

**PRECONSTRUCTION ANALYSIS**  
**REED MATERIALS, LLC**  
**711-0074**  
**UNIT X001**

Reed Materials, LLC, of Union Grove, Alabama, has applied to the ADEM - Air Division for a Synthetic Minor Operating Permit (SMOP) which would authorize the construction and operation of a limestone crushing, screening, and conveying circuit to be located at 7442 Warrenton Road, Guntersville, Marshall County.

**Reed Materials, LLC, has applied for the following SMOP:**

**X001- 441 TPH Crushing, Screening, and Conveying Circuit with Wet Suppression (NSPS-OOO); Including One 333 Hp Scania Engine, One 129 Hp Caterpillar Engine, One 493 Hp Scania Engine, One 380 Hp Cummins Engine, One 132 Hp Deutz Engine, Two 64 Hp John Deere Engines, Two 50 Hp Caterpillar Engines, and One 131 Hp John Deere Engine (NSPS-III)**

SMOP Limitation:

- Annual Operating Hours Limit of 3,500 hours per year (12-month rolling average)

**X001 Process Description:**

Aggregate material would be fed, by front end loader or dump truck, into the primary crushing, screening, and conveying circuit. Material would flow through the circuit where it will either be distributed into a stockpile or move into the secondary crusher for further processing. Processed material would then flow into the secondary screen where it will either be moved into the tertiary crusher for further processing or be conveyed to different sizing stockpiles. (See flow diagram in the application.)

All equipment associated with this process is subject to either the State Implementation Plan (SIP) or the New Source Performance Standards (40 CFR Part 60, Subpart OOO-Standards of Performance for Nonmetallic Mineral Processing Plants). 40 CFR Part 60, Subpart OOO NSPS limits visible emissions from uncontrolled crushers to 12% opacity and limits visible emissions from grinding mills, screening operations, bucket elevators, belt conveyors, bagging operations, storage bins, and enclosed truck or railcar loading stations, or from any other affected facility to 7% opacity. Wet material processing operations as defined in 60.671 of 40 CFR Part 60 are exempt from Subpart OOO. In addition to the opacity requirements, there are periodic monitoring and testing requirements, as well as recordkeeping requirements to remain in compliance with NSPS Subpart OOO, as promulgated on April 28, 2009. Monthly inspections are required for all spray nozzles in wet suppression areas and for areas controlled by carryover moisture from upstream wet suppression. If inspections of the upstream spray nozzles are not conducted, the carryover areas will be subject to the five-year interval retest requirement. All areas not controlled by wet suppression or carryover shall be required to retest every five years. Records of all periodic monitoring inspections, dates, results, and any corrective action taken shall be kept at the facility site, available for inspection and shall be retained for a minimum of five years.

Reed Materials, LLC, will be required to conduct EPA Method 9 Visible Emissions Observations on the NSPS equipment associated with this circuit. Any equipment exempt from NSPS is subject to the State Implementation Plan (SIP).

**Process X001**

<i>Manufacturer</i>	<i>Type</i>	<i>Maximum Operating Capacity</i>	<i>Manufacturer's Date</i>	<i>NSPS/SIP</i>	<i>Testing?</i>
Kleemann	MC 110i EVO2 Vibrating Feeder (1a)	441 TPH	2023	SIP	No
Kleemann	MC 110i EVO2 Jaw Crusher (1b)	441 TPH	2023	NSPS	Yes
Kleemann	MC 110i EVO2 Discharge Conveyor (1c)	441 TPH	2023	NSPS	Yes
Astec	GT165 Feeding Conveyor (2a)	350 TPH	2022	NSPS	Yes
Astec	GT165 Vibrating Screen (2b)	350 TPH	2022	NSPS	Yes
Astec	GT165 Overs Conveyor (2c)	350 TPH	2022	NSPS	Yes
Astec	GT165 Underscreen Conveyor (2d)	350 TPH	2022	NSPS	Yes
Astec	GT165 Bottom Deck Conveyor (2e)	350 TPH	2022	NSPS	Yes
Astec	GT165 Fines Conveyor (2f)	350 TPH	2022	NSPS	Yes
Kleemann	MCO 110i Pro Feeding Conveyor (3a)	518 TPH	2025	NSPS	Yes
Kleemann	MCO 110i Pro Cone Crusher (3b)	518 TPH	2025	NSPS	Yes
Kleemann	MCO 110i Pro Crusher Discharge Conveyor (3c)	518 TPH	2025	NSPS	Yes
Astec	GT440 Vibrating Feeder (4a)	400 TPH	2020	NSPS	Yes
Astec	GT440 Horizontal Shaft Impact Crusher (4b)	400 TPH	2020	NSPS	Yes

