

STATEMENT OF BASIS

MDLG, Inc., dba Phenix Lumber Company
Phenix City, Russell County, Alabama
Facility No. 211-S001

This draft first renewal Title V Major Source Operating Permit (MSOP) is issued under the provisions of ADEM Admin. Code chap. 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 permit application was due by July 9, 2021. The permit application was received on July 8, 2021. Updates to the application were received on July 20 and 21, 2021, and August 3, 2021. The application was considered complete on August 3, 2021.

Facility Operations

Phenix Lumber Company (PLC) operates a softwood lumber sawmill in Phenix City, Alabama. The significant sources of air pollutants at this facility are a 46.4 MMBtu/hr wood-fired boiler with a multiclone, two (2) 120 MBF steam-heated lumber dry kilns, and a planer mill with cyclone. The debarking and sawmill operation with a chipper with cyclone is also considered to be a significant source of air pollutants. Insignificant emission sources at this facility include internal combustion engines, loading and storage of organic compounds, unpaved roads, ash handling, dry kiln bundling, and miscellaneous wood storage and handling.

Changes proposed for Renewal MSOP

The addition of compliance testing once per permit cycle for the 46.4 MMBtu/hr wood-fired boiler.

Applicability: Federal Regulations

Title V

PLC is considered a major source under Title V regulations because potential emissions for particulate matter (PM), carbon monoxide (CO), and volatile organic compounds (VOC) each exceed the 100 TPY major source threshold. It is considered a minor source of Hazardous Air Pollutants (HAP) due to facility-wide emissions being less than 10 TPY for any single HAP and 25 TPY for any combination of HAPs. Nevertheless, in order to ensure the facility would not be subject to 40 CFR Part 63, Subpart DDDDD, the facility limited individual HAP facility-wide to 9.5 TPY and combined HAP be limited to 24.5 TPY.

Prevention of Significant Deterioration (PSD)

The facility operations are not one of the 28 listed major source categories, and the facility is located in an attainment area for all criteria pollutants. Therefore, the major source thresholds of concern are 250 TPY for criteria pollutants. The facility is a minor source under PSD regulations, as no criteria pollutant potential emissions exceed the major source thresholds.

NSPS

The 46.4 MMBtu/hr wood-fired Boiler is not subject to the New Source Performance Standards for boilers, 40 CFR 60, Subpart Dc due to its manufacture date prior to the June 9, 1989, applicability date.

MACT

PLC is an area source of HAP; therefore, the wood-fired boiler is subject to 40 CFR 63, Subpart JJJJJ, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers at Area Sources. The boiler is classified as an existing source. The boiler is subject to a work practice standard requiring biennial tune-ups, conducted in accordance with 40 CFR §63.11223. The first biennial tune-up required by 40 CFR §63.11196 was conducted on May 7, 2015. Each biennial tune-up is required no more than 25 months after the previous tune-up. The boilers are also subject to the general duty to minimize emissions in accordance with 40 CFR §63.11205(a).

PLC is required to comply with the notification, reporting, and recordkeeping requirements outlined in 40 CFR §63.11225. The Notification of Compliance Status specified in 40 CFR §63.11196, which indicates that the required initial tune-up has been conducted, was submitted on June 30, 2015. The facility is required to keep a copy of each notification and report submitted to comply with Subpart JJJJJ, and all documentation supporting any Initial Notification of Applicability or Notification of Compliance Status that is submitted. In addition, the facility is required to keep records of the occurrence and duration of each malfunction of the boiler, or of the associated air pollution control and monitoring equipment. Also, the facility is required to maintain records of actions taken during periods of malfunction to minimize emissions, including corrective actions to restore the malfunctioning boiler to its normal or useful manner of operation. The records are required to be kept in a form suitable and readily available for expeditious review. Each record is required to be retained for a period of five (5) years following the date of each recorded action. For the first two (2) years of this five (5) year period, the records are required to be kept on-site.

