

**STATEMENT OF BASIS**  
Two Rivers Lumber Co., LLC  
Demopolis, Marengo County, Alabama  
Facility/Permit No. 105-S007

This proposed Title V Major Source Operating Permit (MSOP) renewal has been developed in accordance with 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 initial MSOP for Two Rivers Co., LLC (TRL) was issued on September 18, 2020. This is the first renewal of this MSOP. The current MSOP was effective September 18, 2020, was modified on March 16, 2022, and expired on September 17, 2025. The initial application for this renewal was received on March 18, 2025, and deemed complete June 2, 2025, when updated facility-wide calculations were received which included the proposed Emergency Engine No. 2's calculations.

The facility is in Marengo County, which is currently listed as an attainment/unclassifiable with all National Ambient Air Quality Standards (NAAQS).

There are no current or ongoing enforcement actions against TRL necessitating additional requirements to achieve compliance with the proposed permit conditions. The enforcement and compliance history for the facility can be found at [https://echo.epa.gov/\(search using facility ID AL0000000010910S007\)](https://echo.epa.gov/(search%20using%20facility%20ID%20AL0000000010910S007))

**Permit History**

**Table 1: *The following is a history of previously issued permits which established current permit limits for this facility.***

Issuance No./ Permit No.	Issuance Date	Limit(s) Established	Limit(s) Basis/ Reasoning
X002	January 3, 2017	<ul style="list-style-type: none"><li>15.4 MBF/hr Continuous, Dual Path Direct-fired Lumber Dry Kiln (DPK-1) with 38.8 MMBtu/hr Natural Gas-fired Kiln Condensate Evaporator (CE-1)</li><li>Emission Limits for DPK-1: 1.30lb/hr for PM; 3.80 lb/MBF for VOC.</li><li>Emission Limits for CE-1: 0.07lb/hr for PM.</li></ul>	ADEM Admin. Code r.335-3-4-.04(SIP)  PSD(SMS), BACT
X003	January 3, 2017	<ul style="list-style-type: none"><li>15.4 MBF/hr Continuous, Dual Path Direct-fired Lumber Dry Kiln (DPK-2) with 38.8 MMBtu/hr Natural Gas-fired Kiln Condensate Evaporator (CE-2)</li><li>Emission Limits for DPK-2: 1.30lb/hr for PM; 3.80 lb/MBF for VOC.</li><li>Emission Limits for CE2: 0.07lb/hr for PM.</li></ul>	ADEM Admin. Code r.335-3-4-.04(SIP)  PSD(SMS), BACT
X004	January 3, 2017	<ul style="list-style-type: none"><li>Planer Mill (PM1) Operations with a Shavings Storage Bin (SSB1) and Cyclofilter (CF-1)</li><li>Emission Limits for CF-1: 0.048 lb/hr for PM.</li></ul>	ADEM Admin. Code r.335-3-4-.04(SIP)  PSD(SMS)

## **Facility Operations**

TRL is an existing facility that manufactures dimensional lumber from southern yellow pine logs located in Demopolis, Alabama. TRL operates the following significant emission units: two 15.4 MBF/hr continuous direct-fired lumber dry kilns (DPK-1 & DPK-2) with a 38.8 MMBtu/hr natural gas-fired burners and associated 4 MMBtu/hr natural gas-fired kiln condensate evaporators (CE-1 & CE-2); a dry lumber planer mill with a cyclofilter (PM-1) and (CF-1); a sawmill (SM-1); a 321 bhp emergency fire pump engine (ENG1), a 7.5 kw Emergency Engine (ENG2) and various byproduct material storage bins. Insignificant activities include log debarking, log bucking, bark hog, and sawmill chipper.

## **Proposed Changes**

The MSOP renewal would incorporate the following changes:

Incorporation of the regulatory requirements for the facility's 7.5 kw Emergency Engine (ENG2) used for scale house emergency operations.

## **Federal Regulations**

### **Title V**

TRL became a major source under Title V regulations on August 21, 2017, when temporary authorization to operate was issued for the sawmill, green end operations, one 15.4 MBF/hr continuous direct-fired lumber dry kiln with a 38.8 MMBtu/hr natural gas-fired burner and associated 4 MMBtu/hr natural gas-fired kiln condensate evaporator, and the dry lumber planer mill with a cyclofilter. The potential emissions for volatile organic compounds (VOC) exceeds the 100 TPY major source threshold. The facility is also a major source of hazardous air pollutants (HAP) since the facility-wide potential emissions of combined HAP exceed 25 TPY and the facility-wide potential emissions of a single HAP (methanol) exceeds 10 TPY.

