

## STATEMENT OF BASIS

**Southern Parallel Forest Products Corporation  
Albertville Sawmill  
Albertville, Marshall County, Alabama  
Facility/Permit No. 711-S001**

This draft renewal Title V Major Source Operating Permit (MSOP) is proposed 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. This permit would be a renewal of the current MSOP which was issued on May 28, 2015, and modified on December 8, 2016 (Administrative Amendment to Delete Unit No. 006). This would be the fourth renewal of the MSOP.

The Albertville Sawmill is an existing facility that produces finished dimensional lumber from southern yellow pine logs. The significant sources of air pollutants include two steam-heated lumber dry kilns (Unit No. 002), several processes with pneumatic wood residuals transfer systems and cyclone separators (Unit Nos. 003, 004, and 005), three 28.576 MMBtu/hr natural gas/propane-fired boilers (Unit No. 007), a 130 hp diesel emergency fire water pump engine (Unit No. 008), and a 110,000 MBF/yr CDK (Air Permit No. X006; Unit No. 009).

Insignificant emission sources at this facility include brazing/soldering equipment, intermittent ash hauling and disposal, soil borrow pits, boiler room ventilation, log debarking, sizing saws, and non-pneumatic green wood residuals chipping.

### **Proposed Change**

The draft renewal MSOP would include the following change to the current permit:

- Incorporation of the requirements of Air Permit No. X006 for a 110,000 MBF/yr Continuous Direct-Fired Lumber Dry Kiln (CDK), issued on September 7, 2018. The CDK is directly heated by a 35 MMBtu/hr wood-fired burner. Authorization to Operate for the CDK was issued on October 23, 2019. The CDK is subject to a BACT VOC emission limit of  $4.78 \text{ lb/MBF as WPP1 (as VOC expressed as propane, determined as } \text{VOC}_{\text{as C}} \times 1.225 + [(1-0.65) \times \text{Methanol}] + \text{Formaldehyde})$ . It is also subject to PSD synthetic minor emission limits for TSP/PM<sub>10</sub> (2.25 lb/hr) and PM<sub>2.5</sub> (1.84 lb/hr). The CDK is designated as Unit No. 009 in the draft MSOP.

## **Applicability: Federal Regulations**

### Title V

This facility is a 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.

### Prevention of Significant Deterioration (PSD)

The facility is a major source under the PSD regulations for VOC emissions. It 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.

Southern Parallel Forest Products (Bowater Inc. at the time) underwent PSD for the proposed expansion of, and increase in production through, the two existing steam-heated lumber dry kilns, for which Air Permit No. X004 was issued on April 9, 2008. The kilns previously underwent PSD in 2003, and a combined production limit of 125,000 MBF per year was established. In the 2008 PSD action, the total allowed throughput capacity was increased to 187,800 MBF per year, a production limit established in X004 which superseded the previous limit. Though the physical expansions were not made, the production limit evaluated in the PSD action remains in place. Each kiln is subject to a VOC BACT emission limit of 7.0 lb/MBF expressed as pinene with a response factor of 1.13 lb pinene/lb carbon.

Most recently, in 2018, Southern Parallel Forest Products underwent PSD for the proposed construction and operation of a continuous direct-fired lumber dry kiln (CDK) that is directly heated by a 35 MMBtu/hr wood-fired burner. Air Permit No. X006 was issued for the CDK on September 7, 2018. The permit contained a BACT limit for VOC emissions (4.78 lb/MBF as WPP1) and synthetic minor limits for particulate emissions (2.25 lb/hr TSP/PM<sub>10</sub>; 1.84 lb/hr PM<sub>2.5</sub>). Authorization to Operate for the CDK was issued on October 23, 2019.

### NSPS

The three 28.576 MMBtu/hr natural gas-fired boilers (Unit No. 007) are subject to 40 CFR 60, Subpart Dc. Due to the use of only natural gas/propane as fuel, the only requirement under the NSPS applicable to the boilers is the requirement to maintain daily or monthly fuel usage records. There are no other sources at the facility subject to a NSPS.

### MACT

This facility is a major source of HAP emissions, as listed in ADEM Admin. Code div. 335-3, Appendix G, and has four process units that are affected sources under 40 CFR Part 63 regulations. The two steam-heated lumber dry kilns (Unit No. 002), and the CDK (Unit No. 009) are affected sources under 40 CFR 63, Subpart DDDD, National Emission Standards for Hazardous Air Pollutants for Plywood and Composite Wood Products (PCWP MACT) originally

promulgated on July 30, 2004, and revised on February 16, 2006, and October 29, 2007. Though an affected source, there are currently no specific requirements for lumber dry kilns under Subpart DDDD.

