

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT

PERMITTEE

Atlas Roofing Corporation
Attn: Levorn Hughes
3110 Morton Drive
East Moline, Illinois 61244

<u>Application No.:</u> 95110075	<u>I.D. No.:</u> 161025ABM
<u>Applicant's Designation:</u>	<u>Date Received:</u> November 20, 1995
<u>Subject:</u> Foam Insulation Board Manufacturing	
<u>Date Issued:</u> January 6, 2010	<u>Expiration Date:</u> January 6, 2015
<u>Location:</u> 3110 Morton Drive, East Moline	

This Permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of foam applicator and nip roll, laminator, trim and cut saws controlled by dust collector, two 15,000 gallon polyol storage tanks (73-T-7, 73-T-8), 10,000 gallon pentane pressure storage tank (73-T-9), 10,000 gallon surfactant (Dabco DC 9343) storage tank (73-T-10), one 22,000 gallon pentane pressure storage tank with vapor recovery system, a Cleaver Brooks natural gas-fired boiler, one Aerovent natural gas-fired air make-up unit, three Hartzell natural gas-fired air make-up units, and one 6,016 gallon surfactant (Dabco K-15) pressure storage tank (73-T-15) 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 is issued:
 - i. To limit the emissions of air pollutants from the source to less than major source thresholds (i.e., 100 tons/year for volatile organic materials (VOM), 10 tons/year for any single hazardous air pollutant (HAP) and 25 tons/year for totaled HAPs). As a result, the source is excluded from the requirements to obtain a Clean Air Act 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.
- 2a. Pursuant to 35 Ill. Adm. Code 212.123(a), no person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to 35 Ill. Adm. Code 212.122.

- b. Pursuant to 35 Ill. Adm. Code 212.123(b), the emission of smoke or other particulate matter from any such emission unit may have an opacity greater than 30 percent but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period provided that such opaque emissions permitted during any 60 minute period shall occur from only one such emission unit located within a 305 meter (1000 foot) radius from the center point of any other such emission unit owned or operated by such person, and provided further that such opaque emissions permitted from each such emission unit shall be limited to 3 times in any 24 hour period.
- c. Pursuant to 35 Ill. Adm. Code 212.301, no person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally toward the zenith at a point beyond the property line of the source.
- d. Pursuant to 35 Ill. Adm. Code 212.306, all normal traffic pattern access areas surrounding storage piles specified in 35 Ill. Adm. Code 212.304 and all normal traffic pattern roads and parking facilities which are located on mining or manufacturing property shall be paved or treated with water, oils or chemical dust suppressants. All paved areas shall be cleaned on a regular basis. All areas treated with water, oils or chemical dust suppressants shall have the treatment applied on a regular basis, as needed, in accordance with the operating program required by 35 Ill. Adm. Code 212.309, 212.310 and 212.312.
- e. Pursuant to 35 Ill. Adm. Code 212.309(a), the emission units described in 35 Ill. Adm. Code 212.304 through 212.308 shall be operated under the provisions of an operating program, consistent with the requirements set forth in 35 Ill. Adm. Code 212.310 and 212.312, and prepared by the owner or operator and submitted to the Illinois EPA for its review. Such operating program shall be designed to significantly reduce fugitive particulate matter emissions.
- f. Pursuant to 35 Ill. Adm. Code 212.310, as a minimum the operating program shall include the following:
 - i. The name and address of the source;
 - ii. The name and address of the owner or operator responsible for execution of the operating program;
 - iii. A map or diagram of the source showing approximate locations of storage piles, conveyor loading operations, normal traffic pattern access areas surrounding storage piles and all normal traffic patterns within the source;
 - iv. Location of unloading and transporting operations with pollution control equipment;

