

STATEMENT OF BASIS
M.C. DIXON LUMBER COMPANT
EUFAULA, ALABAMA
FACILITY NO. 601-S008

This draft Title V Major Source Operating Permit (MSOP) 4th renewal is issued under the provisions of ADEM Admin. Code r. 335-3-16-.13. 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 effective on November 24, 2015, and will expire on February 3, 2020. There are no changes with this renewal. The previous renewal with significant modification (modified on March 21, 2018) incorporated Air Permit No. X008 (emergency generator).

Current Operation

M.C. Dixon Lumber Company (Dixon) operates a softwood sawmill in Eufaula, Alabama. The significant sources of air pollutants at this facility are a 90 MMBtu/hr wood-fired boiler that provides indirect heat to a 140 MBF lumber dry kiln, a 147 MBF lumber dry kiln, and a 76 MBF lumber dry kiln; a dry lumber planer with two (2) cyclones; a 377 brake horsepower emergency generator; and fugitive emissions from debarking and cutting operations. Insignificant emission sources at this facility include bark/sawdust handling and transfer systems; lumber sorting, stacking, and grading; and wood waste storage.

Applicability: Federal Regulations

Prevention of Significant Deterioration (PSD)

Dixon is not one of the listed 28 source categories; therefore, the major source thresholds of concern are 250 TPY for criteria pollutants. This facility is currently a synthetic minor source for PSD because Dixon requested kiln and steam production limitations to reduce the facility-wide VOC, Methanol, and total HAP emissions.

Title V

This facility is a major source under Title V regulations because potential emissions for particulate matter (PM), sulfur dioxide (SO₂), carbon monoxide (CO), and volatile organic compounds (VOC) each exceed the 100 TPY major source threshold.

It is also a synthetic minor source of Hazardous Air Pollutants (HAP) because individual HAP emissions are less than 10 TPY (methanol ~7.97 TPY), and the total HAP potential emissions are less than 25 TPY (combined PTE of ~ 14.60 TPY). The HAP emissions are based on a kiln production limitation and steam production limitation established by Air Permit Nos. X006 and X007, respectively. The kiln limit is 83,133,134 BF/yr on a consecutive 12-month period and the boiler is limited to 400,000,000 pound of steam per year.

New Source Performance Standards (NSPS)

The wood-fired boiler was installed prior to the applicability date for NSPS, Subpart Dc; therefore, it is not subject to these federal standards. The engine is not subject to 40 CFR Part 60, Subpart III, “Standards of Performance for Stationary Compression Ignition Internal Combustion Engines”, because it was constructed prior to the June 12, 2006, applicability date.

National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 63

40 CFR 63, Subpart JJJJJ, National Emission Standards for Hazardous Air Pollutants Industrial, Commercial, and Institutional Boilers at Area Sources (Area Source Boiler MACT)

Dixon is an area source of HAPs, the 90 MMBtu/hr wood-fired boiler with multiclone 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 and is subject to a work practice standards requiring biennial tune-ups conducted in accordance with 40 CFR §63.11223. Dixon’s initial notification, dated September 2, 2011, was received on September 8, 2011. The first biennial tune-up required by 40 CFR §63.11196 was conducted on September 7, 2015. Each biennial tune-up is required no more than 25 months after the previous tune-up. The second biennial tune-up was conducted on May 30, 2017. The most recent biennial tune-up was conducted in February 2019. The boiler is also subject to the general duty to minimize emissions in accordance with 40 CFR §63.11205(a). According to 40 CFR §63.11196, an energy assessment is required. In a letter dated August 5, 2015, the facility stated that the energy assessment had been conducted.

Dixon is required to comply with the notification, reporting, and recordkeeping requirements outlined in 40 CFR §63.11225. 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. Dixon is required to submit biennial compliance certification reports in accordance with 40 CFR §63.11225(b).

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 in accordance with 40 CFR §63.11255(d).

40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE MACT)

Any reciprocating internal combustion engine is an affected source under 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE MACT). The engine is considered an existing affected source because it was constructed before June 12, 2006. Therefore, the engine would be considered an existing emergency 2SRB engine less than 500 bhp located at an area source. This existing emergency RICE would be subject to the work practice requirements of Subpart ZZZZ, including the following:

- Change oil and filter every 500 hours of operation or annually, whichever comes first;
- Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first and replace as necessary;
- Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

Applicability: State Regulations

Particulate Matter

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

The planer mill cyclones and lumber 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:

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

Or

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

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

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

Sulfur Oxides (SO_x)

The wood waste boiler is subject to the sulfur oxides (as SO₂) emission limitations of ADEM Admin. Code r. 335-3-5-.01(b), which limits the boiler to 4.0 lb/MMBtu heat input. Because the

boiler is limited to firing only wood waste, it would be expected to be able to comply with this standard.