### **Prevention of Significant Deterioration (PSD)**

This facility is in Marengo County, which is an attainment area for all criteria pollutants and the facility operations are not one of the 28 listed major source categories listed in ADEM Admin. Code r. 335-3-14-.04(2)(a)(i); therefore, the major source threshold of concern is 250 TPY. The facility is a major source under PSD regulations for VOC because the facility-wide threshold for VOC exceeds 250 TPY.

DPK 1 and 2 (EU002) are subject to PSD/BACT limitations of 3.80 lb/MBF (VOC as Carbon) for VOC and utilize proper maintenance and operating practices as recommended by the manufacturer for BACT. To avoid exceeding significance thresholds for particulate matter, synthetic minor source (SMS) limits were established on DPK-1 and DPK-2 (EU002), CE-1 and CE-2 (EU003), and CF-1 (EU004).

As outlined in the facility's MSOP application, TRL elected to retain the synthetic minor limitations to avoid triggering PSD Significant Emission Rates (SERs) for particulate for the following units:

PSD SMS Limits Listed as lb/hr	DPK1 (EU002)	DPK2 (EU002)	CE1 (EU003)	CE2 (EU003)	CF-1 (EU004)
PM	1.30	1.30	0.07	0.07	0.048

*New Source Performance Standards (NSPS) 40 CFR part 60*

40 CFR 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE)

The emergency diesel fire pump engine (ENG1) is subject to 40 CFR Part 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, which applies to owners/operators of stationary fire pump engine CI ICE that commence construction after July 11, 2005, and manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006 [§60.4200(a)(2)(ii)]. Since the engine was manufactured in 2017, it is subject to this NSPS.

The application indicates that the engine is certified to meet the applicable emission standards in Table 4 to Subpart IIII as required by §60.4205(c) and §60.4202(d) for the engines with a displacement of less than 30 liters per cylinder. The NSPS also has fuel requirements for the sulfur content of the fuel ( $\leq 15$  ppm) and the Cetane index ( $\geq 40$ ) or aromatic content ( $\leq 35\%$  by volume). The engine must be equipped with a non-resettable hour meter. The application indicated the engine is equipped with a non-resettable hour meter and this has been confirmed through visual inspections at the facility. The NSPS also limits the operation of the engine to emergency situations and 100 hours per year for maintenance checks and readiness testing.

In accordance with Table 4 to this subpart, the engine must meet a NO<sub>x</sub> + NMHC emission standard of 3.0 g/Hp-hr, a CO emission standard of 2.6 g/Hp-hr, and a PM emission standard of 0.15 g/Hp-hr. The Permittee must operate and maintain the engine in a manner that meets these emission standards over the certified emissions life of the engine. There are no testing requirements for the fire pump engine since it is certified by the manufacturer.

40 CFR 60, Subpart JJJJ, Standards of performance for Stationary Spark Ignition Internal Combustion Engines

The emergency propane-fired engine (ENG2) is subject to 40 CFR Part 60, Subpart JJJJ, Standards of performance for Stationary Spark Ignition Internal Combustion Engines, which applies to owners /operators of emergency generators that commence construction on or after June 12, 2006, with ICE manufactured on or after July 1, 2008, with a maximum engine power less than 500 hp. [60.4230(a)(4)]. This engine was manufactured in 2021 and is therefore subject to this NSPS.

Supporting documentation provided with the application indicated that ENG2 is certified to meet the applicable emission standards as required by 60.4237(c). The engine is equipped with a non-

resettable hour meter. The NSPS also limits the operation of the engine to emergency situations and 100 hours per year for maintenance and readiness checks.

In accordance with 60.4231(a) and 1054.10, table 1, the engine must meet a NO<sub>x</sub> + NMHC of 8.0 g/KW-hr and a CO emission standard of 610 g/KW-hr. There are no testing requirements for the emergency generator's engine since it is certified by the manufacturer.

#### National Emission Standards for Hazardous Air Pollutants (NESHAP/MACT)

NESHAP requires that any facility whose potential emission of hazardous air pollutants (HAP) exceeds 10 TPY of a single hazardous air pollutant (HAP) or 25 of combined HAP must control these emissions to the level achievable by the best demonstrated technology as specified in the applicable provisions (MACT). The MACT standards are established for source categories and prescribed based on whether the source is "existing" or "new". This facility is considered an "existing" source. The facility is a major source for HAP and an affected source under 40 CFR Part 63, Subpart DDDD, *Plywood and Composite Wood Products* (PWCP MACT).

#### ADEM Admin. Code r. 335-3-11-.06(81)/40 CFR Part 63, Subpart 63 DDDD NESHAP for Plywood and Composite Wood Products ("PCWP MACT")

The PCWP MACT regulates HAP emissions from activities associated with the manufacture of plywood and other composite wood products, including stand-alone lumber kilns, in accordance with 40 CFR §63.2232. Processes that are not subject to the compliance options or work practice requirements specified in 40 CFR §63.2240, such as the lumber kilns, are specifically not required to comply with the compliance options, work practice requirements, performance testing, monitoring, and recordkeeping or reporting requirements of this subpart, or any other requirements in 40 CFR 63 Subpart A, except the initial notification requirements in 40 CFR §63.9(b) in accordance with 40 CFR §63.2252. DPK-1 & DPK-2 are considered affected sources and are only subject to the initial reporting requirements.

