STATEMENT OF BASIS

TR Miller Mill Company, Inc. Brewton, Escambia County, Alabama Facility/Permit No. 502-S002

This draft renewal Title V Major Source Operating Permit (MSOP) is proposed 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, in accordance with the terms and conditions of this permit. The current MSOP was issued and became effective on April 21, 2015.

TR Miller Mill Company, Inc. (TRMM) operates a sawmill, pole mill, and wood treating facility in Brewton, Escambia County, Alabama. The significant sources of air pollutants at this facility are the 68 MMBtu/hr (SB-1) and 35.62 MMBtu/hr (SB-2) wood-fired boilers that provide indirect heat to two (2) 11.4 MBF/hr continuous dual path lumber dry kilns (DPK-1 and DPK-2); one (1) wood-fired (natural gas backup) continuous pole dry kiln (TP-1); a planer mill with pneumatic conveyance system utilizing a cyclone and baghouse; a box factory with pneumatic conveyance system utilizing four (4) cyclones; a specialty shop with pneumatic conveyance system utilizing a dual cyclone; a sawmill; 240 HP Diesel-fired Emergency Fire Water Pump Engine; and one (1) gasoline storage tank (9,000 gallon). Insignificant emission sources at this facility include space heaters, debarkers; wood/lumber chippers; bark/chip/sawdust mechanical handling and transfer systems; penta/CCA/diesel storage tanks; and storage piles.

Proposed Modifications

The MSOP renewal would include modifications to incorporate the following changes:

1. <u>Removal of Emission Units Nos. 007 (Sawmill Kiln No. SK-1), 008 (Sawmill Kiln No. SK-2R), 009 (Sawmill Kiln No. SK-3R) and 022 (Sawmill Kiln No. SK-4)</u>

TRMM has permanently taken the sawmill kilns SK-1, SK-2R, SK-3R and SK-4 out of service.

2. <u>Incorporation of the requirements of Air Permit No. X022 for 100,000 MBF/yr Continuous</u>, <u>Dual Path, Indirect-Heated Lumber Dry Kiln (DPK-1) as Emission Unit 026</u>.

On June 5, 2018, the Air Division issued Air Permit No. X022 for the construction of a 100,000 MBF/hr continuous, dual path, indirect-heated lumber dry kiln (DPK-1). The renewal MSOP would incorporate the new kiln (DPK-1) and the requirements of Air Permit No. X022 under the unit specific provisos of Emission Unit 026.

3. <u>Incorporation of the requirements of Air Permit No. X023 for 100,000 MBF/yr Continuous</u>, <u>Dual Path, Indirect-Heated Lumber Dry Kiln (DPK-2) as Emission Unit 027.</u>

On June 5, 2018, the Air Division issued Air Permit No. X023 for the construction of a 100,000 MBF/hr continuous, dual path, indirect-heated lumber dry kiln (DPK-2). The renewal MSOP would incorporate the new kiln (DPK-2) and the requirements of Air

Permit No. X023 under the unit specific provisos of Emission Unit 027.

Federal Regulations

Title V

This facility is a major source under Title V regulations because potential emissions of particulate matter (PM_{10}), sulfur dioxide (SO_2), nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC) exceed the 100 TPY major source threshold. It is also a major source of Hazardous Air Pollutants (HAP) because individual HAP potential emissions are greater than 10 TPY (Methanol) and the total HAP potential emissions are greater than 25 TPY.

PSD

The facility is located in an attainment area for all criteria pollutants. The facility operations are not one of the listed 28 major source categories listed in ADEM Admin. Code r. 335-3-14-.04(2)(a)1(i); therefore, the applicable PSD major source threshold is 250 TPY for criteria pollutants. The facility is considered a major source under PSD regulations. The Sawmill Boiler No. SB-2 (Emission Unit No. 023) is subject to synthetic minor source limits for TSP, PM₁₀, and annual heat input and a BACT limit for VOC. The Continuous Dry Kiln No. TP-1 (Emission Unit No. 003) is subject to synthetic minor source limits for TSP and PM₁₀. The Continuous Dry Kilns No. DPK-1 and DPK-2 are each subject to a BACT limit for VOC. The pneumatic conveyance systems for the planer mill and specialty shop each have synthetic minor source limits for TSP, PM₁₀ and hours of operation.

NSPS

Both boilers were constructed prior to the June 9, 1989, applicability date for 40 CFR Part 60, Subpart Dc, and are, therefore, not subject. The gasoline storage tank is not subject to any NSPS for storage tanks due to its size. The remaining significant sources are not included in any NSPS source categories.

