

STATEMENT OF BASIS

*for the issuance of Air Permit # 401-AR-14*

1. PERMITTING AUTHORITY:

Arkansas Department of Environmental Quality  
8001 National Drive  
Post Office Box 8913  
Little Rock, Arkansas 72219-8913

2. APPLICANT:

Epoxy Products  
500 East 16<sup>th</sup> Street  
Mountain Home, Arkansas 72653

3. PERMIT WRITER:

Siew Low

4. PROCESS DESCRIPTION AND NAICS CODE:

NAICS Description: Laboratory apparatus and furniture manufacturing  
NAICS Code: 3339111

5. SUBMITTALS: November 26, 2003, January 23, 2004, February 6, 2004, and February 13, 2004.

6. REVIEWER'S NOTES: Epoxy Products operates a facility which manufactures laboratory counter tops in Mountain Home, Arkansas. This modification to permit #401-AR-13 authorizes an increase of the epoxy mix throughput from 180,822 pounds per day to 197,260 pounds per day; a modification of the panel saw baghouse (SN-28) to include a second panel saw exhaust; the installation of a new Thermal Curing Unit (SN-30); and the installation of a natural gas-fired water heater.

7. COMPLIANCE STATUS: There are no compliance issues pending for this facility.

8. APPLICABLE REGULATIONS:

A. Applicability

Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, et cetera) (Y/N)   N  

Has this facility underwent PSD review in the past (Y/N)   N   Permit #   N/A  

Is this facility categorized as a major source for PSD? (Y/N)   N  

\$ 100 tpy and on the list of 28 (100 tpy)? (Y/N)   N  

\$ 250 tpy all other (Y/N)   N

9. EMISSION CHANGES:

The following table summarizes plantwide emission changes associated with this permitting action.

Plantwide Permitted Emissions (ton/yr)			
Pollutant	Air Permit 401-AR-13	Air Permit 401-AR-14	Change
PM/PM <sub>10</sub>	31.8	34.4	+2.6
SO <sub>2</sub>	2.5	2.5	0
VOC	65.0	78.9	+13.9
CO	4.3	4.3	0
NO <sub>x</sub>	15.9	15.9	0
Phthalic Anhydride	7.9	7.92	+0.02
Toluene	3.5	0	-3.5
Xylene	3.9	6.5	+2.6
Total HAP	15.3	17.92	+2.62

10. MODELING:

A. Criteria Pollutants

Examination of the source type, location, plot plan, land use, emission parameters, and other available information indicate that modeling is not warranted at this time.

Pollutant	Emission Rate (lb/hr)	NAAQS Standard (µg/m <sup>3</sup> )	Averaging Time	Highest Concentration (µg/m <sup>3</sup> )	% of NAAQS
PM <sub>10</sub>	8.8	50	Annual	6.9	13.8%
		150	24-Hour	58.4	38.9%
SO <sub>2</sub>	0.7	80	Annual	2.81	3.5%
		1300	3-Hour	101.85	7.8%
		365	24-Hour	27.049	7.4%
VOC	78.9 tpy	0.12	1-Hour (ppm)	0.012 ppm	10%
CO	1.0	10,000	8-Hour	36.84	0.36%
		40,000	1-Hour	113.8	0.28%

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Pollutant	Emission Rate (lb/hr)	NAAQS Standard ( $\mu\text{g}/\text{m}^3$ )	Averaging Time	Highest Concentration ( $\mu\text{g}/\text{m}^3$ )	% of NAAQS
NO <sub>x</sub>	3.8	100	Annual	6.2	6.2%

**B. Non-Criteria Pollutants**

**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 deemed PAER to be the product, in lb/hr, of 0.11 and the Threshold Limit Value ( $\text{mg}/\text{m}^3$ ), as listed by the American Conference of Governmental Industrial Hygienists (**ACGIH**).

Pollutant	TLV ( $\text{mg}/\text{m}^3$ )	PAER (lb/hr) = 0.11*TLV	Proposed lb/hr	Pass?
Phthalic Anhydride	6.057	0.667	2.95	No
Xylene	434	47.7	1.89	Yes

**2nd Tier Screening (PAIL)**

SCREEN3 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 was 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?
Phthalic Anhydride	60.57	14.07	Yes

11. CALCULATIONS:

SN	Emission Factor Source (AP-42, Testing, etc)	Emission Factor and units (lbs/ton, lbs/hr, etc)	Control Equipment Type (if any)	Control Equipment Efficiency	Comments (Emission factor controlled/uncontrolled, etc)
02, 03, 05, 07, 12, 24, 25, 29, and 30	Environ Study dated 11/25/97.  Mass Balance	2.2 x 10 <sup>-4</sup> lb phthalic anhydride/ lb epoxyn mix.  VOC xylene	N.A.	-	-
23	Mass Balance	-	-	-	-
28	5.2 tpy = (100% - 99%) x 520 tons/yr		Baghouse	99%	

12. TESTING REQUIREMENTS:

This permit requires stack testing of the following sources.

SN(s)	Pollutant	Test Method	Test Interval	Justification For Test Requirement
No sources are required to be stack tested at this time.				

13. MONITORING OR CEMS

The following are parameters that must be monitored with CEMs or other monitoring equipment (temperature, pressure differential, etc), frequency of recording and whether records are needed to be included in any annual, semiannual or other reports.

SN	Parameter or Pollutant to be Monitored	Method of Monitoring (CEM, Pressure Gauge, etc)	Frequency*	Report (Y/N)**
No parameters require monitoring by CEM at this time.				

\* Indicate frequency of recording required for the parameter (Continuously, hourly, daily, etc.)

\*\* Indicates whether the parameter needs to be included in reports.

14. RECORD KEEPING REQUIREMENTS

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The following are items (such as throughput, fuel usage, VOC content of coating, etc) that must be tracked and recorded, frequency of recording and whether records are needed to be included in any annual, semiannual or other reports.

SN	Recorded Item	Limit (as established in permit)	Frequency*	Report (Y/N)**
28	Dust collected in panel saw baghouse	No more than 520 ton/yr	Monthly	N
facility	Natural Gas Usage	297.2 MM cf per year	Monthly	N
facility	Epoxy mix	197,260 lb per 24 hour period	Daily	N
01, 02, 03, 04, 05, 07, 08, 10, 11, 12, 24, 25, 29, and 30	Formulation of HAPS in materials and solvent based product.	See permit.	Monthly	N
21	HAPs content and purchases of HAPs containing materials	3.5 tpy	Monthly	N

\* Indicate frequency of recording required for the item (Continuously, hourly, daily, etc.)

\*\* Indicates whether the item needs to be included in reports

15. OPACITY

SN	Opacity %	Justification (NSPS limit, Dept. Guidance, etc)	Compliance Mechanism (daily observation, weekly, control equipment operation, etc)
18 and 19	0	Departmental Guidance	Annual Inspection
All others	5%	Departmental Guidance	Annual Inspection

16. DELETED CONDITIONS:

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The following Specific Conditions were included in the previous permit, but deleted for the current permitting action.

Former SC	Justification for removal
16	New language which requires the record keeping of dust collected at the panel saw baghouse provides a more representative measurement of PM/PM <sub>10</sub> emission rates. The new specific condition provides an equivalent compliance mechanism.

17. VOIDED, SUPERSEDED OR SUBSUMED PERMITS

List all active permits for this facility which are voided/superseded/subsumed by issuance of this permit.

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18. CONCURRENCE BY:

The following supervisor concurs with the permitting decision:

\_\_\_\_\_  
*Lyndon Poole, P.E.*