

# STATEMENT OF BASIS

**Cahaba Pressure Treated Forest Products, Inc.  
Brierfield, Bibb County, Alabama  
Facility/Permit No. 401-0011**

This 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. The current MSOP expires on August 25, 2019. The permit was modified on May 18, 2018, to increase the facility-wide creosote wood treatment limit from 3.665123 million (MM) ft<sup>3</sup>/yr to 5.40 MM ft<sup>3</sup>/yr.

## **Facility Operations**

Cahaba Pressure Treated Forest Products (CPTFP) produces dimensional lumber and treated pine utility poles. The significant sources of air pollutants at the facility include one wood-fired boiler, pole/saw mill, four steam-heated dry kilns, planer mill operation with cyclone, tie mill operation, four wood preserving and storage operations [creosote, pentachlorophenol, copper naphthenate, and chromated copper arsenate (CCA)], a wastewater treatment operation, and a gasoline storage tank.

## **Applicability: Federal Regulations**

### Title V

This facility is a major source under 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 a synthetic minor source for hazardous air pollutants (HAP) because the facility requested a production limit to restrict the HAP potential emissions below the 10/25 TPY major source threshold.

### 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 major source categories. Therefore, the major source threshold of concern is 250 TPY. The facility is a minor source for PSD because the facility-wide potential emissions of each criteria pollutant are less than 250 TPY.

### NSPS

The 28.7 MMBtu/hr wood-fired boiler (EU-002) is subject to the Standards of Performance for New Stationary Sources; Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Dc. Since the capacity of the boiler is <30 MMBtu/hr, the only requirement for this boiler under this standard is to maintain records of the fuel usage on either a daily or monthly basis. A 19.13 MMBtu/hr wood-fired boiler (EU-001) remains on site but has been deactivated. The remaining significant sources are not included in any NSPS source categories.

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

The facility has a production limit for creosote treated wood of 5.40 MM ft<sup>3</sup> during any consecutive 12-month period. This limit was established to restrict the facility's HAP potential emissions below the applicable 10/25 TPY major source thresholds. In addition, CPTFP has taken a lumber kiln production limit (50 MMBF during any consecutive 12-month period) in order to remain a minor/area source of HAP emissions.

40 CFR 63, Subpart DDDD, National Emission Standards for Hazardous Air Pollutants for Plywood and Composite Wood Products (PCWP MACT)

As an area source, the dry kilns would not be affected sources under 40 CFR 63, Subpart DDDD, National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products (the “Plywood MACT”).

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

CPTFP is an area source of HAPs, the 28.7 MMBtu/hr 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 and is subject to a work practice standards 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 April 17, 2014. Each biennial tune-up is required no more than 25 months after the previous tune-up. The last biennial tune-up was conducted on July 24, 2018. 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. This assessment was conducted on September 24, 2014.

An Initial Notification of Applicability was not submitted to the US EPA prior to the March 21, 2014, the compliance date specified in 40 CFR §63.11196. The Notification of Compliance Status specified in 40 CFR §63.11196, which indicates that the required initial tune-up has been conducted (September 24, 2014), was submitted on March 3, 2015, via the CDX system. The Notification of Compliance Status is required to include a statement indicating that the facility complies with the requirements in 40 CFR §63.11214 to conduct an initial tune-up of the boilers.

CPTFP 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. CPTFP 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 63, Subpart QOOOOO, National Emission Standard for Hazardous Air Pollutants for Wood Preserving Operations

Since CPTFP is an area source for HAP, the pentachlorophenol and CCA wood preserving operations are subject to 40 CFR 63, Subpart QOOOOO (National Emission Standard for Hazardous Air Pollutants for Wood Preserving Operations). The facility submitted an initial notification and notification of compliance status for this NESHAP on September 21, 2007. The standards applicable to the facility for the CCA operation under this NESHAP include:

- ❖ Apply the preservative to the wood product inside a retort or similarly enclosed vessel;
- ❖ Prepare and operate according to a management practice plan to minimize air emissions from the preservative treatment of wood, which must include:
  1. Minimize preservative usage;
  2. Maintain records on the type of treatment process and types and amounts of wood preservatives used at the facility;
  3. Maintain charge records identifying pressure reading(s) inside the retorts (or similarly enclosed vessel);
  4. Store treated wood product on drip pads or in a primary containment area to convey preservative drippage to a collection system until drippage has ceased;
  5. Fully drain the retort to the extent practicable, prior to opening the retort door;
  6. Promptly collect any spills; and
  7. Perform relevant corrective actions or preventative measures in the event of a malfunction before resuming operations.

