

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 2482-AR-1 AFIN: 10-00531

1. PERMITTING AUTHORITY:

Division of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118-5317

2. APPLICANT:

Building Materials Manufacturing LLC
151 McClellan Blvd.
Arkadelphia, Arkansas 71923

3. PERMIT WRITER:

Elliott Marshall

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Custom Compounding of Purchased Resins
NAICS Code: 325991

5. ALL SUBMITTALS:

The following is a list of ALL permit applications included in this permit revision.

Date of Application	Type of Application (New, Renewal, Modification, Deminimis/Minor Mod, or Administrative Amendment)	Short Description of Any Changes That Would Be Considered New or Modified Emissions
4/9/2025	Deminimis	Add SN-06

6. REVIEWER'S NOTES:

The facility submitted an application to install a new 129 Hp, natural gas emergency generator (SN-06). Permitted emission rates are increasing by 0.1 tpy PM/PM₁₀/SO₂, 0.2 tpy VOC, 0.8 tpy NO_x, 27.6 tpy CO, and 0.02 tpy Total HAPs.

7. COMPLIANCE STATUS:

The following summarizes the current compliance of the facility including active/pending enforcement actions and recent compliance activities and issues.

An inspection was performed on March 5, 2025. An emergency natural gas generator which was not addressed in the facility's current permit was being utilized at the southern warehouse. This permitting action serves to permit this engine as SN-06.

8. PSD/GHG APPLICABILITY:

a) Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? N
If yes, were GHG emission increases significant? N/A

b) Is the facility categorized as a major source for PSD? N

- *Single pollutant ≥ 100 tpy and on the list of 28 or single pollutant ≥ 250 tpy and not on list*

If yes for 8(b), explain why this permit modification is not PSD.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
05, 06	NO _x , CO, VOC	NSPS JJJJ
	HAPs	NESHAP ZZZZ

10. UNCONSTRUCTED SOURCES:

Unconstructed Source	Permit Approval Date	Extension Requested Date	Extension Approval Date	If Greater than 18 Months without Approval, List Reason for Continued Inclusion in Permit
N/A				

11. PERMIT SHIELD – TITLE V PERMITS ONLY:

Did the facility request a permit shield in this application? N

(Note - permit shields are not allowed to be added, but existing ones can remain, for minor modification applications or any Rule 18 requirement.)

If yes, are applicable requirements included and specifically identified in the permit? N/A
If not, explain why.

For any requested inapplicable regulation in the permit shield, explain the reason why it is not applicable in the table below.

Source	Inapplicable Regulation	Reason
N/A		

12. COMPLIANCE ASSURANCE MONITORING (CAM) – TITLE V PERMITS ONLY:

List sources potentially subject to CAM because they use a control device to achieve compliance and have pre-control emissions of at least 100 percent of the major source level. List the pollutant of concern and a brief summary of the CAM plan (temperature monitoring, CEMs, opacity monitoring, etc.) and frequency requirements of § 64.

Source	Pollutant Controlled	Cite Exemption or CAM Plan Monitoring and Frequency
N/A		

13. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

14. AMBIENT AIR EVALUATIONS:

The following are results for ambient air evaluations or modeling.

a) NAAQS

A NAAQS evaluation is not required under the Arkansas State Implementation Plan, National Ambient Air Quality Standards, Infrastructure SIPs and NAAQS SIP per Ark. Code Ann. § 8-4-318, dated March 2017 and the DEQ Air Permit Screening Modeling Instructions.

b) Non-Criteria Pollutants:

The non-criteria pollutants listed below were evaluated. Based on Division of Environmental Quality procedures for review of non-criteria pollutants, emissions of all other non-criteria pollutants are below thresholds of concern.

1st Tier Screening (PAER)

Estimated hourly emissions from the following sources were compared to the Presumptively Acceptable Emission Rate (PAER) for each compound. The Division of Environmental Quality has deemed the PAER to be the product, in lb/hr, of 0.11 and the Threshold Limit Value (mg/m³), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

There were no updates to the table below with this revision. SN-06 is an emergency engine.