Astec	GT440 Discharge Conveyor (4c)	400 TPH	2020	NSPS	Yes
Kleemann	MS 953i EVO Feeding Conveyor (5a)	551 TPH	2023	NSPS	Yes
Kleemann	MS 953i EVO Screen (5b)	551 TPH	2023	NSPS	Yes
Kleemann	MS 953i EVO Discharge Conveyor (5c)	551 TPH	2023	NSPS	Yes
Kleemann	MS 953i EVO Discharge Conveyor (5d)	300 TPH	2023	NSPS	Yes
Kleemann	MS 953i EVO Discharge Conveyor (5e)	300 TPH	2023	NSPS	Yes
Kleemann	MS 953i EVO Transfer Conveyor (5f)	551 TPH	2023	NSPS	Yes
Kleemann	MS 953i EVO Grain Conveyor (5g)	180 TPH	2023	NSPS	Yes
Kleemann	MBT 24i Conveyor (6)	500 TPH	2023	NSPS	Yes
Kleemann	MBT 20i Conveyor (7)	500 TPH	2023	NSPS	Yes
Astec	GT4280 Conveyor (8)	500 TPH	2024	NSPS	Yes
Astec	GT4280 Conveyor (9)	500 TPH	2025	NSPS	Yes
Kleemann	MS 952i EVO Feeding Conveyor (10a)	551 TPH	2019	NSPS	Yes
Kleemann	MS 952i EVO Screen (10b)	551 TPH	2019	NSPS	Yes
Kleemann	MS 952i EVO Discharge Conveyor (10c)	551 TPH	2019	NSPS	Yes
Kleemann	MS 952i EVO Discharge Conveyor (10d)	300 TPH	2019	NSPS	Yes
Kleemann	MS 952i EVO Discharge Conveyor (10e)	300 TPH	2019	NSPS	Yes

The total expected fugitive emissions rate for this circuit would be **10.64 TPY**. There is no allowable emissions rate for fugitive or dust emissions. Therefore, the uncontrolled, controlled, and expected emission rate calculations for this circuit can be found in Appendix A. Note: these calculations are furnished as public information and used to demonstrate the effectiveness of wet suppression systems

based on emission factors taken from an EPA approved source of emission factors. By definition, fugitive emissions from this process would not be considered in determining Prevention of Significant Deterioration (PSD) applicability. Also, emissions from this facility are below the Title V major source threshold.

Reed Materials, LLC, will utilize 10 diesel-fired engines to supply power for circuit X001. The engines are affected sources under 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (the "RICE MACT"). The engines are considered new affected sources since all ten engines were constructed after June 12, 2006. According to §63.6590(c), any new stationary "RICE" located at an area source of HAP emissions must meet the requirements of the "RICE MACT" by meeting the requirements of 40 CFR 60, Subpart III, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. Engine manufacturers' certifications were provided with the applications.

Potential emissions from the diesel engines have been calculated and can be found in Appendix A. Since potential emissions for NO<sub>x</sub> are above the 100 TPY threshold, an hours of operation limitation of 3,500 hours during any consecutive twelve (12) month rolling period will be included in the permit. Due to the hours of operation limit, emissions of criteria pollutants would not meet or exceed the major source threshold for Title V sources (see Appendix A, calculations).

This facility is located within 100 km of the Sipsey Class I Wilderness Area. The construction and operation of this facility is not anticipated to significantly impact this area.

In accordance with ADEM Admin. Code R. 335-3-14, 335-3-15, and 335-3-16, this facility would not be considered "major" for any criteria pollutant and, therefore, would not be required to undergo the PSD process. This site would be considered a Greenfield site and Reed Materials, LLC, would be required to complete a 30-day public comment period, a joint public notice with the Water Division.

This analysis indicates that this source would meet the requirements of all applicable rules and regulations of the ADEM - Air Division; therefore, I recommend that a Synthetic Minor Operating Permit be issued to Reed Materials, LLC, incorporating the provisions of Appendix B and Appendix C, and the cover letter.

