

**STAFF DETERMINATION FOR THE APPLICATION TO CONSTRUCT
UNDER THE PREVENTION OF SIGNIFICANT DETERIORATION REGULATIONS
FOR THE JOHNS MANVILLE INTERNATIONAL, INC. (PLANT 03)
DEFIANCE COUNTY, OHIO
PTI NUMBER 03-13522
JANUARY 2, 2001**

Ohio Environmental Protection Agency
Division of Air Pollution Control
122 South Front Street
Columbus, Ohio 43215

The Clean Air Act and regulations promulgated thereunder require that major air pollution sources undergoing construction or modification comply with all applicable Prevention of Significant Deterioration (PSD) provisions and nonattainment area New Source Review requirements. The federal PSD rules govern emission increases in attainment areas for major sources, which are sources with the potential to emit 250 tons per year or more of any pollutant regulated under the Clean Air Act, or 100 tons per year or more if the source is included in one of 28 source categories. In nonattainment areas, the definition of major source is one having at least 100 tons per year potential emissions. A major modification is one resulting in a contemporaneous increase in emissions which exceeds the significance level of one or more pollutants. Any changes in actual emissions within a five-year period are considered to be contemporaneous. In addition, Ohio now has incorporated the PSD and NSR requirements by rule under OAC 3745-31.

Both PSD and nonattainment rules require that certain analyses be performed before a facility can obtain a permit authorizing construction of a new source or major modification to a major source. The principal requirements of the PSD regulations are:

- 1) Best Available Control Technology (BACT) review - A detailed engineering review must be performed to ensure that BACT is being installed for the pollutants for which the new source is a major source.
- 2) Ambient Air Quality Review - An analysis must be completed to ensure the continued maintenance of the National Ambient Air Quality Standards (NAAQS) and that any increases in ambient air pollutant concentrations do not exceed the incremental values set pursuant to the Clean Air Act.

For nonattainment areas, the requirements are:

- 1) Lowest Achievable Emissions Rate (LAER) - New major sources must install controls that represent the lowest emission levels (highest control efficiency) that has been achieved in practice.
- 2) The emissions from the new major source must be offset by a reduction of existing emissions

of the same pollutant by at least the same amount, and a demonstration must be made that the resulting air quality shows a net air quality benefit. This is more completely described in the Emission Offset Interpretative Ruling as found in Appendix S of 40 CFR Part 51.

- 3) The facility must certify that all major sources owned or operated in the state by the same entity are either in compliance with the existing State Implementation Plan (SIP) or are on an approved schedule resulting in full compliance with the SIP.

For rural ozone nonattainment areas, the requirements are:

- 1) LAER - New major sources must install controls that represent the lowest emissions levels (highest control efficiency) that has been achieved in practice.
- 2) The facility must certify that all major sources owned or operated in the state by the same entity are either in compliance with the existing SIP or are on an approved schedule resulting in full compliance with the SIP.

Finally, New Source Performance Standards (NSPS), SIP emission standards and public participation requirements must be followed in all cases.

Site Description

The Johns Manville International, Inc. - Plant 03 is in Defiance, Ohio, which is located in Defiance County. This area is classified as attainment for all of the criteria pollutants, total suspended particulates, particulate matter less than 10 microns, sulfur dioxide, nitrogen oxides, carbon monoxide, volatile organic compounds (ozone) and lead.

Facility Description

The Johns Manville Defiance 03 facility operates a large fiber glass manufacturing facility located in Defiance, Ohio. The facility manufactures fiber glass from glass marbles made in other facilities across the US. The fiber glass product produced in this facility is classified as a pipe insulation product. The facility uses the pot and marble manufacturing method of producing the fiber glass. This process re-melts the glass marbles in gas-fired crucibles, then uses flame attenuation gas-fired burners to stretch the glass into fiber glass. The fiber glass is sprayed with a phenolic based resin material which is used as a glass fiber binder. The binder and fiber glass is cured together in gas-fired curing ovens in the Product Curing Section. The product is then post-processed into pipe insulation using grinders, slitters and trimmers in the Product Finishing Section.

The modification of the fiber glass plant includes a number of new sources and changes to existing sources. A new offline pipe unit (Line #38) and a new in-line pipe unit (Line #30) will be installed at the facility. These new sources will have a Product Curing Unit to provide curing of the fiber

glass mat and a Product Finishing Unit to process the manufactured product into a pipe insulation product. These two lines will not have a Forming and Collection Unit to manufacture fiber glass.

