

STATEMENT OF BASIS

For the issuance of Air Permit # 2448-AOP-R0 AFIN: 60-06113

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Creative Foam Products, LLC.
1301 E. Eighth Street
North Little Rock, Arkansas 72114

3. PERMIT WRITER:

Sterling Powers

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Polystyrene Foam Product Manufacturing
NAICS Code: 326140

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
9/26/2023	New Permit	<ul style="list-style-type: none">• Add a dust collector to SN-01• Add Boiler #2• Increase throughput to 240.0 tpy VOC

6. REVIEWER'S NOTES:

Creative Foam Products, LLC operates an expanded polystyrene (EPS) block molding facility at 1308 West 8th Street in North Little Rock, AR. The facility submitted an application to change the facility permit from a Minor Source Permit to a Title V Permit. A dust collector was added to the Remelt phase of the bead expansion process for SN-01, Boiler #2 was added (SN-02B), the throughput for the facility was increased to 240.0 tpy VOC, and process descriptions were updated. Permitted emissions increased by 0.8 tpy

PM₁₀, 0.1 tpy SO_x, 145.3 tpy VOC, 3.8 tpy CO, 4.5 tpy NO_x, 0.8 tpy PM, and 0.18 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.

As of December 30, 2023, no violations were identified.

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

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)
02A, 02B	-	NSPS Dc

10. UNCONSTRUCTED SOURCES: N/A

11. PERMIT SHIELD – TITLE V PERMITS ONLY: N/A

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

Based on Division on Environmental Quality procedures for review of non-criteria pollutants, emissions of 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 Department 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).

Pollutant	TLV (mg/m ³)	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
Benzene	1.597	0.17567	0.0000431	Y
Dichlorobenzene	0.2	0.022	0.0000246	Y
Formaldehyde	1.5	0.165	0.00154	Y
Hexane	176.327	19.39	0.0369	Y
Toluene	75.37	8.29	0.0000697	Y
Arsenic	0.01	0.0011	0.0000041	Y
Beryllium	0.002	0.00022	0.000000246	N
Cadmium	0.01	0.0011	0.0000226	Y
Cobalt	0.02	0.0022	0.00000172	Y
Lead	0.05	0.0055	0.0000103	Y
Manganese	0.02	0.0022	0.00000779	Y
Mercury	0.01	0.0011	0.00000533	Y
Nickel	0.2	0.022	0.0000431	Y
Selenium	0.2	0.022	0.000000429	Y
POM	0.2	0.022	0.000062605	Y

2nd Tier Screening (PAIL)

AERMOD air dispersion modeling was performed on the estimated hourly emissions from the following sources, in order to predict ambient concentrations beyond the property boundary. The Presumptively Acceptable Impact Level (PAIL) for each compound has been deemed by the Department to be one one-hundredth of the Threshold Limit Value as listed by the ACGIH.

Pollutant	PAIL ($\mu\text{g}/\text{m}^3$) = 1/100 of Threshold Limit Value	Modeled Concentration ($\mu\text{g}/\text{m}^3$)*	Pass?
N/A			Y

c) H₂S Modeling: N/A

15. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01	Mass Balance 1999 BASF Bulletin “Environmental Pentane Emissions During Processing”	Pre-expansion: 13% of pentane emitted	-	-	4,000 lb/hr beads 8% pentane by weight
		Pre-puff aging: 27% of pentane emitted	-	-	
		Block Molding: 16% of pentane emitted	-	-	
		Block Storage: 9.7% of pentane emitted	-	-	
		Remelt: VOC: 8% by weight pentane 100% of pentane emitted PM: 882.75 dscfm 0.01 gr/dscf 7000 gr/lb	Dust Collector	99%	800 lb/hr throughput 60 min/hr 8760 hr/yr
02A & 02B	AP-42 Table 1.4-1 & 2 Table 1.4-3 & 4	<u>lb/MMscf</u> PM/PM ₁₀ : 7.6 SO ₂ : 0.6 VOC: 5.5 CO: 84.0 NO _x : 100.0	-	-	10.461 MMBtu/hr 10,255.90 scf/hr 8,760 hr/yr

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)
01	VOC tpy	240.0	Monthly	N
01	VOC content	8 wt. %	Monthly	N
02A, 02B	Fuel Combusted	-	Monthly	N

19. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
02A, 02B	5%	Department Guidance	Use of Natural Gas

20. DELETED CONDITIONS:

Former SC	Justification for removal
N/A	

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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
Cooling Tower	A-13	0.86						
Crusher	A-13	0.017						
Dust Distributor (Block Fabrication Process)	A-13	0.05						

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 #
2448-AR-1

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 03-11-16

Facility Name: Creative Foam Products

Permit Number: 2448-AOP-R0

AFIN: 60-06113

\$/ton factor	28.14	Annual Chargeable Emissions (tpy)	245
Permit Type	Initial Permit	Permit Fee \$	4295.3

Minor Modification Fee \$ 500

Minimum Modification Fee \$ 1000

Renewal with Minor Modification \$ 500

Check if Facility Holds an Active Minor Source or Minor Source General Permit ☒

If Hold Active Permit, Amt of Last Annual Air Permit Invoice \$ 2599

Total Permit Fee Chargeable Emissions (tpy) 144.7

Initial Title V Permit Fee Chargeable Emissions (tpy) 245

HAPs not included in VOC or PM:

Chlorine, Hydrazine, HCl, HF, Methyl Chloroform, Methylene Chloride, Phosphine, Tetrachloroethylene, Titanium Tetrachloride

Air Contaminants:

All air contaminants are chargeable unless they are included in other totals (e.g., H2SO4 in condensible PM, H2S in TRS, etc.)

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
PM		0.4	0.4	0		
PM ₁₀		0.4	0.4	0	0	0.4
PM _{2.5}		0		0		
SO ₂		0.1	0.1	0	0	0.1
VOC		95.3	240	144.7	144.7	240
CO		3.8	3.8	0		
NO _x		4.5	4.5	0	0	4.5
Total HAPs	<input type="checkbox"/>	0.09	0.18	0.09		