Although the engine is a fuel combustion source, it is not be subject to any particulate matter (as TSP) emission standard found in ADEM Admin. Code r. 335-3-4 or any sulfur dioxide (SO₂) emission standard found in ADEM Admin. Code r. 335-3-5, because it does not meet the definition of fuel-burning equipment. However, the engine is subject to the visible emissions standard found in ADEM Admin. Code r. 335-3-4-.01(1).

Emissions Monitoring

001 – Wood Waste Boiler (90 MMBTU/hr Wood Waste Boiler with Multiclone)

Emission monitoring for this unit would include the following:

- The instant opacity of the boiler/multiclone's stack emissions shall be determined by an individual qualified 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 15%, 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 15% 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 15% opacity.
- The multiclone shall be inspected for proper operation at least annually, but more frequently whenever observed visible emissions are greater than 15%. 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.
- The permittee shall not cause or allow the boiler to exceed 400,000,000 pounds of steam per year during any consecutive 12-month period.
- Within 10 days of the end of each calendar month, the permittee shall calculate the steam production for the boiler for the previous month and previous consecutive 12-month period and determine compliance with the production limitation.
- Should this facility, at any time, exceed any limit, the permittee shall notify the Air Division within two (2) working days of determining that the exceedance occurred.

002, 003, and 004 – Nos. 2, 3, and 4 Lumber Dry Kilns

Within 10 days after the end of each calendar month, Dixon is required to calculate the combined production from the lumber dry kilns for the previous month and the previous 12-month period

and determine compliance with the combined production limit. Since particulate emissions from the kilns are considered negligible, no emission monitoring is necessary for this unit.

005 – Planer Mill with Two (2) Cyclones

For compliance with the particulate and visible emission standards, emission monitoring for the cyclones includes:

- 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 as soon as practicable but no longer than 24 hours after the observation, followed by an additional observation to confirm that emissions are reduced to normal.
- The cyclones 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.

006 – Sawmill Operations

This unit has no applicable emission standards; therefore, no emission monitoring would be required.

008 – 377.16 Brake Horsepower Diesel-Fired Emergency Generator

Dixon is required to maintain on-site records pertaining to the operation and maintenance of the emergency generator. These records should include a maintenance plan (schedule, etc.), and operation times (emergency and non-emergency maintenance checks) per 40 CFR §§63.6625 and 63.6640. These records should be maintained on-site for the life of the unit. The facility must install a non-resettable hour meter if one is not already installed.

Dixon is required to maintain on-site records pertaining to the operation and maintenance of the emergency generator. These records should include a maintenance plan (schedule, etc.), and operation times (emergency and non-emergency maintenance checks) per 40 CFR §§63.6625 and 63.6640. These records should be maintained on-site for the life of the unit.

Recordkeeping and Reporting

The facility would be required to maintain records for the required emission monitoring of Emission Unit Nos. 001 and 005 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. 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.

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/multiclones was accomplished during the reporting period, and if so, the date and results of the inspection; and

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 cyclones/multiclone indicated that cleaning or emission-related maintenance was needed

The recordkeeping requirements for the emergency engine are outlined in 40 CFR §63.6675 and Table 6 of Subpart ZZZZ to demonstrate continuous compliance. Dixon is required to operate and maintain the engine according to the manufacturer's emission-related operation and maintenance instructions or to develop a maintenance plan, and to keep records of the maintenance conducted on the stationary RICE. For each period of operation, Dixon is required to record the length of operation and the reason the engine was in operation. For periods of operation designated as "emergency operation", Dixon is required to record what classified the operation as emergency. Dixon is required to maintain all reports (with supporting documentation), records pertaining to continuous compliance and records of all maintenance conducted must be maintained in a form suitable and readily available for expeditious review for a period of 5 years from the date of each record or report. They must be maintained on-site for at least 2 years and may be kept off-site for the remaining 3 years.

In accordance with 40 CFR §63.6675 and Footnote 2 of Table 2d of Subpart ZZZZ, Dixon is required to report any failure to perform a work practice, including instances when the work practice standard was not performed due to emergency operation or unacceptable risk under federal, state, or local law. Dixon is required to submit the report within two working days of the deviation. The management practice should be performed as soon as practicable after the deviation.

Dixon will also be required to keep records pertaining to work practices for the Emergency Generator that include the following:

- Change oil and filter every 500 hours of operation or annually, whichever comes first;
- Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and

- Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.
- During periods of startup, the facility will be required to minimize the engine's time spent at idle and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.

In addition, to maintain its classification as an "emergency" engine, this engine is limited to operating during the following:

- Emergency situations;
- Maintenance checks and readiness testing, not to exceed 100 hours per year; and
- Non-emergency situations, not to exceed 50 hours per year (those 50 hours are counted towards the 100 hours per year provided for maintenance and testing)

Emissions Testing

There are no testing requirements for the boiler or the emergency engine.

Recommendation

Based on the above analysis, I recommend that M.C. Dixon Lumber Company's existing Major Source Operating Permit (601-S008) be renewed pending a 30-day public notice period and a 45-day EPA review.

Corey D. Ohme
Chemical Branch
Air Division

Date