Changes will also be made to four existing sources at the facility. The Line #31 Forming and Collection Unit will manufacture fiber glass to feed the new Line #30 Product Curing and Product Finishing Units and the existing Line #31 Product Curing and Product Finishing Units which will operate concurrently. While the Line #31 Forming and Collection Unit will not be physically modified, it will have an actual increase in emissions due to higher production levels. The Line #37 fiber glass line (Forming and Collection Unit, Product Curing and Product Finishing Units) emission rates will have an increase in emissions due to an increase in manufacturing capacity and the need to run higher emitting products on the line. Also, two existing off-line Handwrap Product Curing Units (#36 and #38) and a combined #36/38 Product Finishing Unit will be semi-automated increasing production capacity. All Product Finishing Units at the facility are, and will continue to be controlled for particulate emissions using a cyclones and baghouse in series. All other units are controlled using Best Management Practices or process-related controls. Natural gas is the only fuel used at the facility for manufacturing.

The modifications to the existing emission units and the proposed new emission units will trigger PSD review for PM₁₀.

New Source Review (NSR) /PSD Applicability

The Johns Manville Defiance 03 facility is currently classified as a PSD “major” stationary source due to the facility being defined as one of the 28 source categories (Glass fiber processing plants) with potential emissions including fugitive emissions exceeding 100 tons per year in an attainment area (estimated PTE for particulate emissions were >388 TPY). The Johns Manville Defiance 03 facility is located in Defiance County that is currently in attainment for all criteria pollutants. Any “major” stationary source which is proposing the emission of a regulated pollutant in excess of PSD significance levels will be required to undergo a PSD analysis for that particular pollutant.

Table 1 shows the allowable and Net emissions increase from the proposed installation.

Table 1

| <u>Pollutant</u> | <u>Allowable Tons/Year</u> | <u>Tons per Year Increases</u> | <u>PSD Trigger</u> |
|------------------------|----------------------------|--------------------------------|--------------------|
| OC | 40 | 31.29 | 40 |
| CO | 100 | 41.99 | 100 |
| NOx | 40 | 24.86 | 40 |
| S02 | 40 | 11.28 | 40 |
| PM₁₀ | 15 | 64.97 | 15 |
| Fluoride | 3 | 1.16 | 3 |

Based upon the above information, a PSD review is required for PM₁₀.

BACT Review

Johns Manville is proposing to modify the fiber glass manufacturing operations at their facility in Defiance, Ohio which is located in Defiance County. Under Section 107 of the Clean Air Act as of June 24, 1992, this area was classified as attainment for all of the criteria pollutants, i.e., total suspended particulate, particulate matter less than 10 microns, sulfur dioxide, nitrogen oxides, carbon monoxide, volatile organic compounds (ozone) and lead.

The Johns Manville Defiance 03 facility is subject to PSD regulations which mandates a case-by-case Best Available Control Technology (BACT) analysis be performed for the following pollutant: PM₁₀. The application used a “top-down” approach to determine an appropriate level of control.

As part of the application for any emissions unit regulated under the PSD requirements, an analysis must be conducted that demonstrates that Best Available Control Technology (BACT) will be employed.

Technical Feasibility of Control Options

This analysis is organized in three groups of emission sources. Group #1 is the new and modified Product Curing Units (Line #30, #38, #37, Handwrap #36, and Handwrap #38); and the modified Line #31 and Line #37 Forming and Collection Units. Group #2 is the new and modified Product Finishing Units (Line #30, Line #38, Line #37, and Handwrap #36/#38). Group #3 includes review of the Line #31 Forming and Collection Unit combined with the Line #30 Product Curing Unit, and the combined Line #37 Forming and Collection Unit and Product Curing Unit.

Group #1 -- New and Modified Forming Product Curing Units and Modified Forming and Collection Units

Emissions generated from Product Curing Units and Forming and Collection Units are composed of a mixture of cured resin particles and uncured resin droplets or aerosols, and to a lesser degree glass fiber (<20%). The material emitted as a liquid aerosol tends to deposit and cure on all surfaces on contact when not continually dissolved in a water wash (binder is water-soluble). This deposit forms a tough heat resistant surface that is difficult to remove.