- v. A detailed description of the best management practices utilized to achieve compliance with 35 Ill. Adm. Code 212 Subpart K, including an engineering specification of particulate collection equipment, application systems for water, oil, chemicals and dust suppressants utilized and equivalent methods utilized;
 - vi. Estimated frequency of application of dust suppressants by location of materials; and
 - vii. Such other information as may be necessary to facilitate the Illinois EPA's review of the operating program.
- g. Pursuant to 35 Ill. Adm. Code 212.321(a), no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in 35 Ill. Adm. Code 212.321(c).
- 3a. Pursuant to 35 Ill. Adm. Code 215.122(b), no person shall cause or allow the loading of any organic material into any stationary tank having a storage capacity of greater than 946 l (250 gal), unless such tank is equipped with a permanent submerged loading pipe or an equivalent device approved by the Illinois EPA according to the provisions of 35 Ill. Adm. Code 201, or unless such tank is a pressure tank as described in 35 Ill. Adm. Code 215.121(a) or is fitted with a recovery system as described in 35 Ill. Adm. Code 215.121(b) (2).
- b. Pursuant to 35 Ill. Adm. Code 215.301, no person shall cause or allow the discharge of more than 3.6 kg/hour (8 lbs/hour) of organic material into the atmosphere from any emission unit, except as provided in 35 Ill. Adm. Code 215.302, 215.303, or 215.304 and the following exception: If no odor nuisance exists the limitation of 35 Ill. Adm. Code 215 Subpart K shall apply only to photochemically reactive material.
- c. Pursuant to 35 Ill. Adm. Code 215.302, emissions of organic material in excess of those permitted by 35 Ill. Adm. Code 215.301 are allowable if such emissions are controlled by one of the following methods:
- i. Flame, thermal or catalytic incineration so as either to reduce such emissions to 10 ppm equivalent methane (molecular weight 16) or less, or to convert 85 percent of the hydrocarbons to carbon dioxide and water; or,
 - ii. A vapor recovery system which adsorbs and/or condenses at least 85 percent of the total uncontrolled organic material that would otherwise be emitted to the atmosphere; or,
4. This permit is issued based on the pentane storage tank not being subject to the New Source Performance Standards (NSPS) for Volatile

Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984, 40 CFR 60, Subpart Kb. Pursuant to 40 CFR 60.110b(d) (2), 40 CFR 60 Subpart Kb does not apply to pressure vessels designed to operate in excess of 204.9 kPa and without emissions to the atmosphere.

5. Pursuant to 35 Ill. Adm. Code 212.314, 35 Ill. Adm. Code 212.301 shall not apply and spraying pursuant to 35 Ill. Adm. Code 212.304 through 212.310 and 35 Ill. Adm. Code 212.312 shall not be required when the wind speed is greater than 40.2 km/hour (25 mph). Determination of wind speed for the purposes of this rule shall be by a one-hour average or hourly recorded value at the nearest official station of the U.S. Weather Bureau or by wind speed instruments operated on the site. In cases where the duration of operations subject to this rule is less than one hour, wind speed may be averaged over the duration of the operations on the basis of on-site wind speed instrument measurements.
6. Pursuant to 35 Ill. Adm. Code 215.122(c), if no odor nuisance exists the limitations of 35 Ill. Adm. Code 215.122 shall only apply to the loading of VOL with a vapor pressure of 17.24 kPa (2.5 psia) or greater at 294.3°K (70°F).
- 7a. The Permittee shall only use a blowing agent that is not photochemically reactive.
- b. In the event that the operation of this source results in an odor nuisance, the Permittee shall take appropriate and necessary actions to minimize odors, including but not limited to, changes in raw material or installation of controls, in order to eliminate the odor nuisance.
- 8a. Emission and operations from adhesive and solvents shall not exceed the following limits:

VOM Usage		VOM Emissions	
<u>(Tons/Month)</u>	<u>(Tons/Year)</u>	<u>(Tons/Month)</u>	<u>(Tons/Year)</u>
0.5	5.0	0.5	5.0

These limits are based on maximum throughput of material and material balance.