The facility is required to conduct a performance tune-up and prepare a biennial compliance certification that indicates the facility complied with all the relevant standards and requirements of Subpart JJJJJ. These reports are not required to be submitted unless requested by the Air Division or EPA. The facility is required to keep records of the dates and procedures of each boiler tune-up and the fuel used by the boiler. PLC is required to submit biennial compliance certification reports in accordance with 40 CFR §63.11225(b).

Applicability: State Regulations

Particulate Matter

The wood-fired boiler is subject to the particulate matter (as TSP) emission limitations of ADEM Admin. Code r. 335-3-4-.08(2)(d), which limits each boiler to 0.20 gr/dscf, adjusted to 50%

excess air. The boiler is also subject to the State visible emissions standards of ADEM Admin. Code r. 335-3-4-.01(1).

The sawmill's chipper cyclone and planer mill's wood waste cyclone and the two (2) dry kilns are each subject to the particulate matter (as TSP) emission limitations of ADEM Admin. Code r. 335-3-4-.04(1) for Process Industries-General. The allowable emission rate for each process is calculated using the following process weight equation:

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

OR

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

Where E = Emissions in pounds an hour

P = Process weight in tons per hour

In addition to the above limitations, ADEM Admin. Code r. 335-3-4-.01(1) sets forth a visible emissions standard which states that each stationary source at the facility shall not emit particulate matter of an opacity greater than twenty percent (20%), as determined by a six-minute average and at no time shall a six-minute average opacity of particulate emissions be greater than forty percent (40%) from any source.

Sulfur Oxides (SO_x)

The wood-fired boiler is subject to the sulfur oxides (as SO₂) emission limitations of ADEM Admin. Code r. 335-3-5-.01(b), which limits the boilers to 4.0 lb/MMBtu heat input. However, emissions of SO₂ would be expected to be negligible since the boiler is only fired with wood.

Emission Testing and Monitoring

001 -- 46.4 MMBtu/hr Wood-Fired Boiler with Multiclone

This boiler is equipped with a multiclone for the removal of particulate emissions from the gas stream. It is expected to be able to continuously comply with State particulate emission standards. No initial compliance test would be required by the MSOP. However, if emission problems should occur, testing may be required at that time.

- The instant opacity of the boiler/multiclone's stack emissions shall be determined by a qualified visible emissions observer to read visible emissions at least once per day during the daylight hours, while the boiler is operating. If the instant opacity is greater than 10%, an individual qualified to read visible emissions shall conduct a Method 9 visible emissions observation within 30 minutes for a minimum of 12 minutes.
- If the average opacity during the Method 9 visible emissions observation exceeds 10% opacity, corrective action shall be initiated as soon as practicable but no longer than 24 hours after the observation to identify and correct the problem, followed by an additional

Method 9 for 12 minutes to confirm that the visible emissions have been reduced to no greater than 10% opacity.

- The multiclone shall be inspected for proper operation at least annually, but more frequently whenever visible emissions greater than 10% opacity are determined by a Method 9 Visible Emissions Observation. If the results of the inspection indicate that cleaning or maintenance is needed, such action shall be initiated as soon as practicable but no longer than 24 hours after completing the inspection.

Due to the minimal expected SO₂ emissions from the combustion of wood waste, no emission testing or monitoring for SO₂ is considered necessary.

002-- 120 MBF Steam-heated Dry Kiln No. 1

003 -- 120 MBF Steam-heated Dry Kiln No. 2

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. 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. However, to remain in compliance with the HAP limitations PLC is limited to 36 million board feet (MMBF) of combined production of lumber for the dry kilns during any consecutive 12-month period. Within fifteen (15) days of the end of each calendar month, PLC shall calculate, the combined lumber throughput for the dry kilns for the previous calendar month and the consecutive 12-month period to determine compliance with the throughput limitation.