MACT

RICE MACT (40 CFR Part 63, Subpart ZZZZ)

The facility is a major source of HAP emissions and has a unit that is an affected source under 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (the RICE MACT). The 240 HP Diesel-fired Fire Water Pump Engine is classified as an existing source (constructed before June 12, 2006) and is subject to the work practice, recordkeeping and reporting requirements of 40 CFR Part 63, Subpart ZZZZ.

Boiler MACT (40 CFR Part 63, Subpart DDDDD)

The facility is a major source of HAP emissions and has two boilers that are affected sources

under 40 CFR Part 63, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters (the Boiler MACT). The 68 MMBtu/hr wood-fired boiler with multiclone (SB-1 or Emission unit 002) and the 35.62 MMBtu/hr industrial wood-fired boiler with multiclone (SB-2 or emission unit 023) are subject to the emission limitations, work practice standards and compliance requirements of the Boiler MACT as outlined, but not limited to, the following:

- 1. Pursuant to §63.7500, TRMM must comply with the applicable emission limitations and work practice requirements of 40 CFR Part 63 Subpart DDDDD Table 2 (Emission Limits for Existing Boilers and Process Heaters) and Table 3 (Work Practice Standards) at all times the units are operating, except during periods of startup and shutdown, during which time the units must comply with the work practices noted below:
 - a. During Startup and Shut down TRMM must operate all CMS
 - b. For startup of a boiler or process heater, TRMM must use one or a combination of the clean fuels listed in Table 3 of 40 CFR Part 63 Subpart DDDDD.

	Pollutant Limitation			
Required for	Pollutant	Limitation		
Units in all subcategories	HCL	2.2×10^{-2} lbs per MMBtu heat input		
designed to burn solid fuel	Hg	5.7 x 10 ⁻⁶ lbs per MMBtu heat input		
Hybrid suspension grate units	PM	0.44 lbs per MMBtu heat input		
designed to burn biomass/bio-	CO	3500 ppm by volume on a dry basis		
based solid		corrected to 3% O ₂		

Applicable Emission Limitations

- 2. As an initial compliance requirement, TRMM was required to conduct a one-time energy assessment performed by a qualified energy assessor which met the requirements of Table 3. This assessment was performed on January 29, 2016, by McBurney Engineering.
- 3. To show continued compliance with the applicable emission standards, TRMM must conduct all applicable performance tests according to 40 CFR §63.7520 and Table 5 of Subpart DDDDD on an annual basis except as specified below. TRMM's most recent performance test for SB-1 was conducted August 29, 2017, and the next test date is projected for July 2020. The most recent performance test for SB-2 was conducted August 27, 2019, and the next test date is projected for July 2022.
 - a. Annual performance tests must be completed no more than 13 months after the previous performance test
 - b. If performance tests for a given pollutant for at least 2 consecutive years show that emissions are at or below 75 percent of the emission limit for the pollutant and there are no changes to the operation or air pollution control equipment that could increase emissions,
 - i. The permittee may choose to conduct performance tests for the pollutant every third year.
 - ii. Each such performance test must be conducted no more than 37 months after the previous performance test
 - iii. If a performance test shows emissions exceeded the emission limit or 75 percent of the emission limit for a pollutant, the permittee must conduct annual performance tests for that pollutant until all performance tests over a consecutive 2-year period meet the required level (at or below 75 percent

of the emission limit).

- 4. TRMM shall conduct a tune-up of the boiler every 5 years to demonstrate continuous compliance, as specified, but not limited to, below:
 - a. Inspect the burner, and clean or replace any components of the burner as necessary
 - b. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available
 - c. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly
 - d. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_X requirement to which the unit is subject
 - e. Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and
 - f. Maintain on-site and submit, if requested by the Administrator, a report containing the information in 40 CFR §63.7540 (10)(vi)(a) through (C).
- 5. Each tune-up, specified in §63.7540(a)(12), must be conducted at least once every 72 months after the previous tune-up. The last tune-up and boiler inspection for SB-1 and SB-2 were performed on January 29, 2016. The next being is due January 29, 2021.
- 6. Pursuant to 40 CFR §63.7525(a)(7), the oxygen level of the oxygen trim system shall be set to no lower than the oxygen concentration measured during the CO performance test.
- 7. As specified in 40 CFR §63.10(b)(1), TRMM must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The permittee must keep each record on site, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR §63.10(b)(1). Records can be kept off site for the remaining 3 years

PCWP MACT (40 CFR Part 63, Subpart DDDD)

The facility is a major source of HAP emissions and has processes that are affected sources under 40 CFR Part 63, Subpart DDDD, National Emission Standards for Hazardous Air Pollutants for Plywood and Composite Wood Products (the PCWP MACT). The lumber dry kilns are considered affected sources and are only subject to the initial reporting requirements.