Emily Williams

Emily Williams  
Energy Branch  
Air Division

March 12, 2026  
Date

**APPENDIX A**  
**CALCULATIONS**  
**FOR**  
**REED MATERIALS, LLC**  
**GUNTERSVILLE, ALABAMA**  
**711-0074-X001**

**X001** – 441 TPH Crushing, Screening, and Conveying Circuit with Wet Suppression (NSPS-000); Including One 333 Hp Scania Engine, One 129 Hp Caterpillar Engine, One 493 Hp Scania Engine, One 380 Hp Cummins Engine, One 132 Hp Deutz Engine, Two 64 Hp John Deere Engines, Two 50 Hp Caterpillar Engines, and One 131 Hp John Deere Engine (NSPS-III)

*Equipment:* 3 Crushers, 3 Screens, and 25 Associated Belt Conveyors (including 2 Feeders)

*Hours of Operation:* SMOP Limitation of 3,500 hours/year (rolling average)

*Pollution Control:* Wet Suppression

**Allowable Emission:** There is no allowable particulate emission rate limiting fugitive emissions for any of these processes.

**Uncontrolled Emissions:** Emission factors taken from EPA AP-42, Table 11.19.2-2

Source			Uncontrolled		Controlled	
		Units	Total PM	PM-10	Total PM	PM-10
<b>Crushing Emission Factor</b>		<b>lb/Ton</b>	<b>0.0054</b>	<b>0.0024</b>	<b>0.0012</b>	<b>0.00054</b>
Capacity	<b>441</b>	<b>TPH</b>				
<b>Total (# TPH * EF# lb/Ton)</b>		<b>lb/hr</b>	2.3814	1.0584	0.5292	0.23814
	8760	hrs/yr				
<b>Total</b> (#lb/hr*#hrs/yr*(1/2000)Ton/lbs)		<b>TPY</b>	10.430532	4.635792	2.317896	1.043053
	3500	hrs/yr				
<b>Expected/Limited</b> (#lb/hr*exp#hrs/yr*(1/2000)Ton/lbs)		<b>TPY</b>	4.16745	1.8522	0.9261	0.416745
<b>Screening Emission Factor</b>		<b>lb/Ton</b>	<b>0.025</b>	<b>0.0087</b>	<b>0.0022</b>	<b>0.00074</b>
Capacity	<b>441</b>	<b>TPH</b>				
<b>Total (# TPH * EF# lb/Ton)</b>		<b>lb/hr</b>	11.025	3.8367	0.9702	0.32634
	8760	hrs/yr				
<b>Total</b> (#lb/hr*#hrs/yr*1/2000Ton/lbs)		<b>TPY</b>	48.2895	16.80475	4.249476	1.429369
	3500	hrs/yr				
<b>Expected/Limited</b> (#lb/hr*exp#hrs/yr*1/2000Ton/lbs)		<b>TPY</b>	19.29375	6.714225	1.69785	0.571095
<b>Conveying/ Transfer Point Emission Factor</b>		<b>lb/Ton</b>	<b>0.003</b>	<b>0.0011</b>	<b>0.00014</b>	<b>0.000046</b>
Capacity	<b>441</b>	<b>TPH</b>				
<b>Total (# TPH * EF# lb/Ton)</b>		<b>lb/hr</b>	1.323	0.4851	0.06174	0.020286
	8760	hrs/yr				
<b>Total</b> (#lb/hr*#hrs/yr*1/2000Ton/lbs)		<b>TPY</b>	5.79474	2.124738	0.2704212	0.088853
	3500	hrs/yr				
<b>Expected/Limited</b> (#lb/hr*exp#hrs/yr*1/2000Ton/lbs)		<b>TPY</b>	2.31525	0.848925	0.108045	0.035501

**Total Uncontrolled Fugitive Emissions:**

Crushing	10.43 TPY x 3 Crushers = 31.29 TPY
Screening	48.29 TPY x 3 Screens = 144.87 TPY
<u>Conveying</u>	<u>5.79 TPY x 25 Conveyors = 144.75 TPY</u>
<b>Total</b>	320.91 TPY at 8760 hrs/yr

**Total Controlled Fugitive Emissions:**

Crushing	2.32 TPY x 3 Crushers = 6.96 TPY
Screening	4.25 TPY x 3 Screens = 12.75 TPY
<u>Conveying</u>	<u>0.27 TPY x 25 Conveyors = 6.75 TPY</u>
<b>Total</b>	26.46 TPY at 8760 hrs/yr

**Expected/Limited Fugitive Emissions:** Based on 3500 Limited Hours of Operation and the AP-42 total particulate controlled emission factor.