The three natural gas-fired boilers (Unit No. 007) are subject to 40 CFR 63, Subpart DDDDD (Boiler MACT). The amended final rule was published in the Federal Register on January 31, 2013. The boilers were manufactured in 2013. Therefore, the boilers are regulated as new sources under this MACT since they were manufactured and installed after the June 4, 2010, applicability date. Under Subpart DDDDD, the boilers are only subject to work practice standards due to the use of only natural gas or propane as fuel. The boilers are new units without an oxygen trim system. Therefore, the applicable work practice standard consists of annual tune-ups. This standard, as well as the notification, recordkeeping, and reporting requirements are included in the draft permit.

The 130 Hp diesel-fired water pump engine (Unit No. 008) is an existing affected source under 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE). As an existing emergency compression ignition (CI) stationary RICE <500 Hp located at a major source of HAP emissions, this engine is subject to work practice requirements. The compliance date was May 3, 2013. The requirements include:

- 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; and
- Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

In addition, this engine will be limited to operating during:

- 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).

### **Applicability: State Regulations**

#### Particulate Matter

The planer mill operation, sawmill operation, waste wood chipper, and the CDK 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 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 in tons per hour

The three natural gas-fired boilers are subject to the particulate matter (as TSP) emission limitations of ADEM Admin. Code r. 335-3-4-.03(1) for fuel burning equipment in Class 1 Counties, which limits the boilers to a particulate emission rate accomplished by use of the equation:

$$E = 1.38H^{-0.44}$$

where E = Emissions in lb/million BTU

H = Heat Input in millions of BTU/hr

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

### Sulfur Oxides (SO<sub>x</sub>)

The three natural gas-fired boilers (Unit No. 007) are subject to the sulfur oxides (as SO<sub>2</sub>) emission limitations of ADEM Admin. Code r. 335-3-5-.01(1)(b), which limits the boilers to 4.0 lb/MMBTU of heat input.

## **Emission Testing and Monitoring**

### Unit No. 002 - Lumber Dry Kilns: North and South

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 State visible emission standard and the particulate emission limits are not considered practical.

The kilns are subject to a PSD-BACT limit of 7.0 lb VOC/MBF, expressed as pinene, and to a total dried lumber production of no more than 187,800 MBF during any consecutive 12-month period. The following emission monitoring provisions were established in Air Permit No. X004 and are contained in the current MSOP:

- (a) Within 10 days of the end of each calendar month, the Permittee shall determine compliance with the combined dried lumber production limitation.
- (b) The Permittee shall operate the lumber kilns following a wet bulb set point drying schedule of 185 °F or lower.
- (c) The Permittee shall follow the following routines for preventative maintenance:
  - (1) Daily Routine
    - (i) Check wet bulb socks and change, if needed
    - (ii) Check temperature sensors for proper operation
    - (iii) Check water flow to wet bulbs
  - (2) Monthly Routine
    - (i) Inspect temperature sensor mounts for damage
    - (ii) Inspect vent linkage and operation

Southern Parallel Forest Products proposed no changes to the kiln monitoring requirements as listed in the current MSOP.

Unit Nos. 003-Planer Mill Operation, 004-Sawmill Operation, 005- Waste Wood Chipper (Sawmill Chips)

These processes utilize cyclone separators in the pneumatic transfer of wood residuals to storage. They are subject to the State allowable particulate emission rate as determined by the process weight equation (ADEM Admin. Code r. 335-3-4-.04(1)) and to the State opacity standard. No changes to the monitoring as listed in the current permit were proposed. For compliance with the particulate and visible emission standards, emission monitoring for the cyclones include:

- Weekly observations of each wood residual transfer system by someone familiar with the process during daylight hours for greater than normal visible emissions as determined by previous observations of normal operation;
- 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; and

- To ensure proper operation, each cyclone shall be inspected and cleaned at least annually but more frequently if greater than normal visible emissions are observed.

Unit No. 007 – Three 28.576 MMBTU/hr Natural Gas-Fired Boilers (Propane Standby Fuel)

The three natural gas-fired boilers (Unit No. 007) are subject to the particulate matter (as TSP) emission limitations of ADEM Admin. Code r. 335-3-4-.03(1) for fuel burning equipment in Class 1 Counties. They are also subject to the sulfur oxides (as SO<sub>2</sub>) emission limitations of ADEM Admin. Code r. 335-3-5-.01(1)(b).