- b. i. Emissions and operation of the foam insulation board manufacturing equipment at this source shall not exceed the following limits:

VOM Emissions	
<u>(Tons/Month)</u>	<u>(Tons/Year)</u>
9.0	90.0

- ii. The VOM emissions shall be verified on at least a monthly basis from the data collected from the blowing agent usage multiplied by the following emission factors:

$$\text{VOM(ton/month)} = \Sigma (\text{blowing agent usage (lbs/month)} \times \text{emission factor (lbs/lb)} / 2000 \text{ lbs/ton})$$

<u>Product Thickness</u>	<u>VOM Emission Factor (Lbs/Lb Usage)</u>
0.5" to 0.9"	0.05969
0.5" to 0.9" Energy Shield	0.04827
1.0" to 1.3"	0.03192
1.4" to 1.9"	0.02765
2.0" to 2.6"	0.02870
2.0" to 2.4" Energy Shield	0.03026
2.7" to 3.2"	0.03447
3.3" to 4.0"	0.04589

Formulation B

Product Group	VOC Emission Factor (Lbs/Lb Usage)
Group 1: 0.5" to 0.9"	0.1638
Group 2: 1.0" to 2.6"	0.0959
Group 3: 2.7" to 4.0"	0.0836

These limits are based on maximum throughput of material and the stack testing conducted.

- c. Emissions and operation of equipment shall not exceed the following limits:

<u>Item of Equipment</u>	<u>Production Rule (Tons/Hour)</u>	<u>Particulate Matter Emissions (Lbs/Hour)</u>	<u>(Tons/Year)</u>
Trim and Cut Saws	2.32	3.98	17.43

These limits are based on the cumulative allowable emissions (Section 212.321) from individual lines, the maximum production rate, and continuous (8,760) hours of operation. The annual limit is the product of the hourly limit and the maximum hours of operation.

- d. Emissions and operation of all air make-up units and boiler (combined) shall not exceed the following limits:

- i. Natural Gas Usage:

<u>(mmscf/Month)</u>	<u>(mmscf/Year)</u>
20	200

ii. Emissions from the combustion of natural gas:

<u>Pollutant</u>	<u>Emission Factor</u>		<u>Emissions</u>	
	<u>(Lbs/mmscf)</u>	<u>(Tons/Month)</u>	<u>(Tons/Year)</u>	
CO	84.0	0.84	8.40	
NO _x	100.0	1.00	10.00	
PM	7.6	0.08	0.76	
SO ₂	0.6	0.01	0.06	
VOM	5.5	0.06	0.55	

These limits are based on maximum fuel usage and standard emissions factors (Tables 1.4-1 and 1.4-2, AP-42, Fifth Edition, Volume I, Supplement D, July 1998).

- e. This permit is issued based on negligible emissions of VOM from the 2 polyol storage tanks and 10,000 gallon surfactant storage tank. For this purpose, emissions of VOM from each emission unit shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 ton/year.
 - f. This permit is issued based on negligible emissions of VOM from the 2 pentane pressure storage tanks and the surfactant pressure storage tank. For this purpose, emissions of VOM from each emission unit shall not exceed nominal emission rates of 0.1 lb/hour and 0.1 ton/year.
 - g. Compliance with the annual limits of this permit shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).
9. The emissions of Hazardous Air Pollutants (HAPs) as listed in Section 112(b) of the Clean Air Act from the source shall not exceed 0.9 tons/month and 9.0 tons/year of any single HAP and 2.25 tons/month and 22.5 tons/year of any combination of such HAPs. As a result of this condition, this permit is issued based on the emissions of any HAP from this source not triggering the requirements to obtain a CAAPP permit from the Illinois EPA and the NESHAP for Surface Coating of Miscellaneous Metal Parts and Products, 40 CFR 63 Subpart Mmmm.
- 10a. Pursuant to 35 Ill. Adm. Code 201.282, every emission source or air pollution control equipment shall be subject to the following testing requirements for the purpose of determining the nature and quantities of specified air contaminant emissions and for the purpose of determining ground level and ambient air concentrations of such air contaminants:
- i. Testing by Owner or Operator. The Illinois EPA may require the owner or operator of the emission source or air pollution control equipment to conduct such tests in accordance with procedures adopted by the Illinois EPA, at such reasonable times as may be specified by the Illinois EPA and at the expense of the owner or operator of the emission source or air pollution control equipment. The Illinois EPA may adopt procedures detailing

methods of testing and formats for reporting results of testing. Such procedures and revisions thereto, shall not become effective until filed with the Secretary of State, as required by the APA Act. All such tests shall be made by or under the direction of a person qualified by training and/or experience in the field of air pollution testing. The Illinois EPA shall have the right to observe all aspects of such tests.