### **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 the boiler to 0.20 gr/dscf, adjusted to 50% excess air.

The lumber/pole dry kilns and the planer mill operation with cyclone are each subject to the particulate matter (as TSP) emission limitations of ADEM Admin. Code r. 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:

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

**OR**

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

where E = Emissions in pounds per hour  
P = Process weight per hour 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 the facility shall not discharge more than one 6-minute average opacity greater than 20% in any 60-minute period from these sources. At no time shall any source discharge a 6-minute average opacity of particulate emissions greater than 40%.

#### Sulfur Dioxide (SO<sub>2</sub>)

The wood-fired boiler is subject to the sulfur dioxide emission limitations of ADEM Admin. Code r. 335-3-5-.01(b), which limits the boiler to 4.0 lb/MMBtu heat input. As wood is the only fuel source for the boiler, it is expected to be able to comply.

### **Emission Monitoring**

#### 002 - Boiler No. 2

For compliance with the particulate and visible emission standards, emission monitoring for the boiler would include:

- ❖ The boiler shall be operated with a %O<sub>2</sub> of the flue gas of 7% ± 2% (EU-002), averaged over a 24-hour period. This is the parameter range recommended by the boiler manufacturer. The O<sub>2</sub> monitor shall be calibrated at least annually against a known standard.
- ❖ Someone familiar with the process shall, weather permitting, observe the visible emissions from the boiler stack at least daily while operating during daylight hours to determine if the visible emissions are greater than normal, as determined by previous observations. If greater than normal visible emissions are observed, the permittee shall initiate corrective action as soon as practicable, but no longer than 24 hours from the time of observation, followed by an additional observation to verify the visible emissions have been returned to normal.
- ❖ Whenever the %O<sub>2</sub>, averaged over a 24-hour period, is outside the manufacturer's recommended range, and/or whenever observed visible emissions are greater than normal, corrective action to return the process to normal operation shall be initiated as soon as practicable no longer than 24 hours after the time of observation.
- ❖ To ensure proper operation, the permittee shall inspect the multiclone/cyclone at least annually, but more frequently if visible emissions greater than normal are observed. If the inspection indicates that cleaning or emissions-related maintenance is required, such action shall be initiated as soon as practicable but no longer than 24 hours from the time of inspection.

004-A, 004-B, 004-C, 004-D - Four Lumber/Pole Drying Kilns

CPTFP will maintain its status as a minor source of hazardous air pollutants (HAPs) by limiting lumber kiln production to less than 50,000,000 board feet (<50 MMBF) during any consecutive 12-month period. The facility would be required to determine compliance with the production limit within 10 days of the end of each calendar month by calculating the combined production from all lumber dry kilns for the previous month and previous consecutive 12-month period and determine compliance with the production limitation. This limitation was established by Air Permit No. X007.

005 - Planer Mill Operation with Cyclone

CPTFP utilizes a pneumatic transfer system with a cyclone to convey shavings generated by the planer mill operation. The expected particulate emission rate, based on an AP-42 emission factor, is 2.0 lb/hr, which is ~ 75% of the allowable rate (2.68 lb/hr) calculated based on the process weight of the amount of wood shavings transferred. Emission testing for particulate matter would not be required at this time as the process is expected to be able to comply with the applicable standard. For compliance with the particulate and visible emission standards, emission monitoring for the cyclone would include:

- ❖ The emissions from the cyclone shall be visually observed by someone familiar with the process at least weekly while operating during daylight hours to determine if the visible emissions are greater than normal, as determined by previous observations. If greater than normal visible emissions are observed, corrective action shall be initiated as soon as practicable but no longer than 24 hours after the time of observation, followed by an additional observation to confirm that the emissions are reduced to normal.
- ❖ To ensure proper operation, the permittee shall inspect the cyclone at least annually, but more frequently if visible emissions greater than normal are observed. If the inspection indicates that cleaning or emissions-related maintenance is required, such action shall be initiated as soon as practicable but no longer than 24 hours from the time of inspection.