Wood Treating MACT (40 CFR Part 63, Subpart QQQQQQ)

The facility is a <u>major source</u> of HAP emissions. Therefore, 40 CFR Part 63, Subpart QQQQQQ, National Emission Standards for Hazardous Air Pollutants for <u>Area Source</u> Wood Treating Facilities does not apply to TRMM.

State Regulations

Particulates

The two wood-fired boilers are 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 pole and lumber dry kilns (including the wood-fired continuous pole dry kiln), planer mill, box factory, specialty shop, and sawmill operations are each subject to the particulate matter (as TSP) emission limitations of ADEM Admin. Code 335-3-4-.04 for Process Industries-General. The allowable emission rate for each process is calculated using the appropriate process weight equation:

 $E = 3.59P^{0.62} (P < 30 \text{ tons per hour}) \text{ OR}$ $E = 17.31P^{0.16} (P \ge 30 \text{ tons per hour}) \text{ OR}$ $E = 4.10P^{0.67} (P < 30 \text{ tons per hour}) (Sources in a Class 2 county built prior to January 1972)$ 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 that no stationary source at the facility shall discharge more than one 6-minute average opacity greater than 20% in any 60-minute period, and, at no time shall any source discharge a 6-minute average opacity of particulate emissions greater than 40%.

Sulfur Oxides (SO_x)

The two wood-fired boilers, the continuous wood-fired pole dry kiln, and the natural gas-fired pole dry kiln are subject to the sulfur oxides (as SO₂) emission limitations of ADEM Admin. Code r. 335-3-5-.01(b), which limits each boiler to 4.0 lb/MMBtu heat input.

Volatile Organic Compounds (VOC)

The gasoline storage tank is equipped with a submerged fill pipe to comply ADEM Admin. Code r. 335-3-6-.03.

Emission Testing and Monitoring

<u>002 – Sawmill Boiler No. SB-1</u> <u>023 – Sawmill Boiler No. SB-2</u>

Pursuant to ADEM Admin. Code r.335-3-16-.05(c), TRMM would be required to conduct emission testing for particulate emissions every five (5) years to determine compliance with the applicable standards for SB-2. The permittee would be required to conduct each test no later than 60 months from the date of the previous test unless an extension of time is granted by the Air Division. The last test was conducted on August 27, 2019, and the next test would be due prior to August 27, 2024. Also, TRMM would be required to properly maintain and operate a device to measure and record steam flow for SB-2. The data collected would be used to calculate the heat input to SB-2. Within ten (10) days of the end of each calendar month, TRMM would be required to calculate the heat input to the boiler on a monthly and 12-month rolling total basis to determine compliance with the heat input limitation of 334,075 MMBtu during any consecutive 12-month period.

TRMM would be required to conduct emission testing annually to show compliance with the emission limitations under Boiler MACT. If Boiler MACT performance tests for a given pollutant show emissions are at or below 75 percent of the emission limit for the pollutant and there are no changes to the operation of the unit or air pollution control equipment that could increase emissions, the facility may choose to conduct testing every third year. If a performance test shows emissions exceeded the emission limit or 75 percent of the emission limit for a given pollutant, the permittee must return to conducting annual performance tests for that pollutant. Performance tests conducted on SB-1 on July 7, 2016, and August 29, 2017, showed results of each of the tested emission limits to be below 75%. Additional testing will be required in July 2020. Performance tests conducted on SB-2 on the following dates showed results of each of the tested emission limits, when applicable, to be below 75%. Additional testing will be required in July 2022. Additionally, TRMM would be required to conduct a tune-up and burner inspection every 5 years, with the last being performed on each unit January 29, 2016.

Emission T Unit	Test Date	Results less than 75% of Emission Limit?				
		РМ	СО	HCL	Hg	
SB-2	7/14/15	Yes	Yes	Yes	Yes*	
SB-2	7/6/16	Yes	Yes	Yes	Yes**	
SB-2	12/22/16	N/A	N/A	N/A	Yes	
SB-2	8/28/17	N/A	N/A	N/A	Yes	
SB-2	6/18/19	Yes	Yes	Yes	Yes	
SB-2	8/27/19	Yes	Yes	N/A	N/A	

* Hg test, only 1 run passed QC, all runs below limit

** Hg test, only 2 runs passed QC, all runs below limit

TRMM would be required to conduct a Method 9 of the opacity of each boiler's exhaust at least once per day while the boiler is operating. If the results of the Method 9 test indicate visible emissions of greater than 10% opacity, the boiler operator would be required to immediately undertake the necessary procedures to return the boiler to its normal operating condition. Once the boiler has been returned to its normal operating condition, an additional Method 9 test would be required. If the additional Method 9 test indicates visible emissions of greater than 10% opacity, the above steps shall be repeated until a Method 9 test indicates that visible emissions are no greater than 10% opacity.

