

STATEMENT OF BASIS

for the issuance of Draft Air Permit # 0747-AOP-R2 AFIN: 66-00294

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Owens Corning Composite Materials, LLC
5520 Planters Road
Fort Smith, AR 72916

3. PERMIT WRITER: Joseph Hurt

4. PROCESS DESCRIPTION AND NAICS CODE:

NAICS Description: Other Pressed and Blown Glass and Glassware Manufacturing
NAICS Code: 327212

5. SUBMITTALS: 11/5/2007

6. REVIEWER'S NOTES:

Owens Corning owns and operates a fiberglass mat manufacturing facility at 5520 Planters Road in Fort Smith, Arkansas 72916. The facility uses chopped fiberglass and a chemical binder to produce fiberglass mat primarily for use in the roofing products industry. This permit modification shall add a coated veil manufacturing operation. The coated veil manufacturing operation will consist of Coated Veil Curing & Drying Oven (SN-10A), Coated Veil Materials Storage and Mix Tanks (SN-10B), Coated Veil Printing & Drying Oven (SN-11), four (4) Aggregate Silos (SN-12 thru SN-15), two (2) Aggregate Hoppers (SN-16 & SN-17), and a Mat Trim Baghouse (SN-18). The permitted emissions increases include 7.4 tpy PM/PM₁₀, 0.2 tpy SO₂, 13.8 tpy VOC, 9.5 tpy CO, and 11.3 tpy NO_x.

7. COMPLIANCE STATUS:

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

During the review of the permit application, it was discovered that the modeled Formaldehyde emissions from new and existing sources has an off-site impact above the

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15 µg/m³ PAIL threshold. Plantwide condition # 10 requires the facility to submit their Title V Renewal application with 45 days of permit issuance. Acceptable ambient air impacts for Formaldehyde shall be demonstrated with said Title V Renewal Application.

8. APPLICABLE REGULATIONS:

PSD Applicability

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

Has this facility undergone PSD review in the past? N Permit#

Is this facility categorized as a major source for PSD?
 100 tpy and on the list of 28 (100 tpy)? N
 250 tpy all other N

PSD Netting

Was netting performed to avoid PSD review in this permit? N

Source and Pollutant Specific Regulatory Applicability

Source	Pollutant	Regulation [NSPS, NESHAP (Part 61 & Part 63), or PSD only]
SN-01	VOC Acrylic Acid Formaldehyde Methanol	40 CFR Part 63, Subpart HHHH, effective April 11, 2005
SN-10A, SN-10B, SN-11	HAPs	40 CFR Part 63, Subpart KK
SN-10A, SN-10B, SN-11	HAPs	40 CFR 63, Subpart JJJJ

9. EMISSION CHANGES:

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

Plantwide Permitted Emissions (tpy)			
Pollutant	Permit # 0747-AOP-R1	Permit # 0747-AOP-R2	Change
PM	35.1	42.5	+ 7.4
PM ₁₀	35.1	42.5	+ 7.4
SO ₂	14.0	14.2	+ 0.2
VOC	127.1	140.9	+ 13.8

Plantwide Permitted Emissions (tpy)			
Pollutant	Permit # 0747-AOP-R1	Permit # 0747-AOP-R2	Change
CO	219.0	228.5	+ 9.5
NO _x	43.8	55.1	+ 11.3
Acrylic Acid	17.6	17.6	0
Formaldehyde	22.9	23.34	+ 0.44
Methanol	25.6	25.6	0
Ammonia	30.1	30.54	+ 0.44
Styrene	0	4.38	+ 4.38

10. MODELING:

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.

Other Modeling

Odor

Odor modeling for sources emitting styrene.

Pollutant	Threshold value 1-hour average	Modeled Concentration ($\mu\text{g}/\text{m}^3$)	Pass?
Styrene	1361 $\mu\text{g}/\text{m}^3$	9.4	Y

11. 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 (mg/m^3), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

Pollutant	TLV (mg/m^3)	PAER (lb/hr) = $0.11 \times \text{TLV}$	Proposed lb/hr	Pass?
Acrylic Acid	5.89	0.65	4.0	N
Formaldehyde	1.5	0.165	5.2	N
Methanol	262	28.83	5.8	Y
Styrene	85.2	9.37	1.00	Y

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 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?
Acrylic Acid	58.9	4.68	Y
Formaldehyde	15	21.59	N

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?
Formaldehyde	15	47.6	N*

* See Plantwide Condition #10

12. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01-07	testing	various	thermal oxidizer at SN-01, none on other sources	96%	
08	best guess	0.02 gr/ft ³	none	N/A	Emission factor based on large size of material transferred to this source.

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SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
09	testing	0.5 lb/hr	none	N/A	All formaldehyde in the water is assumed to be emitted
10A & 10B	AP-42 Section 1.4 Testing	lb/MMft ³ 7.6 PM/PM ₁₀ 0.6 SO ₂ 84 CO 100 NO _x lb/lb slurry 0.0001 VOC	none	N/A	
11	AP-42 Section 1.4 MSDS	lb/MMft ³ 7.6 PM/PM ₁₀ 0.6 SO ₂ 84 CO 100 NO _x lb/gallon 0.5 VOC	none	N/A	
12-18	Best guess	0.02 gr/ft ³	Fabric Filter	99%	

13. TESTING REQUIREMENTS:

This permit requires stack testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
03 – 05, & 07	All	Various	Once every 5 years	Verify emission rates used in permit.

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14. MONITORING OR CEMS

The permittee must monitor the following parameters with CEMs or other monitoring equipment (temperature, pressure differential, etc), frequency of recording and the need for records included in any annual, semiannual or other reports.

SN	Parameter or Pollutant to be Monitored	Method (CEM, Pressure Gauge, etc.)	Frequency	Report (Y/N)
01	temperature of oxidizer	continuous recorder	15-min 3 hour	N

15. RECORD KEEPING REQUIREMENTS

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	Permit Limit	Frequency	Report (Y/N)
Facility	VOC and HAP usage	Various	Monthly	N
Facility	Coating Slurry usage	143,664,000 lb/yr	Monthly	N
Facility	VOC content of printing inks	0.5 lb/gal	Monthly	N

16. OPACITY

SN	Opacity %	Justification (NSPS limit, Dept. Guidance, etc)	Compliance Mechanism (daily observation, weekly, control equipment operation, etc)
01	20	Dept. Guidance	Daily Observation
03, 04, & 08	5	Dept. Guidance	Weekly Observation
10A	20	Dept. Guidance	Daily Observation
12-18	5	Dept. Guidance	Weekly Observation

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17. DELETED CONDITIONS:

The previous permit contained the following deleted Specific Conditions.

Former SC	Justification for removal
N/A	

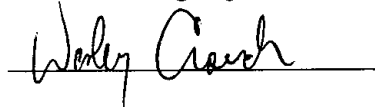
18. VOIDED, SUPERSEDED OR SUBSUMED PERMITS

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

Permit #
0747-AOP-R1

19. CONCURRENCE BY:

The following supervisor concurs with the permitting decision:



Wesley Crouch, P.E.