006 - Creosote Wood Preserving and Storage Operations

As emission monitoring for this process, the facility would be required to determine compliance with the production limit for creosote treated wood within 10 days of the end of each calendar month by calculating and recording the production for the previous month and previous 12-month period.

003 - Pole/Sawmill Operations/007 - Pentachlorophenol Wood Preserving and Storage Operations/008 - Copper Naphthanate Wood Preserving and Storage Operations/009 - Wastewater Treatment Operation/010 – Gasoline Storage Tank

The above units have no applicable emission limits and, therefore, no emission monitoring requirements. The units utilize no add-on pollution control devices.

011 – CCA Wood Preserving Operation

No monitoring beyond what is required by the Wood Preserving NESHAP would be required.

012 – Cross-tie Trim Operation

This operation is an insignificant source of particulate emissions (< 6 TPY). This operation does not utilize any add-on pollution control and there are no emissions monitoring requirements.

**Compliance Assurance Monitoring (CAM)**

None of the process units at the facility would be subject to CAM. This determination is based on the fact that the uncontrolled emissions of particulate from the boiler is less than the Title V major source threshold, and the cyclone utilized for wood waste transfer from the planer mill is considered inherent process equipment.

**Recordkeeping and Reporting Requirements**

The facility would be required to maintain records of the required emission monitoring 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):

- ❖ Records of the %O<sub>2</sub> monitoring data and the calculated 24-hour averages;
- ❖ The date, time, and results of each observation for visible emissions;
- ❖ The date(s), time, nature, and results of any corrective action taken when deviations from an emission monitoring parameter were observed;
- ❖ The date(s) and time the multiclone/cyclones were inspected for proper operation and, if the results of the inspection indicated that cleaning or emission-related maintenance was needed, the date(s), time, and nature of the cleaning/maintenance performed;
- ❖ All available process records and operator's logs verifying the boiler's operating parameters.
- ❖ The date, time, and duration of all startups and load changes.
- ❖ The facility must submit a biennial compliance reports as required by 40 CFR Part 63, Subpart JJJJJ. Furthermore, a report prepared after the required boiler tune-up is completed which should contain CO and O<sub>2</sub> measurements before and after tune-up, the description of corrective actions after the tune-up, and the type and amount of fuel used over the 12 months prior to the biennial tune-up.
- ❖ Production from Kiln Nos. 1, 2, 3, and 4 (EU-004A, 004B, 004C, and 004D, respectively) on a monthly and consecutive 12-month periods;
- ❖ Creosote wood production on a monthly and 12-month rolling total basis;
- ❖ For the pentachlorophenol and CCA operation, records of the type of treatment process and types and amounts of wood preservatives used at the facility; and

- ❖ For the pentachlorophenol and CCA operation, charge records identifying pressure reading(s) inside the retorts.

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

- ❖ The creosote wood production for each consecutive 12-month period during the reporting period;
- ❖ EU-004A, 004B, 004C, and 004D production for each consecutive 12-month period;
- ❖ A statement as to whether all emission monitoring was 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 inspections of the multiclone/cyclones were accomplished during the reporting period, and if so, the date and results of the inspection;
- ❖ The date(s), time, 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 multiclone/cyclones indicated that cleaning or emission-related maintenance was needed; and
- ❖ A statement as to whether the management practice plan for the Wood Preserving NESHP was followed during the reporting period.

### **Recommendation**

Based on the above analysis, I recommend that Cahaba Pressure Treated Forest Products, Inc.'s Major Source Operating Permit (401-0011) be renewed with the conditions noted pending a 30-day public notice period and a 45-day EPA review.

Lester Meredith  
Chemical Branch  
Air Division

March 22, 2019  
Date