

ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY  
DIVISION OF AIR POLLUTION CONTROL

Summary Report Relative to Permit Application

Submitted By: **Owens Corning Fort Smith Facility  
Walker Industrial Park  
5520 Planters Road  
Fort Smith, Arkansas 72916  
Sebastian County**

Contact Position: **Bill Mars, Safety & Environmental Manager**

Phone Number: **(501) 646-8000 ext. 329**

CSN: 66-0294

Permit No.: 747-AR-4

Date Issued:

Submittals: 10/08/97

Summary

**Owens Corning Fiberglass (OCF) owns and operates a fiberglass mat manufacturing facility in south Fort Smith. OCF's previous air permit #747-AR-3 permitted emissions of 35.0 tons per year (tpy) of PM/PM<sub>10</sub>, 0.1 tpy of SO<sub>2</sub>, 44.4 tpy of VOC, 4.9 tpy of CO, 19.7 tpy of NO<sub>x</sub>, and 0.5 tpy of NH<sub>4</sub>. Air permit #747-AR-4 will incorporate an increase in production rates, emission rates, and the incorporation of a landfill gas burning operation.**

**This facility is subject to regulation under the Arkansas Air Pollution Control Code (Regulation 18), and the Arkansas Plan of Implementation for Air Pollution Control (Regulation 19).**

Process Description

**The fiberglass mat manufacturing process begins in the fiber preparation area. Chopped glass fibers, delivered to the site in containers, are fed into the glass bins, weighed out, and fed into the pulper on conveyor belts. In the pulper, glass fibers, white water (recycled), dispersant, ammonia, and viscosity modifier are mixed together in controlled amounts and agitated to disperse the glass fibers and create what is called "thick stock". Once the thick stock batch is complete, the pulper contents are pumped to the holding chest and another batch of thick stock begins.**

**The holding chest agitates the thick stock to continue the dispersion of the glass fibers. From the holding chest, the thick stock is pumped to the constant level chest and then to the Deltaformer silo. The thick stock is then pumped through the fan pump to the distributor header and into the headbox where it is deposited on a moving screen. Excess water is removed from the screen through drainage and vacuum and is returned to the process (as white water). The air from the vacuum lines routes through a series of**

Owens Corning Fort Smith Facility

Permit #: 747-AR-4

CSN: 66-0294

moisture separators to remove entrained water prior to venting to the atmosphere (SN-03). The fibers remaining on the screen form a mat which is transferred to another conveyor in the binder application section.

A urea-formaldehyde resin is used to make the binder and is applied to the glass fiber mat to allow the glass fibers to form a cohesive mat. The binder is applied using a flooding wiper. Excess binder is removed and recirculated by a combination of natural drainage and vacuum slots. The air from the vacuum lines routes through a series of moisture separators to remove entrained liquid prior to venting to the atmosphere (SN-04). The mat saturated with binder is conveyed to a heated recirculating air oven where the binder is dried and cured. Emissions from the drying/curing oven are controlled in a fume incinerator (which will burn natural gas and landfill gas) prior to emitting to the atmosphere (SN-01). The incinerator achieves a 98% control of emissions of organic compounds. Heat from the incinerated vapors can be recovered through a heat exchanger to provide steam for plant operations prior to venting to the atmosphere (SN-02).

The cured mat is then trimmed, rolled, and packaged prior to storage in the warehouse (Sheet 4). The trimmings are conveyed pneumatically to the drop-out box. The air exhausts out the sides of the drop-out box SN-08 and the trimmings are fed into a compactor.

As part of a previous permitting action, the facility installed a dust collection system to improve worker comfort (SN-06). The system did not perform as anticipated and is no longer being used. Successful source reduction activities were implemented and, as a consequence, Owens Corning wishes to remove this emission source from the permit application.

The binder used in the process is a blend of several components that are mixed together in the binder room. The ingredients are delivered to the site in a variety of ways, including, tank trucks, drums and bags. High volume ingredients are stored in permanent tanks while minor ingredients are stored in drums or totes. The components are mixed together in the binder mix tank according to a binder recipe which yields the properties desired for the end-product.

From the binder mix tank, the binder enters the binder circulation system which continuously cycles binder throughout the process as follows: Binder is initially pumped from the mix tank into one of the two binder circulation tanks. The binder is then pumped from the circulation tanks to the binder seal tank and the binder applicator. Excess binder is recovered from the application area and pumped back to the circulation tanks where the cycle begins again. Emissions from the binder mix tank and the binder circulation tanks are collected and vented together (SN-05).

