

- 3a. Operation of the custom foam products manufacturing process shall not exceed the following limits:
 - i. Raw expanded polystyrene (EPS) bead VOM blowing agent content: 6.5 percent monthly average by weight; and
 - ii. Raw ARCEL bead VOM blowing agent content: 12.5 percent monthly average by weight.
- b. Emissions of volatile organic material, VOM, from the custom foam products manufacturing process shall not exceed 9.9 tons/month and 98.5 tons/year. This limit is based on a loss rate of 97% from the ARCEL and EPS beads. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months.

- 4. Emissions of nitrogen oxides (NO_x) and carbon monoxide (CO) and operation of the two gas-fired boilers shall not exceed the following limits:

<u>Firing Rate</u>	<u>NO_x</u>		<u>CO</u>	
<u>(mmBtu/Hr)</u>	<u>(Lb/Hr)</u>	<u>(Ton/Yr)</u>	<u>(Lb/Hr)</u>	<u>(Ton/Yr)</u>
25.2	2.47	10.82	2.07	9.05

These limits define the potential emissions of CO and NO_x and are based on standard emission factors and maximum usage capacity. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months.

- 5. The emissions of Hazardous Air Pollutants (HAP) as listed in Section 112(b) of the Clean Air Act shall be less than 10 tons/year of any single HAP and 25 tons/year of any combination of such HAPs. As a result of this condition, this permit is issued based on the emissions of all HAPs from this source not triggering the requirements to obtain a Clean Air Act Permit Program Permit (CAAPP), and Section 112(G) of the Clean Air Act.
- 6. The Permittee shall maintain records of the following items:
 - a. Daily Operating Records:
 - i. Type and lot number of each VOM containing raw material, e.g., EPS, ARCEL, etc., used at the plant;
 - ii. A record of the VOM content of each lot of VOM containing raw material, e.g., EPS, ARCEL, etc., used at the plant. The records must include the following for each material: the percent weight of VOM and the corresponding certificate of analysis from the bead manufacturer;

- iii. EPS and ARCEL usages per lot number (tons or pounds);
- iv. Daily calculations of VOM emissions using the following equation:

$$E_{\text{vom}} = \sum_i (U_i \times V_i \times L)$$

Where:

i = Bead lot number

U_i = Daily usages of EPS and ARCEL beads from lot i (pounds or tons)

V_i = VOM content of EPS and ARCEL beads from lot i (percent weight)

L = Loss rate of 97%

b. Monthly Operating Records:

- i. Type and lot number of each VOM containing raw material, e.g., EPS, ARCEL, etc., used at the plant;
- ii. A record of the VOM content of each lot of VOM containing raw material, e.g., EPS, ARCEL, etc., used at the plant. The records must include the following for each material: the percent weight of VOM and the corresponding certificate of analysis from the bead manufacturer;
- iii. EPS and ARCEL usages (tons or pounds);
- iv. Monthly calculations of VOM emissions using the following equation:

$$E_{\text{vom}} = \sum_i (U_i \times V_i \times L)$$

Where:

i = Bead lot number

U_i = Monthly usages of EPS and ARCEL beads from lot i (pounds or tons)

V_i = VOM content of EPS and ARCEL beads from lot i (percent weight)

L = Loss rate of 97%

- v. Annual plant VOM emissions, determined on a monthly basis, with supporting calculations; and
 - vi. Natural gas usage (therms/mo and therms/yr).
7. Compliance with the limitations in Condition 3 shall be determined as follows:
- a. Annual Usage: Compute the volume or weight of each material (i.e., EPS, ARCEL, natural gas, ...etc.) used each month by the 15th of the following month. By the 15th of each month, add the latest monthly material usage used for the month to the monthly usage for the 11 previous months (to obtain the annual usage of each material).
 - b. Annual Emissions: Annual uncontrolled emissions shall be determined as the sum of an emission unit's monthly emission rate over a consecutive 12 month period. Compute the emissions for each month by the 15th of the following month. To obtain the annual emissions of each material, by the 15th of each month, add the latest monthly material emissions for the month to the emissions of the 11 previous months.
 - c. Volatile Organic Material (VOM) Content: VOM content of the VOM containing raw materials shall be determined in accordance with the provisions of 35 Ill. Adm. Code Section 215.102 and 215.208, manufacturer's data, or sampling and analysis by appropriate methods formally adopted by USEPA. In the event of a difference between manufacturer's data and laboratory analysis, the results of the laboratory analysis shall govern.
- The above limitation excludes water and any compounds which are specifically exempted from the definition of VOM pursuant to 35 Ill. Adm. Code 215, Subpart F.
8. Within 30 days of a written request from the Illinois EPA the VOM content of the materials used at the source shall be determined through the methods referenced in Condition 7(c), unless another method is approved by the Illinois EPA. Three (3) copies of the Final Report(s) for these tests shall be submitted to the Illinois EPA within 14 days after the test results are compiled and finalized.
9. 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 an Illinois EPA or USEPA request for records during the course of a source inspection.

10. 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.
11. 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
5415 North University
Peoria, Illinois 61614

12. Annual emissions of regulated air pollutants shall not exceed 118.37 tons, which shall be the permitted emissions for this site.
13. The Permittee shall submit the following additional information with the Annual Emissions Report, due May 1st of each year:
 - a. Maximum VOM content (percent by weight) of each VOM containing raw material used, excluding water and exempted materials;
 - b. Each month's, monthly and annual material usages for the preceding calendar year (i.e., preceding 12 months);
 - c. Each month's monthly and annual VOM emissions for the preceding calendar year (i.e., preceding 12 months); and
 - d. Dates that the plant exceeded the annual usage or VOM limitations, if applicable.

If there have been no exceedances during the prior calendar year, the Annual Emission Report shall include a statement to that effect.

It should be noted that this permit incorporates the limits and conditions from Construction Permit #97040004.

Page 6

It should be noted that the regrinder controlled by filters is exempt from state permit requirements, pursuant to 35 Ill. Adm. Code 201.146(aa).

If you have any questions on this, please call Tara T. Nguyen-Ede at 217/782-2113.

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

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cc: Illinois EPA, FOS Region 2
Illinois EPA, Compliance Section
Lotus Notes

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from custom foam products manufacturing source 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 such a plant. The resulting maximum emissions are well below the levels, e.g., 100 tons per year of VOM 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 less material is handled and control measures are more effective than required in this permit.

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