pollutant	Measure Results	Boiler MACT Emission Limit
PM	0.105 lb/MMBtu	0.44 lb/MMBtu
HCL	0.00007 lb/MMBtu	0.022 lb/MMBtu
Hg	6.34E-07 lb/MMBtu	5.7E-06 lb/MMBtu
CO	3,445 ppm @3% O ₂	3,500 ppm @ 3% O ₂

Unit 003

Pollutant	Measure Results	Boiler MACT Emission Limit
PM	0.193 lb/MMBtu	0.44 lb/MMBtu
HCL	0.00009 lb/MMBtu	0.022 lb/MMBtu
Hg	5.3E-07 lb/MMBtu	5.7E-06 lb/MMBtu
CO	3,357 ppm @3% O ₂	3,500 ppm @ 3% O ₂

The following parameters were established during testing of the boilers for the purpose of demonstrating continuous compliance in accordance with Subpart DDDDD:

	Boiler No. 1	Boiler No. 3
Max. 30-Day Rolling Average Steam Flow Rate (PPH)	87,864	37,353
Min. O ₂ Trim System Set Point (%)	3.94	5.2
Min. 30-Day Rolling Average Scrubber Flow Rate (gpm)	558.0	494.1
Min. 30-Day Rolling Average Scrubber Differential Pressure (in. H ₂ O)	14.2	12.4

No additional testing would be required at this time. However, the facility would be required to conduct testing for the above pollutants in 2020 to demonstrate continuous compliance with the requirements of the Boiler MACT

Sulfur Dioxide

The boilers are also subject to the SIP SO₂ allowable emission rate of 4.0 lb/MMBtu of heat input. Wood waste is the primary fuel source for these boilers. The facility is allowed under certain conditions to burn used oil generated on site as a result of spills, etc., for the purpose of disposal and energy recovery.

Records indicating the quantity, duration, and date used oil is burned would be required. Due to the minimal expected SO₂ emissions from the combustion of wood waste and from the negligible amount of used oil combusted, no further emission testing or monitoring for SO₂ is considered necessary.

Lumber Dry Kilns

The lumber in the kilns is dried via radiant heat from closed steam coils resulting in negligible particulate emissions. Emissions from the kiln vents are primarily condensed water vapor and VOC driven off from the drying lumber.

Periodic Monitoring

Due to the nature of the emissions from the kilns, emission testing and monitoring for the SIP visible emission and particulate standards is not considered practical. The facility would be required to determine compliance with the production limitation within 10 days of the end of each calendar month.

Testing

Emission testing for VOC would not be required at this time as emission testing at similar sources at other facilities indicate that these processes are capable of complying with this emission limit.

Planer Mill

This process is controlled by a baghouse.

Periodic Monitoring

The facility would be required to determine compliance with the operating hour limitation within 10 days of the end of each calendar month as emission monitoring.

To demonstrate compliance with the visible emissions standard, emission monitoring for the baghouse would include a weekly observation of the baghouse for any visible emissions during daylight hours while the unit is operating.

CFP would be required to take corrective action to eliminate emissions as soon as practicable but no longer than 24 hours from the time of the observation if emissions are observed, followed by an additional observation to confirm that emissions have been eliminated. The baghouse would be inspected for proper operation and cleaned at least annually and whenever observed visible emissions are observed.

CFP would be required to maintain records of the weekly observations, inspections, corrective actions, and emissions-related maintenance performed in a logbook for five years from the date of generation of each record.

Testing

Emission testing for PM would not be required at this time for this process as it would be expected to be able to comply with the applicable emission limits since a baghouse is utilized to control emissions.

Veneer Dryers

VOC

Periodic Monitoring

The periodic monitoring requirements for these units would be satisfied by the monitoring requirements of the PCWP MACT.

Testing

Emission testing for VOC will not be required at this time as the facility has previously demonstrated compliance through stack testing.

PM/Visible Emissions

Emissions from the dryer vents are primarily condensed water vapor and VOC driven off from the drying veneer. Due to the nature of the emissions from the dryers, emission testing and monitoring for the SIP visible emissions and particulate standards is not considered practical.

Sawmill Operations

Particulate emissions from the sawmill processes are controlled by two cyclones, one for the fuel silo and one for the sawmill chipper.

Periodic Monitoring

For compliance with the visible emission standard, emission monitoring would include weekly observations of the cyclones for greater than normal visible emissions as determined by previous observations.

CFP would be required to take corrective action to reduce emissions to normal as soon as practicable but no longer than 24 hours from the time of observation if emissions are greater than normal, followed by an additional observation to confirm that emissions have returned to normal. Each cyclone would be inspected for proper operation and cleaned at least annually and whenever observed visible emissions are greater than normal.

CFP would be required to maintain records of the weekly observations, inspections, corrective actions, and emissions-related maintenance performed in a logbook for five years from the date of generation.

Testing

Emission testing for PM would not be required at this time for these processes as they would be expected to comply with the applicable emission limits since cyclones are utilized to control emissions.

Plywood Mill Operations

Particulate emissions from these processes are controlled by three baghouses.

Periodic Monitoring

To demonstrate compliance with the visible emissions standard, emission monitoring would include weekly observations of the baghouses for any visible emissions during daylight hours while the unit is operating.

CFP would be required to take corrective action to eliminate emissions as soon as practicable but no longer than 24 hours from the time of observation if emissions are observed, followed by an additional observation to confirm that emissions have been eliminated. Each baghouse would be inspected for proper operation and cleaned at least annually and whenever visible emissions are observed.

CFP would be required to maintain records of the weekly observations, inspections, corrective actions, and emissions-related maintenance performed in a logbook for five years from the date of generation.

Testing

Emission testing for PM would not be required at this time for these processes as they would be expected to be able to comply with the applicable emission limits since baghouses are utilized to control emissions.

Public Notice

The renewal of this Title V MSOP would require a 30-day public comment period and a 45-day EPA review period.

Recommendation

I recommend that Coastal Forest Products' Title V MSOP be renewed with the requirements noted above pending the resolution of any comments received during the 30-day public comment period and the EPA 45-day review.



Lester Meredith
Chemical Branch
Air Division

December 12, 2019
Date

VLM/vlm