- ii. Testing by the Illinois EPA. The Illinois EPA shall have the right to conduct such tests at any time at its own expense. Upon request of the Illinois EPA, the owner or operator of the emission source or air pollution control equipment shall provide, without charge to the Illinois EPA, necessary holes in stacks or ducts and other safe and proper testing facilities, including scaffolding, but excluding instruments and sensing devices, as may be necessary.
- b. Testing required by Condition 11 shall be performed upon a written request from the Illinois EPA by a qualified independent testing service.
- 11. Pursuant to 35 Ill. Adm. Code 212.110(c), upon a written notification by the Illinois EPA, the owner or operator of a particulate matter emission unit subject to 35 Ill. Adm. Code Part 212 shall conduct the applicable testing for particulate matter emissions, opacity, or visible emissions at such person's own expense, to demonstrate compliance. Such test results shall be submitted to the Illinois EPA within thirty (30) days after conducting the test unless an alternative time for submittal is agreed to by the Illinois EPA.
- 12. Pursuant to 35 Ill. Adm. Code 212.110(e), the owner or operator of an emission unit subject to 35 Ill. Adm. Code Part 212 shall retain records of all tests which are performed. These records shall be retained for at least three (3) years after the date a test is performed.
- 13a. The Permittee shall maintain records of the following items so as to demonstrate compliance with the conditions of this permit:
 - i. Foam production (tons/month, tons/year);
 - ii. Pentane usage (tons/month, tons/year);
 - iii. Monthly and annual VOM and HAP emissions, with supporting calculations (tons/month, tons/year).
 - iv. The VOM and HAP content of each adhesive and solvent (lbs/gallon);
 - v. Usage of each adhesive and solvent (gallons/month and gallons/year);

- vi. Natural gas usage (ft³/month and ft³/year); and
 - vii. Monthly and annual emissions of CO, NO_x, PM, SO₂, VOM, each individual HAP and total HAPs from the source, with supporting calculations (tons/month and tons/year).
- b. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five (5) 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 or USEPA request for records during the course of a source inspection.
- c. Pursuant to 35 Ill. Adm. Code 212.110(d), a person planning to conduct testing for particulate matter emissions to demonstrate compliance shall give written notice to the Illinois EPA of that intent. Such notification shall be given at least thirty (30) days prior to the initiation of the test unless a shorter period is agreed to by the Illinois EPA. Such notification shall state the specific test methods from 35 Ill. Adm. Code 212.110 that will be used.
- 14a. If there is an exceedance of or a deviation from 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 or deviation. 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 deviation and efforts to reduce emissions and future occurrences.
- b. Two (2) copies of required reports and notifications shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance and Enforcement Section (#40)
P.O. Box 19276
Springfield, IL 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 - Regional Office
5415 North University
Peoria, Illinois 61614

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

Edwin C. Bakowski, P.E.
Manager, Permit Section
Division of Air Pollution Control

Date Signed: _____

ECB:VJB:psj

cc: Illinois EPA, FOS Region 1
Lotus Notes

Attachment A - Emissions Summary

This attachment provides a summary of the maximum emissions from the foam insulation boards manufacturing plant in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Agency used the annual operating scenario which results in maximum emissions from such a plant. The resulting maximum emission is below the level (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 used and control measures are more effective than required in this permit.

<u>Emission Unit</u>	E M I S S I O N S (Tons/Year)					<u>Single HAP</u>	<u>Total HAPs</u>
	<u>CO</u>	<u>NO_x</u>	<u>PM</u>	<u>SO₂</u>	<u>VOM</u>		
Insulation Board Manufacturing Equipment					90.0		
Laminator					5.0		
Trim & Cut Saws			17.43				
Air Make-Up Units and Boiler	8.40	10.0	0.76	0.06	0.55		
2 Polyol Storage Tanks					0.88		
2 Pentane Storage Tanks					0.2		
10,000 Gallon Surfactant Storage Tank					0.44		
Surfactant Pressure Storage Tank					0.4		
Totals	<u>8.40</u>	<u>10.0</u>	<u>18.19</u>	<u>0.06</u>	<u>97.17</u>	<u>9.0</u>	<u>22.5</u>

ECB:DWH:psj