#### 40 CFR Part 63, Subpart ZZZZ NESHAP for Stationary Reciprocating Internal Combustion Engines ("RICE MACT")

The emergency fire pump engine (ENG1) is considered an affected source under 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, commonly referred to as the RICE MACT. According to §63.6590(c)(6), a new or reconstructed stationary "RICE" with a site rating of 500 brake (HP) or less, located at a major source of HAP emissions, is subject to the requirements of the "RICE MACT" by meeting the requirements of 40 CFR 60, Subpart IIII. No further requirements would apply to the emergency fire pump engine under Subpart ZZZZ.

The emergency engine (ENG2) is also an affected source under 40 CFR Part 63, Subpart ZZZZ, the "RICE MACT". As specified in §63.6590(c), an existing, new or reconstructed stationary "RICE" located at a major or area source of HAP emissions must meet the requirements of the "RICE MACT" by meeting the requirements of 40, CFR 60 Subpart JJJJ, for spark ignition engines.

No further requirements would apply to the emergency engines under Subpart ZZZZ.

## **State Regulations**

### **Particulate Matter**

PM1, CF-1, DPK-1, and DPK-2 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:

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

or

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

where  $E$  = Emissions in pounds/hour

$P$  = Process weight in tons/hour

Both 4 MMBtu/hr natural gas-fired kiln condensate evaporators (CE-1 & CE-2) are subject to the particulate matter emission limitation of ADEM Admin. Code r. 335-3-4-.03. The allowable emission rate for these condensate evaporators is calculated using the equation below:

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

where  $E$  = Emissions in lb/million BTU

$H$  = Heat Input in millions of BTU/hr

### **Visible Emissions**

All sources of particulate emissions are subject to the State visible emission standards of ADEM Admin. Code r. 335-3-4-.01(1), which states that each stationary source at the facility shall not emit particulate emissions of an opacity greater than twenty percent (20%), as determined by a six-minute average, more than once during any 60-minute period, and shall not at any time emit particulate of an opacity greater than forty percent (40%), as determined by a six-minute average.

### **Fuel Burning Equipment and Sulfur Oxides (SO<sub>x</sub>)**

The CDKs are not subject to ADEM Admin. Code r. 335-3-4-.03(1) because the kilns are direct fired, and therefore, not considered “fuel-burning equipment”. The fire pump engine is not subject to this regulation because its function is to supply water in the event of a fire, and therefore, not considered “fuel burning equipment”.

Although the emergency engines are fuel combustion sources, they are not subject to any particulate matter emission limitation of ADEM Admin. Code r. 335-3-4 or any sulfur dioxide (SO<sub>2</sub>) emission limitation of ADEM Admin. Code r. because they do not meet the definition of fuel burning equipment and they are not considered one of the process industries, general or specific. The emergency engines are, however, subject to the visible emissions standard of ADEM Admin. Code r. 335-3-4-.01(1). Since ENG1 burns diesel and ENG 2 burns propane, they would both be expected to be able to comply with this standard.

Both 38.8 MMBtu/hr natural gas-fired burners and both 4 MMBtu/hr natural-gas fired kiln condensate evaporators (CE-1 & CE-2) are subject to the sulfur oxides (as SO<sub>2</sub>) emission limitations of ADEM Admin. Code r. 335-3-5-.01(b), which limits the burners to 4.0 lb/MMBtu heat input.

#### *Fugitive Dust and Fugitive Emissions*

ADEM Admin. Code r. 335-3-4-.02 requires that precautions be taken to prevent particulate matter from becoming airborne. This rule is applicable. The facility submitted a fugitive dust plan on March 18, 2025. The dust plan will be included in Appendix A of the permit.

#### **Compliance Assurance Monitoring (CAM)**

40 CFR Part 64, Compliance Assurance Monitoring, applies to processes that utilize an active control device to meet an emission limitation. The permittee does not operate any equipment that is considered an active control device. The cyclone associated with the planer mill's pneumatic conveyance system is considered inherent process equipment.

#### **Emission Testing and Monitoring**

##### *EU 001 Sawmill and Green End Operations*

Emission monitoring for EU001 is subject to the following monitoring requirements: At least once per week, someone familiar with the system should check the conveyer system and transfer points for leaks and at least once each quarter for serviceability and repair them as needed. The Permittee shall operate the conveyer systems in a manner as to ensure materials are confined.