004 -- Planer Mill with One (1) Wood Waste Cyclone

This process utilizes a cyclone in the transfer of wood waste to a storage bin. For compliance with the particulate and visible emission standards, emission monitoring for the cyclones would include:

- While the process is operating, someone familiar with the process shall observe the visible emissions from the cyclone at least daily during daylight hours for greater than normal visible emissions as determined by previous observations of normal operations.
- Whenever observed visible emissions are greater than normal, corrective action to minimize emissions shall be initiated within 24 hours, followed by an additional observation to confirm that emissions are reduced to normal.
- The cyclone shall be inspected for proper operation at least annually, but more frequently whenever observed visible emissions are greater than normal. If the results of the inspection indicate that cleaning or maintenance is needed, such action shall be initiated within 24 hours of completing the inspection.

005 -- Debarking and Sawmill Operations with Chipper and Cyclone

This process utilizes a chipper with cyclone in the transfer of wood waste to a fuel bin. Other emissions from this operation are fugitive. For compliance with the particulate and visible emission standards, emission monitoring for the cyclones would include:

- While the process is operating, someone familiar with the process shall observe the visible emissions from each cyclone at least daily during daylight hours for greater than normal visible emissions as determined by previous observations of normal operations.
- Whenever observed visible emissions are greater than normal, corrective action to minimize emissions shall be initiated within 24 hours, followed by an additional observation to confirm that emissions are reduced to normal.
- The cyclone shall be inspected for proper operation at least annually, but more frequently whenever observed visible emissions are greater than normal. If the results of the inspection indicate that cleaning or maintenance is needed, such action shall be initiated within 24 hours of completing the inspection.

Recordkeeping and Reporting Requirements

The facility would be required to maintain records for the required emission monitoring of Emission Unit Nos. 001, 004, and 005 on-site in a permanent form suitable for inspection and readily available for at least five (5) years from the date of generation of each record. These records would include (as applicable):

- The date, time, and results of each emission observation;
- The date(s), nature, and results of any corrective action taken when deviations from an emission monitoring parameter were observed; and
- The date(s) the control device was inspected for proper operation and, if the results of the inspection indicated that cleaning or emission-related maintenance was needed, the date(s) and nature of the cleaning/maintenance performed.

For Emission Unit Nos. 002 and 003 (2 Dry Kilns), the facility would be required to maintain records of lumber production on a 12-month rolling total basis to determine annual VOC and HAP emissions applicable to these units. The permittee is required to submit a report to the Air Division by March 1st of each year that includes the 12-month rolling totals for lumber throughput calculated during the previous calendar year (i.e. one 12-month rolling total per month). The facility would also be required to maintain these records on-site in a permanent form suitable for inspection and readily available for inspection for at least five (5) years from the date of generation of each record.

The facility would be required to include the following information (as applicable) in the Semiannual Monitoring Report required by General Permit Proviso No. 21:

- A statement as to whether all emission observations were completed as required during the reporting period, and if not, the date(s) and reasons(s) why the monitoring was not performed;
- A statement as to whether the annual inspection of the cyclone/multiclone was accomplished during the reporting period, and if so, the date and results of the inspection;
- The date(s), nature, and results of any corrective action taken when (1) a deviation from an emission monitoring parameter was observed or (2) an inspection of the cyclone/multiclone indicated that cleaning or emission-related maintenance was needed; and
- The lumber production for each consecutive 12-month period during the reporting period.

Compliance Assurance Monitoring (CAM)

The 46.4 MMBtu/hr wood-fired boiler (001) is equipped with a multiclone to remove particulate matter in the gas stream. Similarly, the chipper cyclone (005) is used to remove particulate matter and direct it to the fuel bin. Both processes have a pre-control PTE greater than the applicable major source threshold (100 TPY). However, the boiler multiclone and chipper cyclone are inherent to the processes and therefore not subject to CAM applicability. The planer mill cyclone (004) emissions are less than the applicable major source threshold (100 TPY) and are not subject to CAM.

Recommendation

Based on the above analysis, I recommend that Phenix Lumber Company be issued their first renewal Major Source Operating Permit (211-S001) pending the resolution of any comments received during the 30-day public comment period and the 45-day EPA review.



Corey D. Ohme
Chemical Branch
Air Division

October 20, 2021
Date