As a result, truly “dry” particulate pollution control technologies such as baghouses or dry Electrostatic Precipitator Systems (EPS) applied to Product Curing Units and Forming and Collection Units are considered infeasible due to deposition of the liquid aerosol droplets (binder), which subsequently cures and accumulates on equipment surfaces. This build-up quickly deteriorates their control efficiency (fouling of ESP plates) and can lead to safety compromises such as duct and/or pollution control fires when the accumulated resin is ignited by accident (molten glass getting in the duct or control device).

Product Curing Units and Forming and Collection Units also contain a small percentage of glass fibers, which would make incineration technology prone to plugging due to glass build up within the bed. This plugging leads to decreased control efficiencies and frequent media changes which can be very costly in terms of media replacement and production unit down time. While incineration has been proposed and installed on other wool fiber glass curing units (none for Forming and Collection Units) these types of operations contain a very low level of glass fibers in the exhaust gas stream. Thus, glass build-up within the bed is not a critical issue.

For pipe production however, the Product Curing Unit emissions differ in that the oven exhaust is not drawn through a fiber glass mat, as occurs within most wool fiber glass manufacturing lines. Drawing the air through the mat forms an excellent filter for removing fiber glass from the exhaust stream. Pipe sear roll and curing oven units move air around the pipe and not through it. This creates the situation where the air stream can pull small puffs of fiber glass off the exterior of the pipe, exhausting them to atmosphere. The emissions of fiber glass puffs would build-up in the incinerator as the temperature within the device would not be sufficient to completely breakdown the glass fibers. Product Curing processes generate a high percentage of fiber glass PM emissions that will quickly plug or foul the incinerator and force the frequent replacement of media in the bed.

Therefore, for Product Curing Units and Forming and Collection Units, cyclones and baghouses, incinerators, and dry electrostatic precipitators have been deemed technically infeasible. Feasible air pollution control devices that are analyzed for the Product Curing Units and Forming and Collection Units are as follows:

- (A) Wet electrostatic Precipitators,
- (B) High Energy Wet Venturi Scrubbers,
- (C) Low Energy Wet Venturi Scrubbers,
- (D) High Energy Air Filtration (HEAF).

Group #2 -- New and Modified Product Finishing Units

On the Product Finishing Units, cured pipe insulation is ground, trimmed, slit, and jacketed to final product specifications. Emissions generated during this stage of the pipe manufacturing are mainly

solid glass particles. The particulate matter is generated when the rough cured pipe is ground to final outside diameter dimensions, ends trimmed off to make flush and straight, and the center slit from end to end to ease product installation. These processes generate a lot of large particulate matter that has a very high glass content (>80%) and contains no uncured liquid aerosol emissions because the product is cured before reaching this stage of manufacture.

The existing Product Finishing Units at the Facility are controlled by a cyclone and baghouse collector in series at a measured collection efficiency of >99%. This control efficiency is also equivalent to the highest level of control achieved in practice on Product Finishing Units at wool fiber glass manufacturing operations, according to RBLC database control efficiency determinations. This control system is considered BACT for cutting and trimming operations per RBLC Id: KS-0018 Certaineed Corp BACT analysis. Control beyond the level already achieved has not been determined to be technically feasible.

Therefore, for the new and modified Product Finishing Units, a cyclone and baghouse collector in series is the only technically feasible control option for these types of sources.

Group #3 -- Control Devices For Combined Forming and Collection Unit and Product Curing Unit Emission Sources

As part of the BACT analysis, JM has examined the economic aspect of combining sources for control of PM₁₀ emissions from manufacturing lines. The JM Defiance 03 currently employs control technologies for combined emission units using a common control system on Line #37. Line #37 contains a Forming and Collection Unit and Product Curing Unit that are ducted to a common Low Energy Wet Venturi Scrubber. This combining of various production units will occur for Line #37 as stated, and Line #31 Forming and Collection Unit and Line #30 Product Curing Unit.

Control Effectiveness Rankings by Source Type

A summary of the control efficiency for technically feasible control options is presented in Table A.

Control efficiencies have been determined from a number of sources. Wet ESP efficiency has been determined by applying the BACT control efficiency levels to the estimated filterable and condensable particulate matter (CPM) components of PM₁₀ emissions. This results in a control efficiency of 77% for PM₁₀.