Crushing	0.93 TPY x 3 Crushers = 2.79 TPY
Screening	1.70 TPY x 3 Screens = 5.10 TPY
<u>Conveying</u>	<u>0.11 TPY x 25 Conveyors = 2.75 TPY</u>
<b>Total</b>	10.64 TPY at 3500 hrs/yr

## CALCULATIONS FOR ENGINES

*Equipment:* One 333 Hp Scania Diesel Engine (Kleemann MC 110i Jaw Crusher)

*Hours of Operation:* SMOP Limitation of 3,500 hours/year (rolling average)

*Pollution Control:* Manufacturer certification

**Allowable Emission Rate:** 40 CFR 60, Subpart IIII

**Uncontrolled Emissions:** Emission factors taken from AP-42 Table 3.3-1 Emission Factors for Uncontrolled Gasoline and Diesel Engines.

### NO<sub>x</sub> Emissions

NO<sub>x</sub> Emission Factor 0.031 lb/Hp-hr, AP-42 Table 3.3-1.

333 Hp	0.031 lb Hp-hr	3500 hrs Yr	1 T 2000 lbs	= 18.07 T Yr
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**Total:** 18.07 TPY

### SO<sub>x</sub> Emissions

SO<sub>x</sub> Emission Factor 2.05 E-03 lb/Hp-hr, AP-42, Table 3.3-1.

333 Hp	0.00205 lb HP-hr	3500 hrs Yr	1 T 2000 lbs	= 1.19 T Yr
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**Total:** 1.19 TPY

### CO Emissions

CO Emission Factor 6.68 E-03 lb/Hp-hr, AP-42, Table 3.3-1.

333 Hp	0.00668 lb Hp-hr	3500 hrs 1Yr	1 T 2000 lbs	= 3.89 T Yr
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**Total:** 3.89 TPY

### PM Emissions

PM Emission Factor 2.20 E-03 lb/Hp-hr, AP-42, Table 3.3-1.

333 Hp	0.00220 lb Hp-hr	3500 hrs Yr	1 T 2000 lbs	= 1.28 T Yr
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**Total:** 1.28 TPY

Equipment: One 129 Hp Caterpillar Diesel Engine (Astec GT165 Screen)

Hours of Operation: SMOP Limitation of 3,500 hours/year (rolling average)

Pollution Control: Manufacturer certification

Allowable Emission Rate: 40 CFR 60, Subpart IIII

Uncontrolled Emissions: Emission factors taken from AP-42 Table 3.3-1 Emission Factors for Uncontrolled Gasoline and Diesel Engines.

**NO<sub>x</sub> Emissions**

NO<sub>x</sub> Emission Factor 0.031 lb/Hp-hr, AP-42 Table 3.3-1.

129 Hp	0.031 lb Hp-hr	3500 hrs Yr	1 T 2000 lbs	= 7.00 T Yr
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**Total: 7.00 TPY**

**SO<sub>x</sub> Emissions**

SO<sub>x</sub> Emission 2.05 E-03 lb/Hp-hr, AP-42, Table 3.3-1.

129 Hp	0.00205 lb Hp-hr	3500 hrs Yr	1 T 2000 lbs	= 0.46 T Yr
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**Total: 0.46 TPY**

**CO Emissions**

CO Emission Factor 6.68 E-03 lb/Hp-hr, AP-42, Table 3.3-1.

129 Hp	0.00668 lb Hp-hr	3500 hrs Yr	1 T 2000 lbs	= 1.51 T Yr
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**Total: 1.51 TPY**

**PM Emissions**

PM Emission Factor 2.20 E-03 lb/Hp-hr, AP-42, Table 3.3-1.

129 Hp	0.00220 lb Hp-hr	3500 hrs Yr	1 T 2000 lbs	= 0.50 T Yr
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**Total: 0.50 TPY**

*Equipment:* One 493 Hp Scania Diesel Engine (Kleemann MCO 110i Cone Crusher)

*Hours of Operation:* SMOP Limitation of 3,500 hours/year (rolling average)

*Pollution Control:* Manufacturer certification

**Allowable Emission Rate:** 40 CFR 60, Subpart IIII

**Uncontrolled Emissions:** Emission factors taken from AP-42 Table 3.3-1 Emission Factors for Uncontrolled Gasoline and Diesel Engines.