##### *EU 002 and EU003 2 Continuous Direct-fired Kilns*

To ensure compliance with PSD regulations and Best Available Control Technology (BACT) limitations, emission monitoring for EU 002 and EU 003 is required to follow the facility's current Kiln Operating and Maintenance Plan (OMP), and to calculate the combined kiln production, including monthly production and 12- month rolling totals, within (10) days after the end of each calendar month.

No emission testing or monitoring for compliance with the State particulate and visible emissions standards would be required for the kilns or condensate evaporators due to the nature of the emissions.

##### *EU 004- Planer Mill Operations*

Compliance testing is not required for the cyclofilter currently since calculations in the application indicate the capability of complying with the State allowable particulate emission rates and Synthetic Minor emission limits. If emission problems are observed in the future from these sources, testing may be required at that time.

For compliance with the particulate and visible emission standards, emission monitoring for EU 004 would be subject to the following monitoring requirements:

1. While the process is operating, someone familiar with the process shall visually observe the cyclofilter exhaust (CF-1) at least daily during daylight hours for the presence of visible emissions.
2. Whenever any visible emissions are observed from the cyclofilter exhaust (CF-1), 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 or eliminated (CF-1).
3. The cyclofilter shall be physically inspected for proper operation and cleaned, if needed, at least annually, but more frequently if visible emissions are observed.

EU 005- 321 brake-hp Emergency Fire Pump Engine and EU006- 7.5 kw Emergency Generator

The permittee is required to operate and maintain these units in strict accordance with the manufacturer's emission-related guidelines, as outlined in the manufacturer's written instructions. Alternatively, the permittee must develop and implement a maintenance plan that ensures, to the maximum extent feasible, the engine is operated and maintained in a manner that aligns with the best practices in air pollution control. This includes ensuring that operational procedures and maintenance activities are conducted to minimize emissions, thereby adhering to established emission reduction standards and optimizing the engine's performance in terms of emission control efficiency.

**Recordkeeping and Reporting Requirements**

EU 001- Sawmill and Green End Operations and EU 004 – Planer Mill Operations

TRL is required to maintain records of the required emission monitoring for Emission Unit Nos. 001 and 004 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 must include (as applicable):

- The date, time, and results of each emission observation;
- The date(s), time(s), nature, and results of any corrective action taken when visible emissions 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 is needed, the date(s) and nature of the cleaning/maintenance performed.

EU 002 and EU003- 2 Continuous Direct-fired Kilns

TRL is required to maintain records of its actions taken to comply with its approved site-specific operating and maintenance plan for the kilns. TRL is required to maintain records of 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. These records shall be maintained in a permanent form readily available for inspection. The records shall be retained for a period of five (5) years from the date of generation with the most recent two years being on-site.

*EU 005- 321 brake-hp Emergency Fire Pump Engine and EU006- 7.5 kw Emergency Generator*

The Permittee must maintain records of each engine's operation during both emergency and non-emergency service, as indicated by the non-resettable hour meter. For each instance the engine is operated, the Permittee must record the date, time, duration, and purpose of operation.

To demonstrate compliance with fuel limitations, the Permittee must also maintain documentation of the sulfur content and either the Cetane index or aromatic content of the diesel fuel used in ENG1.

All records must be kept in a permanent format suitable for inspection and made readily available upon request. These records must be retained for at least five years from the date they are created.

**Facility-wide Reporting Requirements**

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

- The combined throughput records of the kilns (DPK-1 & DPK-2) for each month and consecutive 12-month period during the reporting period;
- A statement describing the emission monitoring that was required during the period, whether all emission observations were completed as required, and if not, the date(s) and reasons(s) why the monitoring was not performed;
- A statement as to whether the annual inspection(s) of the control device(s) was accomplished during the reporting period, and if so, the date and results of the inspection(s); 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 control device indicated that cleaning or emission-related maintenance was needed.

The facility is required to submit an Annual Compliance Certification for each source to the Air Division as part of the Annual Compliance Certification required by MSOP. This compliance certification must include the following for each source, as applicable:

- The identification of each term or condition of this permit that is the basis of the certification;



- The compliance status, whether continuous or intermittent;
- The method(s) used for determining the compliance status of the source, currently and over the reporting period; and
- Other facts the Department may require determining the compliance status of the source.

### **Air Quality Impact**

This facility is in Marengo County, which is an attainment area for all criteria pollutants, and is not located within a 100 km radius of any PSD Class I Area. Therefore, the emissions from this facility are not expected to have any significant impact on the area.

### **Public Notice**

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

### **Recommendation**

Based on the above analysis, I recommend that Two Rivers Lumber's Major Source Operating Permit (105-S007) be renewed with the requirements noted above pending the 30-day public comment period and a 45-day EPA review period.

\_\_\_\_\_  
Olivia B. Toole  
Chemical Branch  
Air Division

\_\_\_\_\_  
Date