### Specific Conditions

1. Emissions shall not exceed the emission limits set forth in Table I. Emissions from any point source not specifically listed in Table I of this permit shall be a violation of this condition.
2. Visible emissions shall not exceed the values specified in Table I as measured by EPA Method 9.
3. The permittee shall not cause or allow the emission of air contaminants, including odors or water vapor and including an air contaminant whose emission is not otherwise prohibited by this Code, if the emission of air contaminant constitutes air pollution within the meaning of A.C.A. § 8-4-303. Also, the permittee shall not cause or allow the handling, transporting, or storage of any material in a manner which allows or may allow unnecessary amounts of air contaminants to become airborne.
4. The permittee shall maintain and operate instrumentation to continuously monitor the operating temperature of the fume incinerator. This instrumentation will be interlocked with the fuel supply of the drying and curing oven and so designed that if the temperature of the fume incinerator drops below 1350EF, the fuel supply to the drying and curing oven will shut off and not resume until the temperature is above 1350EF.
5. The permittee shall not use more than 625,714,286 scf (standard cubic feet) of natural and landfill gas combined per consecutive twelve month period. The permittee shall maintain monthly records which demonstrate compliance with this condition.
6. The permittee shall produce no more than 108,974,000 lbs (pounds) of fiberglass mats per consecutive twelve month period. The permittee shall maintain monthly production records which demonstrate compliance with this condition.
7. The permittee shall use no more than 4,112,000 gal (gallons) of binder per consecutive twelve month period. The permittee shall maintain monthly VOC/HAP usage records which demonstrate compliance with this condition. A suggested record keeping form can be found in Attachment A.
8. The permittee shall use no more than 8.2 tons per year of formaldehyde, 2.0 tons per year of methanol, and 0.5 ton per year of Acrylic Acid per consecutive twelve month period. The monthly VOC/HAP usage records required in Specific Condition 7 shall be used to demonstrate compliance with this condition.

Owens Corning Fort Smith Facility

Permit #: 747-AR-4

CSN: 66-0294

9. The permittee shall operate all equipment and associated control devices within the design specifications as described in the permit application only. All control equipment, including baghouses, cyclones, and the fume incinerator, shall be maintained in good working order and shall be used at all times when associate processes are in operation.
10. The permittee shall comply with all applicable provisions of the Arkansas Air Pollution Control Code (Air Code), and the regulations of the Arkansas Plan of Implementation for Air Pollution Control (SIP).
11. The permittee shall not make any changes in operation and/or production without first modifying this permit.

**TABLE I  
 ALLOWABLE EMISSION RATES**

SN	Description	Control Equipment	Maximum Production/ Operation Rates	Pollutant	Emission Rate		Reg.	% Opacity
					lb/hr	ton/yr		
01-02	Drying & Curing Oven/Fume Incinerator Waste Heat Boiler	Fume Incinerator	625,714,286 MM SCF/year Natural Gas 108,974 MM lbs/year Fiberglass Mats~	PM	0.8	3.5	SIP Air Code	5
				PM <sub>10</sub>	0.8	3.5		
				SO <sub>2</sub>	0.7	3.1		
				VOC*	5.1	16.0		
				CO	19.2	84.1		
				NO <sub>x</sub>	9.2	40.3		
				HCOH	3.0	6.5		
				MeOH	0.2	0.7		
				HAcA	0.1	0.1		
				NH <sub>3</sub>	0.6	2.5		
03	Discharge from Forming and High Velocity Suction Fans	None	108,974 MM lbs/year Fiberglass Mats~	PM	0.2	1.0	SIP Air Code	5
				PM <sub>10</sub>	0.2	1.0		
				VOC	0.1	0.3		
				NH <sub>3</sub>	0.1	0.1		
04	Discharge from Dry-up, Applicator and Binder Control Suction	None	108,974 MM lbs/year Fiberglass Mats~	PM	0.3	1.5	SIP Air Code	5
				PM <sub>10</sub>	0.3	1.5		
				VOC*	0.2	0.5		
				HCOH	0.2	0.3		
				MeOH	0.1	0.1		
				HAcA	0.1	0.1		
				NH <sub>3</sub>	0.1	0.1		
05	Binder Mix Tank, Run Tanks 1 & 2	None	4,112,000 gal/year Binder~	VOC*	0.1	0.1	SIP Air Code	5
				HCOH	0.1	0.1		
				MeOH	0.1	0.1		