No emission testing or monitoring for the VOC emission standard would be considered necessary at this time.

<u>003 – Continuous Pole Dry Kiln No. TP-1</u>

TRMM would be required to conduct emission testing for particulate emissions every five (5) years to determine compliance with the applicable standards. TRMM would be required to conduct each test no later than 60 months from the date of the previous test unless an extension of time is granted by the Air Division. The last test was conducted on September 16, 2016, and the next test would be due prior to September 16, 2021.

<u>010 – Planer Mill with Pneumatic Conveyance System (PMC-1 & PMBH-1)</u>

<u>011 – Box Factory with Pneumatic Conveyance System (BFC-1, BFC-2, BFC-3, & BFC-4)</u> <u>012 – Specialty Shop with Pneumatic Conveyance System (SSC-1)</u>

TRMM would be required to perform the following periodic monitoring for the cyclones and baghouse associated with these processes:

- While the process is operating during daylight hours, someone familiar with the process shall observe the visible emissions from the cyclone at least daily for greater than normal emissions, as determined by previous observations of normal operations;
- While the process is operating during daylight hours, someone familiar with the process shall observe the baghouse for any visible emissions;
- Whenever observed visible emissions are greater than normal from a cyclone and/or any visible emissions are observed from a baghouse, the observer shall note the occurrence and notify the appropriate operations supervisor. The supervisor shall immediately investigate the cause of the exceedance. If it is determined that the exceedance is caused by operator error, operational procedures shall be modified to prevent a recurrence of the error. If the exceedance is determined to be the result of a mechanical failure, the system shall be immediately modified or repaired to return the system to its normal operation;
- Each cyclone and baghouse shall be inspected for proper operation at least annually but more frequently whenever an excursion from a monitoring parameter occurs. If the inspection indicates that cleaning or emission-related maintenance is needed, such action shall be initiated as soon as practicable but no longer than 24 hours after completing the inspection.
- If applicable, TRMM shall calculate the hours of operation of a process within ten (10) days of the end of each calendar month.

<u>013 – Sawmill Operations</u> <u>024 – Gasoline Storage Tank</u> <u>026 – Continuous Dual Path Lumber Dry Kiln DPK-1</u> <u>027 – Continuous Dual Path Lumber Dry Kiln DPK-2</u>

No specific emission monitoring and/or testing would be considered necessary for these emission units.

<u>025 – 240 HP Diesel-fired Fire Water Pump</u>

No specific emission monitoring and/or testing are required or deemed necessary for this unit. However, work practice standards to include maintenance activities for the engine are required to be conducted and documented.

Compliance Assurance Monitoring (CAM)

The cyclones and baghouse utilized at this facility are for the transfer and separation of wood residues and are considered to be inherent process equipment. The multiclones associated with the wood-fired boilers are also considered inherent process equipment in that they precede and protect the induced draft (ID) fan of each boiler. As such, the facility does not have any "active control devices" subject to CAM requirements (40 CFR Part 64).

Recordkeeping and Reporting Requirements

<u>002 – Sawmill Boiler No. SB-1</u> 023 – Sawmill Boiler No. SB-2

In compliance with Boiler MACT, TRMM would be required to maintain records in accordance with the applicable requirements listed in 40 CFR §63.7555 and §63.7560 and to submit a Semiannual Compliance Report in accordance with 40 CFR §63.7550. Reporting under the Boiler MACT would occur on a calendar year basis (January 1-June 30 and July 1-Decembr 31).

Facility-wide Reporting Requirements

TRMM would be required to maintain records of the dates, times, and results of all emission monitoring performed; the dates, times, nature, and duration of all excursions from an emission monitoring parameter; the dates, times, and nature of all corrective actions taken when an excursion from an emission monitoring parameter occurred; and the monthly and 12-month rolling totals for the units that have annual limitations for heat input or operating hours. TRMM would be required to submit a Semiannual Monitoring Report (SMR) to certify whether all emission monitoring was conducted as required, and if not, the dates and reasons why it was not conducted. In addition, the SMR would provide monthly and 12-month rolling totals of the heat input to Sawmill Boiler No. 2 and the operating hours for the planer mill and specialty shop. The SMR would be required no later than 60 days after the end of each semiannual reporting period (December 21-June 20 and June 21-December 20).

Public Notice

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

Recommendation

I recommend TRMM's MSOP (502-S002) 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.

<u>Signed</u>

Chemical Branch Air Division

Date