Pollutant	TLV (mg/m ³)	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
Maleic Anhydride	0.01	0.0011	5.93E-04	Yes

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Pollutant	TLV (mg/m ³)	PAER (lb/hr) = $0.11 \times \text{TLV}$	Proposed lb/hr	Pass?
Lead	0.05	0.055	4.09E-05	Yes
Cadmium	0.01	0.0011	4.09E-06	Yes

c) H₂S Modeling:

A.C.A. §8-3-103 requires hydrogen sulfide emissions to meet specific ambient standards. Many sources are exempt from this regulation, refer to the Arkansas Code for details.

Is the facility exempt from the H₂S Standards

Y

If exempt, explain: No H₂S Emissions

15. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01	AP-42, Chapter 5.2 & Mass Balance	<p><u>Liquid Mixing</u>¹</p> <p>Splash Loading Equation from AP-42 5.2-4 Equation (1) was used to determine loading losses</p> <p>S = Saturation Factor: 1.75 P = true vapor pressure (varies) M = Molecular weight of vapors (varies) T = Temp.: 25 C (298.15 K)</p> <p>Total lb VOC/yr= 111,669.34</p> <p><u>Solids Mixing</u></p> <p>Capture Efficiency: 79.8%</p> <p>Maximum Hourly solids addition = 10,000 lb/hr</p> <p>Maximum annual solids usage rate = 24,596,451.85 lb/yr</p>	Baghouse/ Building (only controls solids portion of mixing operation)	99.0%/ 50%	<p><u>Liquid Mixing</u></p> <p>Max number of tank transfer operations: 4</p> <p><u>Solid Mixing</u></p> <p>Max number of drop points: 2</p>
05	AP-42, Chapter 3.2 & NSPS JJJJ	<p>lb/MMBtu</p> <p><u>AP-42</u></p> <p>PM: 1.94E-02 PM₁₀: 9.5E-03 SO₂: 5.88E-04</p> <p><u>NSPS JJJJ</u></p> <p>VOC: 8.81E-01 CO: 3.72 NO_x: 2.21</p>	-	-	1.82 MMBtu/hr, 500 hr/yr
06	AP-42, Chapter 3.2 & Manufacturer	<p>lb/MMBtu</p> <p>PM/PM₁₀: 9.5E-03 SO₂: 5.88E-04 VOC: 3.58E-01</p>	-	-	1.27 MMBtu/hr, 500 hr/yr

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
		lb/hp-hr CO: 8.53E-01 NO _x : 2.20E-02			

¹Inputs into the splash loading equation were based on chemical/physical properties of the pure component. The use of these properties results in a more conservative emissions estimate as the vapor pressure of the pure component will be higher than the vapor pressure of the same component within a mixture. The resulting emission rate was multiplied by the maximum number of transfer operations that a product may undergo to estimate the final emission rates for each regulated pollutant.

16. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
N/A				

17. MONITORING OR CEMS:

The permittee must monitor the following parameters with CEMS or other monitoring equipment (temperature, pressure differential, etc.)

SN	Parameter or Pollutant to be Monitored	Method (CEM, Pressure Gauge, etc.)	Frequency	Report (Y/N)
N/A				

18. RECORDKEEPING REQUIREMENTS:

The following are items (such as throughput, fuel usage, VOC content, etc.) that must be tracked and recorded.

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
SN-01	Name and Type of Each VOC-containing material used	N/A	Monthly	N
	Amount (pounds) of each VOC-containing material used	N/A	Monthly	N

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
	during each month			
	VOC content (% weight) of each VOC-containing material used, as documented by SDS or equivalent	SDS documents must be retained for a minimum of 24 months beyond the date of the materials' last use	Monthly	N
	Twelve month rolling total of the VOC emissions emitted from the facility	55.9 tons per rolling 12 month period	Monthly	N
	Emission factors used in calculations	N/A	Monthly	N
SN-01	Name and Type of Each HAP-containing material used	N/A	Monthly	N
	Threshold Limit Value (TLV) of each HAP-containing material used	>1.0 mg/m ³	Monthly	N
	Indicate if the HAP-containing material used is a HAP listed on Table 1 of 40 C.F.R. Part 63, Subpart VVVVVV	N/A	Monthly	N
	Indicate if the HAP-containing material used is a "material(s) containing HAP" as defined by 40 C.F.R. Part 63, Subpart	N/A	Monthly	N

