

217/ 782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT -- RENEWAL

PERMITTEE

The Dow Chemical Company  
Attn: Tim Rardin  
1255 North Fifth Street  
Charleston, Illinois 61920

<u>Application No.:</u> 03010014	<u>I.D. No.:</u> 029010AAV
<u>Applicant's Designation:</u>	<u>Date Received:</u> March 26, 2004
<u>Subject:</u> Insulated Foam Panels Manufacturing Plant	
<u>Date Issued:</u> March 16, 2005	<u>Expiration Date:</u> March 16, 2010
<u>Location:</u> 1255 North Fifth Street, Charleston	

This Permit is hereby granted to the above-designated Permittee to OPERATE emission units(s) and/or air pollution control equipment consisting of the polyisocyanurate foam application head, two curing ovens, foam boards trimming and cutting operations controlled by dust collector and two blowing agent and one fire retardant pressure storage tanks pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit issued to limit the emissions of air pollutants from the source to less than major source thresholds (i.e., 100 tons/year of volatile organic materials (VOM) and R-22 (HCFC-22), Class II substance regulated under Clean Air Act). As a result the source is excluded from requirement to obtain a Clean Air Act Permit Program Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permits issued for this location.
2. No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere from any emission source, with the following exception: If no odor nuisance exists these limitations shall apply only to photochemically reactive material (35 Ill. Adm. Code 215.301).
3. VOM and R-22 emissions from insulated boards manufacturing process shall not exceed 10.0 tons/month, 88.0 tons/year and 3.5 tons/month, 35.0 tons/year, respectively.

Emissions should be calculated using the following equation:

$$E_i = \sum [L_i \times (C_i + F_i + R_i)]$$

Where:

- $E_i$  - VOM Emissions (lb)
- $L_i$  - Foam Board i-Type Production ( $10^3$  board-feet)
- $C_i$  - VOM Blowing Agent Emission Factor For i-Type Board (lb/ $10^3$  board-feet)
- $F_i$  - Fire Retardant Emission Factor For i-Type Board (lb/ $10^3$  board-feet)
- $R_i$  - R-22 Blowing Agent Emission Factor For i-Type Board (lb/ $10^3$  board-feet)

The following values of  $C_i$ ,  $F_i$  and  $R_i$  (lb/ $10^3$  board-feet) for the following types of products shall be used as determined by the most recent stack test (January 2004):

<u>Product Family</u>	<u><math>C_i</math></u>	<u><math>F_i</math></u>	<u><math>R_i</math></u>
Thermax/Tuff-R ( $\leq 1''$ )	0.62	0.21	--
Thermax/Tuff-R ( $1'' - 3''$ )	0.56	0.16	--
Thermax/Tuff-R ( $> 3''$ )	0.40	0.16	--
Sturdy-R/Quik-R ( $\leq 0.75''$ )	1.3	--	1.1
Sturdy-R/Quik-R ( $> 0.75''$ )	1.1	--	0.85

These limits are based on the blowing agent usage, composition and operational conditions consistent with those during the stack test. If a new blowing agent composition (containing new components or differing more than 10% by weight of major component from currently used) is introduced or any other changes occurs in the production process the Permittee shall perform a stack test and revise operating permit to implement a new emission factor. Compliance with annual limits shall be determined from a running total of 12 months of data.

4. This permit is issued based on negligible emissions of particulate matter from the board trimming/cutting operations. For this purpose emission shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 tons/year.
5. The Permittee shall maintain monthly records of the following items:
  - a. Production rate of each type of insulation board ( $10^3$  board-feet/month,  $10^3$  board-feet/year);
  - b. Blowing agent usage (tons/month, tons/year) of each type in each type of product;
  - c. Blowing agent composition (weight % of each component); and

- c. VOM and R-22 emissions with supporting calculations (tons/month, tons/year).
6. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least three years from the date of entry and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to the Illinois EPA request for records during the course of a source inspection.
7. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences.
8. Two (2) copies of required reports and notifications concerning equipment operation or repairs, performance testing or a continuous monitoring system shall be sent to:

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
Compliance Section (#40)  
P.O. Box 19276  
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
2009 Mall Street  
Collinsville, Illinois 62234

If you have any questions on this, please call Valeriy Brodsky at 217/782-2113.

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

DES:VJB:psj

cc: Illinois EPA, FOS Region 1  
Lotus Notes

Attachment A - Emissions Summary

This attachment provides a summary of the maximum emission from the Insulated Foam Panels Manufacturing Plant operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from the plant. The resulting maximum emissions are below the levels, e.g., 100 tons/year of volatile organic materials and R-22 (HCFC-22), Class II substance regulated under Clean Air Act, at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that material is handled, and control measures are more effective than required in this permit.

<u>Process</u>	Emissions (Tons/Yr)		
	<u>VOM</u>	<u>R-22</u>	<u>PM</u>
Board Manufacturing (including board cutting)	88.0	35.0	--
Board Cutting			0.44

VJB:psj