The boilers are subject to both 40 CFR 60, Subpart Dc, and 40 CFR 63, Subpart DDDDD, which require the keeping of fuel usage records and annual tune-ups. Due to the burning of only natural gas or propane fuels, the boilers are expected to be able to comply with the State allowables. Therefore, no additional testing or monitoring beyond that required by these Federal regulations is considered necessary.

Unit No. 008 – 130 hp Diesel Emergency Fire Water Pump Engine

No requirements beyond those prescribed by 40 CFR 63, Subpart ZZZZ would be necessary.

Unit No. 009 - 110,000 MBF/yr Continuous Direct-Fired Lumber Dry Kiln

The lumber in the CDK is dried via direct heat supplied by a 35 MMBTU/hr wood-fired burner. Lumber flows continuously through the kiln via two countercurrent tracks. Emissions from the kiln are products of combustion, condensed water vapor, and VOC driven off from the drying lumber. Each end of the kiln has a powered stack through which a portion of the kiln emissions are directed so as to enhance visibility at the ground level around the kiln. The remainder of the emissions are released through the doors at each end of the kiln. The facility monitors the dried lumber moisture content. Due to the nature of the emissions from the kiln, emission testing and monitoring for the State visible emission standard and the particulate emission limits are not considered practical.

Emission monitoring for the CDK was originally established in Air Permit No. X006, which includes:

- The Permittee shall operate the CDK in accordance with its maintenance and operating plan submitted to the Air Division on October 21, 2019. Any change to the plan shall receive prior approval from the Air Division; and
- The Permittee shall measure and record the moisture content of the dried lumber. The 12-month rolling average moisture content shall be  $\geq 12\%$ .

CAM

The cyclones utilized in the wood residual transfer operations are considered to be inherent parts of the processes, and therefore, are not considered control devices under the CAM regulations.

There are no other active control devices at the facility that would be subject to the CAM regulations.

### **Recordkeeping and Reporting Requirements**

The records required for Unit No. 002 include:

- The Permittee shall maintain records of dried lumber production for the kilns on a monthly and 12-month rolling total basis. These records shall be maintained in a permanent form suitable for inspection for a period of 5 years from the date of generation of each record and shall be made available for inspection upon request; and
- The Permittee shall maintain copies of all kiln charge graphs and records of preventative and corrective maintenance items on the vent systems and temperature sensing systems. For each batch processed, the graphs shall contain the date, charge quantity, actual drying time, maximum wet bulb temperature set point, maximum dry bulb temperature, and final temperature drop across the load (TDAL). These records shall be maintained in a permanent form suitable for inspection for a period of 5 years from the date of generation of each record and shall be made available for inspection upon request.

The records required for Units Nos. 003, 004, and 005 include:

- 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.

The records required for Unit No. 007 include:

- Records of daily or monthly fuel usage;
- Copies of all reports and notifications, and all supporting documentation, submitted as required by 40 CFR 63, Subpart DDDDD; and
- The records shall be retained for at least five years from the date of generation and be made available for inspection upon request. At least the most recent two years of data must be kept on-site.

The records required for Unit No. 008 include:

- Records of operation, maintenance activities, and emissions-related repairs;
- Either a copy of the manufacturer's emission-related operation and maintenance instructions or the maintenance plan developed in accordance with §63.6625(e) for the unit;

- Copies of all reports and notifications submitted as required by 40 CFR 63, Subpart ZZZZ; and
- The records shall be retained for at least five years from the date of generation and be made available for inspection upon request. At least the most recent two years of data must be kept on-site.

The records required for Unit No. 009 include:

- The Permittee shall maintain records documenting its compliance with the maintenance and operating plan;
- The Permittee shall calculate and record the average monthly and 12-month rolling average lumber moisture content. Within ten (10) days of the end of each calendar month, records of the average lumber moisture content for the last calendar month shall be recorded and the rolling 12-month average updated;
- The Permittee shall maintain records of 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; and
- 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.