**NO<sub>x</sub> Emissions**

NO<sub>x</sub> Emission Factor 0.031 lb/Hp-hr, AP-42 Table 3.3-1.

493 Hp	0.031 lb Hp-hr	3500 hrs Yr	1 T 2000 lbs	= 26.75 T Yr
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**Total:** 26.75 TPY

**SO<sub>x</sub> Emissions**

SO<sub>x</sub> Emission 2.05 E-03 lb/Hp-hr, AP-42, Table 3.3-1.

493 Hp	0.00205 lb Hp-hr	3500 hrs Yr	1 T 2000 lbs	= 1.77 T Yr
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**Total:** 1.77 TPY

**CO Emissions**

CO Emission Factor 6.68 E-03 lb/Hp-hr, AP-42, Table 3.3-1.

493 Hp	0.00668 lb Hp-hr	3500 hrs Yr	1 T 2000 lbs	= 5.76 T Yr
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**Total:** 5.76 TPY

**PM Emissions**

PM Emission Factor 2.20 E-03 lb/Hp-hr, AP-42, Table 3.3-1.

493 Hp	0.00220 lb Hp-hr	3500 hrs Yr	1 T 2000 lbs	= 1.90 T Yr
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**Total:** 1.90 TPY

*Equipment:* One 380 Hp Cummins Diesel Engine (Astec GT440 HSI Crusher)

*Hours of Operation:* SMOP Limitation of 3,500 hours/year (rolling average)

*Pollution Control:* Manufacturer certification

**Allowable Emission Rate:** 40 CFR 60, Subpart III

**Uncontrolled Emissions:** Emission factors taken from AP-42 Table 3.3-1 Emission Factors for Uncontrolled Gasoline and Diesel Engines.

**NO<sub>x</sub> Emissions**

NO<sub>x</sub> Emission Factor 0.031 lb/Hp-hr, AP-42 Table 3.3-1.

380 Hp	0.031 lb Hp-hr	3500 hrs Yr	1 T 2000 lbs	= 20.62 T Yr
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**Total:** 20.62 TPY

**SO<sub>x</sub> Emissions**

SO<sub>x</sub> Emission 2.05 E-03 lb/Hp-hr, AP-42, Table 3.3-1.

380 Hp	0.00205 lb Hp-hr	3500 hrs Yr	1 T 2000 lbs	= 1.36 T Yr
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**Total:** 1.36 TPY

**CO Emissions**

CO Emission Factor 6.68 E-03 lb/Hp-hr, AP-42, Table 3.3-1.

380 Hp	0.00668 lb Hp-hr	3500 hrs Yr	1 T 2000 lbs	= 4.44 T Yr
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**Total:** 4.44 TPY

**PM Emissions**

PM Emission Factor 2.20 E-03 lb/Hp-hr, AP-42, Table 3.3-1.

380 Hp	0.00220 lb Hp-hr	3500 hrs Yr	1 T 2000 lbs	= 1.46 T Yr
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**Total:** 1.46 TPY

*Equipment:* One 132 Hp Deutz Diesel Engine (Kleemann MS 953i Screen)

*Hours of Operation:* SMOP Limitation of 3,500 hours/year (rolling average)

*Pollution Control:* Manufacturer certification

**Allowable Emission Rate:** 40 CFR 60, Subpart III

**Uncontrolled Emissions:** Emission factors taken from AP-42 Table 3.3-1 Emission Factors for Uncontrolled Gasoline and Diesel Engines.

**NO<sub>x</sub> Emissions**

NO<sub>x</sub> Emission Factor 0.031 lb/Hp-hr, AP-42 Table 3.3-1.

132 Hp	0.031 lb Hp-hr	3500 hrs Yr	1 T 2000 lbs	= 7.16 T Yr
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**Total:** 7.16 TPY

**SO<sub>x</sub> Emissions**

SO<sub>x</sub> Emission 2.05 E-03 lb/Hp-hr, AP-42, Table 3.3-1.

132 Hp	0.00205 lb Hp-hr	3500 hrs Yr	1 T 2000 lbs	= 0.47 T Yr
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**Total:** 0.47 TPY

**CO Emissions**

CO Emission Factor 6.68 E-03 lb/Hp-hr, AP-42, Table 3.3-1.