**TABLE I  
 ALLOWABLE EMISSION RATES**

SN	Description	Control Equipment	Maximum Production/ Operation Rates	Pollutant	Emission Rate		Reg.	% Opacity
					lb/hr	ton/yr		
				HAcA	0.1	0.1		
				NH <sub>3</sub>	0.1	0.1		
06	Removed.							
07	Mat Line Fugitives**	None	108, 974 MM lbs/year Fiberglass Mats~	VOC*	1.0	3.1	SIP Air Code	5
				HCOH	0.6	1.3		
				MeOH	0.1	0.4		
				HAcA	0.1	0.1		
				NH <sub>3</sub>	0.1	0.1		
08	Trim Drop Out Box***	None	108, 974 MM lbs/year Fiberglass Mats~	PM	2.4	4.4	SIP Air Code	5
				PM <sub>10</sub>	2.4	4.4		
Total Allowable Emissions				PM	3.7	10.4		
				PM <sub>10</sub>	3.7	10.4		
				SO <sub>2</sub>	0.7	3.1		
				VOC*	6.5	20.0		
				CO	19.2	84.1		
				NO <sub>x</sub>	9.2	40.3		
				HCOH	3.9	8.2		
				MeOH	0.5	1.3		
				HAcA	0.4	0.4		
				NH <sub>3</sub>	1.0	2.9		

Owens Corning Fort Smith Facility  
Permit #: 747-AR-4  
CSN: 66-0294

~Facility wide production limit.

\*Includes HCOH, MeOH, and HA<sub>C</sub>A.

HCOH - Formaldehyde

MeOH - Methanol

HA<sub>C</sub>A - Acrylic Acid

NH<sub>3</sub> - Ammonia

## Public Notice

Pursuant to Section 19.4(k) of the Arkansas Plan of implementation for Air Pollution Control (SIP or Regulation 19), the Arkansas Department of Pollution Control and Ecology gives the following notice:

Owens Corning owns and operates a fiberglass mat manufacturing facility located at Walker Industrial Park, 5520 Planters Road, Fort Smith, Sebastian County, Arkansas. This permitting action will incorporate production increases, emission increases, and operation of a landfill gas burning operation.

**This facility is subject to regulation under the Arkansas Air Pollution Control Code (Regulation 18), and the Arkansas Plan of Implementation for Air Pollution Control (Regulation 19).**

The application has been reviewed by the staff of the Department and has received the Department's tentative approval subject to the terms of this notice.

Citizens wishing to examine the permit application and staff findings and recommendations may do so by contacting Rhonda Sharp, Information Officer. Citizens desiring technical information concerning the application or permit should contact Derrick Brown, Engineer. Both Rhonda Sharp and Derrick Brown can be reached at the Department's central office, 8001 National Drive, Little Rock, Arkansas 72209, telephone: (501) 682-0744.

Copies of the draft permit and permit application have been placed in the Fort Smith Public Library, 61 South Eight Street, Fort Smith, Arkansas 72901. This information may be reviewed during the Library's normal business hours.

Interested or affected persons may also submit written comments on the proposals to the Department at the above address-Attention: Rhonda Sharp. In order to be considered, the comments must be submitted within thirty (30) days of publication of this notice. Although the Department is not proposing to conduct a public hearing, one will be scheduled if significant comments on the permit provisions are received. If a hearing is scheduled, adequate public notice will be given in the newspaper of the largest circulation in the county in which the facility in question is, or will be, located.

The Director shall make a final decision to issue or deny this application or to impose special conditions in accordance with Section 2.1 of the Arkansas Pollution Control and Ecology Commission's Administrative Procedures (Regulation #8).

Dated this

Randall Mathis  
Director



**AIR DIVISION**  
**INVOICE REQUEST FORM**

(1-94)

**Route To:** FELICIA INMAN

**Facility Name & Address:**

Owens Corning Fort Smith Facility  
P. O. Box 1387  
Fort Smith, AR 72916

**CSN:** 66-0294

**Permit No:** 747-AR-4

**Permit Description:** A, S

(e.g. A = AIR CODE, S=SIP, H=NESHAP, N=NSPS)

**Initial Fee Calculations:**

**FEE** = 18.08\*(TPY PREDOMINANT POLLUTANT, EXCEPT CO)  
not greater than \$65,760 or less than \$500

$F_I =$

**Mod Fee Calculations:**

**FEE** = 18.08\*(20 TPY INCREASE PREDOMINANT POLLUTANT, EXCEPT CO)  
no less than \$400

$F_M = \$400$

**Fee Amount:** \$ 400.00

**Engineer:** Derrick Brown

**Date:** April 4, 2003.