

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0401-AR-21 AFIN: 03-00027

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

American Epoxy Scientific, LLC
500 East 16th Street
Mountain Home, Arkansas 72653

3. PERMIT WRITER:

John Mazurkiewicz

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Institutional Furniture Manufacturing
NAICS Code: 337127

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
10/22/2018	New	Production increases will cause emissions to exceed minor source thresholds

6. REVIEWER'S NOTES:

Except for the pre-mix, which contains maleic anhydride, the facility does not process materials containing HAPs or air contaminants with a TLV less than 1 mg/m³, and is limited to less than 10 tpy of emissions.

7. COMPLIANCE STATUS:

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

There are not current or pending enforcement issues associated with the facility.

8. PSD/GHG APPLICABILITY:

a) Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? No.
If yes, were GHG emission increases significant? N/A.

b) Is the facility categorized as a major source for PSD? No.

- *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. N/A.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
SN-11	HAPs	NESHAP ZZZZ

10. PERMIT SHIELD – TITLE V PERMITS ONLY:

Did the facility request a permit shield in this application? No.

11. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

12. 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 ADEQ Air Permit Screening Modeling Instructions.

b) Non-Criteria Pollutants:

The non-criteria pollutants listed below were evaluated. Based on Department 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 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?
Maleic anhydride	0.01	0.0011	0.00103	Yes

c) H₂S Modeling: N/A.

13. 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 & 1998 emission testing (pre-mix)	<u>Material usage</u> 100% VOC/HAP/Acetone (lb/hr)			Assumes 100% of monthly material usage is emitted over a 24-hour shift
02		<u>Pre-mix</u> 2.2E-02 lb/lb pre-mix Phthalic anhydrate 99.7%			
03		Maleic anhydride 0.05%			
04	Minimum control expected for dust collection/control system	0.01 gr/dscf 2,500 cfm	Filter/dust collector		
05	Minimum control expected for dust collection/control system	0.01 gr/dscf 850 cfm	Filter/dust collector		
06	Minimum control expected for dust	0.01 gr/dscf 28,350 cfm	Filter/dust collector		9,375 lb/hr pre-mix max

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
	collection/control system				
07	Minimum control expected for dust collection/control system	0.01 gr/dscf 5,000 cfm	Filter/dust collector		
08	Minimum control expected for dust collection/control system	0.01 gr/dscf 10,000 cfm	Filter/dust collector		
09	Minimum control expected for dust collection/control system	0.01 gr/dscf 2,250 cfm	Filter/dust collector		
10	Minimum control expected for dust collection/control system	0.01 gr/dscf 1000 cfm	Filter/dust collector		
11	AP-42 Chapter 3.2	<u>PM</u> 1.94E-02 lb/MMBtu <u>PM₁₀</u> 9.50E-03 lb/MMBtu <u>SO₂</u> 5.88E-04 lb/MMBtu <u>VOC</u> 2.96E-02 lb/MMBtu <u>CO</u> 3.72 lb/MMBtu <u>NO_x</u> 2.27 lb/MMBtu			

14. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
None.				

15. 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)
None.				

16. 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)
Facility	VOC, Acetone, and HAP emissions	<u>VOC</u> 9.1 tpy <u>Acetone</u> 9.00 tpy <u>Single HAP</u> 9.01 tpy <u>Total HAP</u> 9.01 tpy <u>Maleic Anhydride</u> 0.01 tpy	Monthly	N
	Pre-mix throughput	75,000 lbs/day	Daily	N
	TLV	1 mg/m ³	Monthly	N
SN-11	Fuel usage	Natural gas only	Monthly	N
	Hours of operation	500 hours per calendar year	Monthly	N
	Subpart ZZZZ records (Specific Conditions 24 through 27)	N/A	As necessary	N

17. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
04 through 10	5%	Department standards	Inspector observation
11	5%	Department standards	Natural gas only

18. DELETED CONDITIONS:

Former SC	Justification for removal
	N/A

19. 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
Curing Oven (0.25 MMBtu/hr)	A-1	0.008	0.001	0.006	0.090	0.107	0.002	0.002
NG Boiler (5.175 MMBtu/hr)	A-1	0.169	0.013	0.122	1.867	2.222	0.042	0.042
NG Boiler (4.164 MMBtu/hr)	A-1	0.136	0.011	0.098	1.502	1.788	0.034	0.034
Heat Cleaning Oven (0.15 MMBtu/hr)	A-1	0.005	0.001	0.004	0.054	0.064	0.001	0.001
Pre Heat Gas Oven (0.99 MMBtu/hr)	A-1	0.032	0.003	0.023	0.357	0.425	0.008	0.008
Total	A-1	0.350	0.029	0.253	3.870	4.606	0.087	0.087
Phthalic Anhydride Particulate	A-13	0.86	-	-	-	-	0.86	0.86

20. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

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

Permit #
N/A

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Minor Source

Revised 03-11-16

American Epoxy Scientific, LLC

Permit #: 0401-AR-21

AFIN: 03-00027

			Old Permit	New Permit
\$/ton factor	23.93	Permit Predominant Air Contaminant	0	19.2
Minimum Fee \$	400	Net Predominant Air Contaminant Increase	0	
Minimum Initial Fee \$	500			
Check if Administrative Amendment	<input type="checkbox"/>	Permit Fee \$	500	
		Annual Chargeable Emissions (tpy)	19.2	

Pollutant (tpy)	Old Permit	New Permit	Change
PM	0	19.2	19.2
PM ₁₀	0	19.2	19.2
PM _{2.5}	0	0	0
SO ₂	0	0.1	0.1
VOC	0	9.1	9.1
CO	0	1	1
NO _x	0	0.6	0.6
Acetone	0	9	9
Maleic anhydride	0	0.01	0.01
Single HAP	0	9.01	9.01
Total HAPs	0	9.01	9.01