132 Hp	0.00668 lb Hp-hr	3500 hrs Yr	1 T 2000 lbs	= 1.54 T Yr
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**Total:** 1.54 TPY

**PM Emissions**

PM Emission Factor 2.20 E-03 lb/Hp-hr, AP-42, Table 3.3-1.

132 Hp	0.00220 lb Hp-hr	3500 hrs Yr	1 T 2000 lbs	= 0.51 T Yr
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**Total:** 0.51 TPY

*Equipment:* Two 64 Hp John Deere Diesel Engines (Kleemann MBT 24i and 20i Conveyor)

*Hours of Operation:* SMOP Limitation of 3,500 hours/year (rolling average)

*Pollution Control:* Manufacturer certification

**Allowable Emission Rate:** 40 CFR 60, Subpart IIII

**Uncontrolled Emissions:** Emission factors taken from AP-42 Table 3.3-1 Emission Factors for Uncontrolled Gasoline and Diesel Engines.

**NO<sub>x</sub> Emissions**

NO<sub>x</sub> Emission Factor 0.031 lb/Hp-hr, AP-42 Table 3.3-1.

64 Hp	0.031 lb Hp-hr	3500 hrs Yr	1 T 2000 lbs	= 3.47 T Yr
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**Total:** 3.47 TPY x 2 = 6.94 TPY

**SO<sub>x</sub> Emissions**

SO<sub>x</sub> Emission 2.05 E-03 lb/Hp-hr, AP-42, Table 3.3-1.

64 Hp	0.00205 lb Hp-hr	3500 hrs Yr	1 T 2000 lbs	= 0.23 T Yr
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**Total:** 0.23 TPY x 2 = 0.46 TPY

**CO Emissions**

CO Emission Factor 6.68 E-03 lb/Hp-hr, AP-42, Table 3.3-1.

64 Hp	0.00668 lb Hp-hr	3500 hrs Yr	1 T 2000 lbs	= 0.75 T Yr
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**Total:** 0.75 TPY x 2 = 1.50 TPY

**PM Emissions**

PM Emission Factor 2.20 E-03 lb/Hp-hr, AP-42, Table 3.3-1.

64 Hp	0.00220 lb Hp-hr	3500 hrs Yr	1 T 2000 lbs	= 0.25 T Yr
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**Total:** 0.25 TPY x 2 = 0.50 TPY

*Equipment:* Two 50 Hp Caterpillar Diesel Engines (Astec GT4280 Conveyors-Emission Points 8&9)

*Hours of Operation:* SMOP Limitation of 3,500 hours/year (rolling average)

*Pollution Control:* Manufacturer certification

**Allowable Emission Rate:** 40 CFR 60, Subpart III

**Uncontrolled Emissions:** Emission factors taken from AP-42 Table 3.3-1 Emission Factors for Uncontrolled Gasoline and Diesel Engines.

**NO<sub>x</sub> Emissions**

NO<sub>x</sub> Emission Factor 0.031 lb/Hp-hr, AP-42 Table 3.3-1.

50 Hp	0.031 lb Hp-hr	3500 hrs Yr	1 T 2000 lbs	= 2.71 T Yr
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**Total:** 2.71 TPY x 2 = 5.42 TPY

**SO<sub>x</sub> Emissions**

SO<sub>x</sub> Emission 2.05 E-03 lb/Hp-hr, AP-42, Table 3.3-1.

50 Hp	0.00205 lb Hp-hr	3500 hrs Yr	1 T 2000 lbs	= 0.18 T Yr
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**Total:** 0.18 TPY x 2 = 0.36 TPY

**CO Emissions**

CO Emission Factor 6.68 E-03 lb/Hp-hr, AP-42, Table 3.3-1.

50 Hp	0.00668 lb Hp-hr	3500 hrs Yr	1 T 2000 lbs	= 0.58 T Yr
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**Total:** 0.58 TPY x 2 = 1.16 TPY

**PM Emissions**

PM Emission Factor 2.20 E-03 lb/Hp-hr, AP-42, Table 3.3-1.