BACT analysis was conducted for the Wet Venturi Scrubbers; however, no BACT has been established for this type of device on a wool fiber glass line. A CPM control efficiency similar to that for the Wet ESP was used for the CPM portion of PM₁₀. Engineering estimates were used for the filterable portion. Then, a new control efficiency value was generated for these devices taking into account both particulate portions. Line #37 is currently abated with this control technology and no unabated data exists for this unit. This control efficiency calculates to 60% PM₁₀ removal.

For High Energy Wet Venturi Scrubbers, a control efficiency between a Wet ESP and Low Energy Venturi Scrubber has been chosen based upon engineering judgment after discussions with several consultants and by reviewing published literature. No further refinements of the control efficiencies were conducted, as the cost effectiveness for the various options were well above generally acceptable values.

Table A

Air Pollution Control Options Subject to Economic BACT Analysis

| Source Combinations to Analyze | Control Technology Requiring Economic Evaluation | Estimated BACT Control Efficiency |
|---|--|-----------------------------------|
| Forming and Collection Unit | Wet ESP | 77.0% |
| | High Energy Wet Venturi Scrubber | 75.0% |
| | Low Energy Wet Venturi Scrubber | 60.0% |
| | High Energy Air Filtration | 50.0% |
| Product Curing Unit <i>(Combined sear roll and curing oven emission sources)</i> | Wet ESP | 77.0% |
| | High Energy Wet Venturi Scrubber | 75.0% |
| | Low Energy Wet Venturi Scrubber | 60.0% |
| | High Energy Air Filtration | 50.0% |
| Forming and Collection Unit + Product Curing Unit | Wet ESP | 77.0% |
| | High Energy Wet Venturi Scrubber | 75.0% |
| | Low Energy Wet Venturi Scrubber | 60.0% |
| | High Energy Air Filtration | 50.0% |
| Product Finishing Unit | Cyclone and Baghouse in series | 99.0% |

Control Effectiveness Results/ BACT Selection

In the BACT analysis, collateral adverse energy or environmental impacts were not considered, because the cost effectiveness values were generally very high.

Cost estimates such as Total Capital Investment (TCI) = Direct Capital Cost (DC) + Indirect Costs (IC), Total Annual Cost (TAC)=Direct Annual cost (DAC) + Indirect Annual Cost (IAC), and Cost Effectiveness (CE) = TAC/(Annual maximum emission reduction potential) are calculated using the costing methods described in USEPA OAQPS Cost Control Manual. United McGill Airclean provided equipment costs for WEP technology and JM provided Low Energy Wet Venturi Scrubber data based upon the original installation for Line #37. Information aiding in the development of cost for the High Energy Wet Venturi Scrubber came from conversations with Cielcote Air Pollution Control and Croll Reynolds. High Energy Air Filtration equipment costs came from Anderson 2000, Inc.

Definitions that apply include: TAC, the sum of annual operating costs added to annualized total installed capital cost, and Cost effectiveness (CE) = TAC / (Annual maximum emission reduction potential). These sheets have been modified to reflect current labor and utility costs. Capital costs for package wastewater treatment systems (Hydrofloat only) are included, and where appropriate, costs for ductwork and extra fan capacity have been included. The costs for removing the existing air pollution control device on Line #37 is not included.

New Line #30 and #38 Product Curing Units

The new Line #30 and #38 Product Curing Units will emit a wet or liquid aerosol emission. Analysis for these Product Curing Units resulted in no control device being considered economically feasible. The lowest CE achieved for any control device option was for the high

energy air filtration (HEAF) system. The TAC values for the HEAF were \$129,632 and \$126,600; and the CE values were \$112,803 and \$28,643 for the Line #30 and Line #38 Product Curing Units, respectively. While no controls are economically feasible for these sources, JM does operate the sources in a manner that results in the lowest emissions possible through best management practices of the process inputs and methods of production. Therefore, no air pollution control device is chosen as BACT, and JM will continue to employ best management practices to minimize emissions from these units.

New Line #30 and #38 Product Finishing Units; Modified Line #37 and Handwrap #36/#38 Product Finishing Units

For Product Finishing Units, only the cyclone/baghouse collector in series was analyzed. The system is >99% efficient and no other control technologies exist with higher control efficiencies. Additionally, this type of control has been established as BACT for other wool fiber glass manufacturing cutting and trimming operations (Product Finishing Units). Based upon the analysis, a cyclone/baghouse collector in series generated TAC values of \$134,733, \$136,587, \$134,733, \$117,092 ; and CE values of \$363, \$262, \$363, and \$629, for the Line #30, Line #38, Line #37, and Handwrap #36/#38 Product Finishing Units, respectively. Because the CE is within a generally accepted range, the cyclone/baghouse collector in series will be installed as BACT for new emission sources, and is already installed on existing emission sources.