Unit-Specific reporting requirements for Unit No. 002 include:

- Should the combined production limitation be exceeded during any consecutive 12-month period, the Permittee shall notify the Air Division within 2 working days of determining that the exceedance occurred;
- The Permittee shall submit a Semiannual Monitoring Report, as required by General Permit Proviso No. 21(a), no later than 60 days after the end of each semiannual reporting period (January 1<sup>st</sup> to June 30<sup>th</sup> and July 1<sup>st</sup> to December 31<sup>st</sup>). The report shall:
  - (1) Certify whether the emission monitoring requirements (including the work practice and operational standards) were accomplished as required, and if not, describes the date and reason any required monitoring was not accomplished;
  - (2) Provide the nature and date of any corrective actions taken or preventative measures adopted following an excursion from an operational standard; and
  - (3) Provide the combined dried lumber production total for each month and consecutive 12-month period during the applicable reporting period

Unit-Specific reporting requirements for Unit Nos. 003, 004, and 005 include:



The Permittee shall submit a Semiannual Monitoring Report, as required by General Permit Proviso No. 21(a), no later than 60 days after the end of each semiannual reporting period (January 1<sup>st</sup> to June 30<sup>th</sup> and July 1<sup>st</sup> to December 31<sup>st</sup>). The report shall:

- Certify whether the emission monitoring requirements were accomplished as required, and if not, describes the date and reason any required monitoring was not accomplished;
- Provide the date, time, and duration of any instance that greater than normal visible emissions were observed from the cyclone;
- Provide the nature and date of any corrective actions taken or preventative measures adopted following an observation of greater than normal visible emissions; and
- Provide the date of the annual inspection and cleaning of the cyclone.

Unit-Specific reporting requirements for Unit No. 007 include:

The Permittee shall submit a Semiannual Monitoring Report, as required by General Permit Proviso No. 21(a), no later than 60 days after the end of each semiannual reporting period (January 1<sup>st</sup> to June 30<sup>th</sup> and July 1<sup>st</sup> to December 31<sup>st</sup>). The report shall certify whether the records of fuel usage for each boiler were maintained as required in Item 5(a) above, and if not, the date(s) and reason the records were not maintained.

The Permittee shall submit an Annual Compliance Report, as required by 40 CFR 63, Subpart DDDDD, §63.7550(b), to be postmarked or submitted by \*April 1<sup>st</sup> each year for the previous calendar year reporting period (January 1<sup>st</sup> to December 31<sup>st</sup>). The report shall contain the following:

- (1)** Company and Facility name and address;
- (2)** Process unit information, emission limitations, and operating parameter limitations;
- (3)** Date of report and beginning and end dates of the reporting period;
- (4)** The total operating time during the reporting period;
- (5)** Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual tune-up according to §63.7540(a)(10). Include the date of the most recent burner inspection if it was not done annually and was delayed until the next scheduled or unscheduled unit shutdown;
- (6)** If there are no deviations from the applicable requirements for work practice standards in Table 3 to Subpart DDDDD, a statement that there were no deviations from the work practice standards during the reporting period; and
- (7)** If there is a deviation from a work practice standard during the reporting period, the report must contain the information in §63.7550(d).

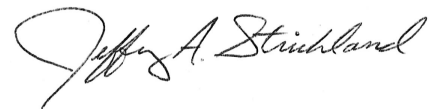
\*Subpart DDDDD specifies that annual compliance reports be postmarked or submitted by January 31<sup>st</sup> each year for the previous calendar year. However, table 10 to Subpart DDDDD indicates at §63.10(a) of 40 CFR 63, Subpart A, General Provisions, applies to Subpart DDDDD. Therefore, the due date may be set to align with deadlines established in the Title V MSOP in accordance with §63.10(a)(5). Therefore, the draft MSOP includes a due date for the MACT annual compliance certification that coincides with the due date for the Title V Annual Compliance Certification (April 1<sup>st</sup> each year).

Unit-Specific reporting requirements for Unit No. 009 include:

- If the CDK should exceed an applicable limit at any time, the Permittee shall notify the Air Division within two (2) working days of determining that the exceedance occurred;
- The Permittee shall submit a Semiannual Monitoring Report, as required by General Permit Proviso No. 21(a), no later than 60 days after the end of each semiannual reporting period (January 1<sup>st</sup> to June 30<sup>th</sup> and July 1<sup>st</sup> to December 31<sup>st</sup>). The report shall:
  - (1) Certify whether the emission monitoring requirements were accomplished as required, and if not, describes the date and reason any required monitoring was not accomplished;
  - (2) Provide the nature and date of any corrective actions taken or preventative measures adopted following an excursion;
  - (3) Provide the monthly and 12-month rolling total average lumber moisture content for each month during the reporting period; and
  - (4) Provide the monthly and 12-month rolling total dried lumber production for each month during the reporting period.

**Recommendation**

Based on the above analysis, I recommend Southern Parallel Forest Products Corporation's Major Source Operating Permit (711-S001) be renewed with the conditions noted above, pending the resolution of any comments received during the 30-day public comment period and 45-day EPA review period.



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Jeffrey A. Strickland  
Chemical Branch  
Air Division

July 29, 2020  
Date