50 Hp	0.00220 lb Hp-hr	3500 hrs Yr	1 T 2000 lbs	= 0.19 T Yr
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**Total:** 0.19 TPY x 2 = 0.38 TPY

*Equipment:* One 131 Hp John Deere Diesel Engine (Kleemann MS 952i Screen)

*Hours of Operation:* SMOP Limitation of 3,500 hours/year (rolling average)

*Pollution Control:* Manufacturer certification

**Allowable Emission Rate:** 40 CFR 60, Subpart IIII

**Uncontrolled Emissions:** Emission factors taken from AP-42 Table 3.3-1 Emission Factors for Uncontrolled Gasoline and Diesel Engines.

**NO<sub>x</sub> Emissions**

NO<sub>x</sub> Emission Factor 0.031 lb/Hp-hr, AP-42 Table 3.3-1.

131 Hp	0.031 lb Hp-hr	3500 hrs Yr	1 T 2000 lbs	= 7.11 T Yr
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**Total:** 7.11 TPY

**SO<sub>x</sub> Emissions**

SO<sub>x</sub> Emission 2.05 E-03 lb/Hp-hr, AP-42, Table 3.3-1.

131 Hp	0.00205 lb Hp-hr	3500 hrs Yr	1 T 2000 lbs	= 0.47 T Yr
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**Total:** 0.47 TPY

**CO Emissions**

CO Emission Factor 6.68 E-03 lb/Hp-hr, AP-42, Table 3.3-1.

131 Hp	0.00668 lb Hp-hr	3500 hrs Yr	1 T 2000 lbs	= 1.53 T Yr
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**Total:** 1.53 TPY

**PM Emissions**

PM Emission Factor 2.20 E-03 lb/Hp-hr, AP-42, Table 3.3-1.

131 Hp	0.00220 lb Hp-hr	3500 hrs Yr	1 T 2000 lbs	= 0.50 T Yr
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**Total:** 0.50 TPY

### Total Facility Emissions Summary Table

Pollutant	Expected/Limited	
	lbs./hr.	TPY
PM	10.10	17.67
SOx	3.74	6.54
NOx	56.61	99.07
CO	12.19	21.33

**APPENDIX B**  
**REED MATERIALS, LLC**  
**Guntersville, Alabama**  
**PERMIT NO. 711-0074-X001**  
**PROVISOS**

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.
2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.
3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.
4. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.
5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shut down as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.
6. This process, including all air pollution control devices and capture systems for which this permit is issued, shall be maintained, and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.
7. This permit expires, and the application is canceled if construction has not begun within 24 months of the date of issuance of the permit.
8. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

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9. Prior to a date to be specified by the Chief of the Air Division in the authorization to operate, emission tests are to be conducted by persons familiar with and using the EPA Sampling Train and Test Procedure as described in the Code of Federal Regulations, Title 40, Part 60, for the following pollutants. Written test results are to be reported to the Department within 15 working days of completion of testing.

Particulates	( )	Carbon Monoxide	( )
Sulfur Dioxide	( )	Nitrogen Oxides	( )
Volatile Organic Compounds	( )	Visible Emissions	(X)

10. Submission of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.

11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.

12. Nothing in this permit or conditions thereto shall negate any authority granted to the Department pursuant to the Alabama Environmental Management Act or regulations issued thereunder.

13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.

14. The Department must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations. To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

- (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.
- (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).
- (c) A description of the processes to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.

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- (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Department within 15 days of the actual completion of the test, unless an extension of time is specifically approved by the Department.

- 15. Precautions to prevent fugitive dust shall be taken so that provisions of the Department's rules and regulations shall not be violated.
- 16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

- (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;
- (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;
- (c) by paving;
- (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

- 17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.

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18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.
19. All equipment associated with this process is subject to either the State Implementation Plan (SIP) or the New Source Performance Standards (40 CFR Part 60, Subpart OOO-Standards of Performance for Nonmetallic Mineral Processing Plants). This NSPS limits fugitive emissions from uncontrolled crushers to 12% opacity, and fugitive emissions from grinding mills, screening operations, bucket elevators, transfer points on belt conveyors, bagging operations, storage bins, enclosed truck or railcar loading stations, or from any other affected facility to 7 % opacity. This NSPS allows no emissions from wet screening operations.
20. Compliance with the opacity standards for sources subject to NSPS-Subpart OOO will be determined by conducting visible emission observations in accordance with the most recent version of EPA Reference Method 9 of Appendix A-4 of the CFR, Title 40, Part 60. When determining compliance with the fugitive emissions standard for grinding mills, screening operations, bucket elevators, belt conveyors, bagging operations, storage bins and enclosed truck and railcar loading stations or from any other affected facility of this circuit, the duration of the Method 9 observations are required to be 30 minutes or five six minute averages. No more than 3 points may be tested concurrently by the same observer. The specified criteria of NSPS - Subpart OOO must be met.