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
	CCCCCCC, § 63.11607			
	Amount (pounds) of each HAP-containing material used during each month	N/A	Monthly	N
	HAP content (% weight) of each HAP-containing material used, as documented by SDS or equivalent	SDS documents must be retained for a minimum of 24 months beyond the date of the materials' last use	Monthly	N
	Twelve month rolling total of the HAP emissions emitted from the facility	7.86 tons Single HAP/Total HAPs per rolling 12 month period	Monthly	N
	Emission factors used in calculations	N/A	Monthly	N
SN-01	Acetone and Ammonia usage	0.08 tons per rolling 12-months of Acetone 0.02 tons per rolling 12-months of Ammonia	Monthly	N
SN-05, SN-06	Hours of operation	500 hr/yr	Monthly	N
	Records required by NSPS JJJJ	40 C.F.R. § 60.4245(a)(1-4)	N/A	N

19. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
01	5%	Rule 18.501	Inspector Observation

SN	Opacity	Justification for limit	Compliance Mechanism
05, 06	5%	Rule 18.501	natural gas as sole fuel

20. DELETED CONDITIONS:

Former SC	Justification for removal
	N/A

21. GROUP A INSIGNIFICANT ACTIVITIES:

The following is a list of Insignificant Activities including revisions by this permit.

Source Name	Group A Category	Emissions (tpy)						
		PM/PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
Natural Gas-fired Boiler 1 (0.017 MMBtu/hr)	A-1	5.5E-04	4.38E-05	4.02E-04	6.13E-03	7.03E-03	1.31E-04	1.38E-04
Natural Gas-fired Boiler 2 (0.017 MMBtu/hr)	A-1	5.5E-04	4.38E-05	4.02E-04	6.13E-03	7.03E-03	1.31E-04	1.38E-04
Natural Gas-fired Boiler 3 (0.017 MMBtu/hr)	A-1	5.5E-04	4.38E-05	4.02E-04	6.13E-03	7.03E-03	1.31E-04	1.38E-04
Methyl Methacrylate Storage Tank 1 (10,000 gal.)	A-3			0.33				0.33
2-Ethylhexyl Acrylate Storage Tank 2 (10,000 gal.)	A-3			0.01				

22. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

The following is a list of all active permits voided/superseded/subsumed by the issuance of this permit.

Permit #
2482-A

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Minor Source

Revised 03-11-16

Facility Name: Building Materials
Manufacturing LLC
Permit Number: 2482-AR-1
AFIN: 10-00531

			<table><tr><th>Old Permit</th><th>New Permit</th></tr><tr><td>56.4</td><td>56.6</td></tr></table>	Old Permit	New Permit	56.4	56.6
Old Permit	New Permit						
56.4	56.6						
\$/ton factor	28.14	Permit Predominant Air Contaminant	56.4				
Minimum Fee \$	400	Net Predominant Air Contaminant Increase	0.2				
Minimum Initial Fee \$	500						
		Permit Fee \$	400				
Check if Administrative Amendment	<input type="checkbox"/>	Annual Chargeable Emissions (tpy)	56.6				

Pollutant (tpy)	Old Permit	New Permit	Change
PM	0.2	0.3	0.1
PM ₁₀	0.2	0.3	0.1
PM _{2.5}	0	0	0
SO ₂	0.1	0.2	0.1
VOC	56.4	56.6	0.2
CO	1.7	29.3	27.6
NO _x	1.1	1.9	0.8
Total HAPs	7.88	7.9	0.02
Acetone	0.08	0.08	0
Ammonia	0.02	0.02	0