The required performance testing will be conducted within 60 days of the source achieving maximum production rate but no later than 180 days of initial start-up of the facility. The test reports will be submitted to the Department within 15 days of the test date.

21. Periodic monitoring is required for all equipment controlled by wet suppression and/or water carryover that is subject to the April 22, 2008, applicability date for NSPS - Subpart OOO. Each spray nozzle shall be examined monthly to assure water is appropriately supplied to the nozzle and that the water is sprayed from the nozzle correctly. Any corrective action indicated shall be taken within 24 hours of the inspection and completed as expeditiously as possible.
22. Recordkeeping is required for all monthly periodic monitoring inspections. Records shall be kept on the facility site, either in a handwritten logbook or in electronic version suitable for inspection upon request by Air Division inspectors and will be retained for at least five (5) years following the date of the inspection. Records of the inspection date, results, and any corrective action taken shall be recorded. In addition, if wet suppression is not utilized during the inspection, any other control method used should be recorded or circumstances shall be noted.

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23. The diesel-fired engines associated with this circuit are affected sources under 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (the "RICE MACT"). The engines are considered new affected sources since all the engines were constructed after June 12, 2006. Any new stationary "RICE" located at an area source of HAP emissions must meet the requirements of the "RICE MACT" by meeting the requirements of 40 CFR 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.
24. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.
25. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.
26. Precautions shall be taken by the permittee and its personnel to ensure that no person shall ignite, cause to be ignited, permit to be ignited, or maintain any open fire in such a manner as to cause the Department's rules and regulations applicable to open burning to be violated.
27. This facility is limited to 3,500 hours of operation during any consecutive twelve (12) month period (12-month rolling average). Recordkeeping is required for the hours of operation. Records shall be kept on the facility site, either in a handwritten logbook or in an electronic version suitable for inspection upon request by Air Division inspectors and will be retained for at least five (5) years following the date of generation.
28. The permittee shall submit an annual report by March 15<sup>th</sup> of each calendar year that provides each monthly and 12-month rolling average total of hours of operation.
29. Should this facility, at any time, exceed the limits set forth in this permit, this Department must be notified within ten (10) days of the exceedance.

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Date

## APPENDIX C

Date

Mr. Chastin Reed  
Reed Materials, LLC  
1039 Bean Rock Road  
Union Grove, AL 35175

Dear Mr. Reed:

**RE: Facility No. 711-0074  
Unit X001**

The enclosed Synthetic Minor Operating Permit (SMOP) is issued pursuant to the Department's air pollution control rules and regulations. Please note the conditions (provisions) which must be met in order to retain this Permit.

New sources of air pollution receiving approval by an Air Permit must notify the Chief of the Air Division upon completion of construction and prior to operation. Authorization to Operate must then be received from the Chief of the Air Division. Failure to notify the Chief of the Air Division upon completion of construction and/or operation without authorization can result in the revocation of the Air Permit.

Upon receiving the enclosed Air Permits, please review **all** of the provisions.

Should you have any questions or if clarification of permit conditions is required, please do not hesitate to contact Emily Williams at (334) 270-5681 in Montgomery.

Sincerely,

Aubrey H. White III, Chief  
Air Division

AHW/ew

Enclosures

# Synthetic Minor Operating Permit

**PERMITTEE:** REED MATERIALS, LLC  
**FACILITY NAME:** PROJECT NEW ROAD  
**LOCATION:** GUNTERSVILLE, ALABAMA

<b>PERMIT NUMBER</b>	<b>DESCRIPTION OF EQUIPMENT, ARTICLE OR DEVICE</b>
711-0074-X001	X001-441 TPH Crushing, Screening, and Conveying Circuit with Wet Suppression (NSPS-000); Including One 333 Hp Scania Engine, One 129 Hp Caterpillar Engine, One 493 Hp Scania Engine, One 380 Hp Cummins Engine, One 132 Hp Deutz Engine, Two 64 Hp John Deere Engines, Two 50 Hp Caterpillar Engines, and One 131 Hp John Deere Engine (NSPS-III)

*In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§ 22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§ 22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.*

**ISSUANCE DATE:**