Modified Line #37 Forming and Collection, Product Curing Units

The Line #37 Forming and Collection and Product Curing Units were combined for all analysis. This occurred because the unit is currently configured in this manner, and analysis from the Line #31 Forming and Collection Unit and Line #30 Product Curing Unit did not show an economically feasible control alternative.

Analysis of various Line #37 control options resulted in no control device being economically feasible. The lowest CE achieved for any control device option was for the Low Energy Wet Venturi Scrubber system. The TAC was \$421,809 and the CE was \$9,703. While no controls are economically feasible for this source, JM does operate the emission units with the Low Energy Wet Venturi Scrubber as a control device. The scrubber was originally installed as part of a permit application to keep particulate matter emissions below the PSD threshold. JM did not install this control device as either a BACT control device under PSD regulations, or as BAT for OEPA regulations. While no abatement is economically justified under BACT analysis, JM will continue to operate the air pollution control device on these units so that emissions are minimized.

Modified Handwrap Product Curing Units #36 and #38

The modified Handwrap Units will be operate similarly to the Line #30 and #38 Product Curing Units. As such, these sources emit a wet or liquid aerosol emission. The HEAF system was selected for BACT analysis due to its adaptability to a batch-like operating schedule.

Analysis of the control system showed that the HEAF is not an economically feasible control option with a TAC of \$106,515 and a CE of \$57,900 for each separate Handwrap Product Curing Unit. While the HEAF was not economically feasible for this source, JM does operate the emission unit in a manner that results in the lowest emissions possible through best management practices of the process inputs and methods of production.

Therefore, no air pollution control device is chosen as BACT, and JM will continue to employ best management practices to minimize emissions from this emissions source.

Modified Line #31 Forming and Collection Unit; Line #31 Forming and Collection Unit Combined With the Line #30 Product Curing Unit

The Line #31 analysis consisted of two distinct parts. First, the Forming and Collection Unit was analyzed individually under various control options. Secondly, the combined emissions from the Line #31 Forming and Collection Unit and Line #30 Product Curing Unit were analyzed under the same control options to determine if a more cost effective control system could be identified.

Analyzing all the control options for the various combined or separate emission units resulted in no control device being considered economically feasible. The lowest CE achieved for any control device option was for a HEAF on Line #31 Forming and Collection Unit and a Low Energy Venturi Scrubber on the combined Line #31 Forming and Collection Unit and Line #30 Product Curing Unit. For the HEAF option, the TAC was \$316,623 and the CE was \$18,219. The scrubber analysis results were TAC of \$430,670 and the CE was \$19,370.

While no controls are economically feasible for these sources, JM does operate the emissions units in a manner that results in the lowest emissions possible. This is accomplished through best management practices of the process inputs and methods of production. Therefore, no air pollution control device is chosen as BACT, and JM will continue to employ best management practices to minimize emissions from this emissions source.

Table B is summary of the selected BACT determinations for each of the new or modified sources for the Defiance 03 Facility.

Table B
BACT Analysis Summary

| Source Description | Proposed BACT | BACT Cost Effectiveness (\$/ton) |
|---|--------------------------------|----------------------------------|
| <i>Line #37</i> ⁽¹⁾ Forming and Collection Unit + Product Curing Unit | No Control ⁽¹⁾⁽²⁾ | NA |
| <i>Line #37</i> Product Finishing Unit | Cyclone and Baghouse in series | \$363 |
| <i>Line #31</i> Forming and Collection Unit | No Control ⁽²⁾ | NA |

| | | |
|---|--------------------------------|-------|
| Line #30 Product Curing Unit | No Control ⁽²⁾ | NA |
| Line #30 Product Finishing Unit | Cyclone and Baghouse in series | \$363 |
| Line #38 Product Curing Unit | No Control ⁽²⁾ | NA |
| Line #38 Product Finishing Unit | Cyclone and Baghouse in series | \$262 |
| Handwrap Product Curing Unit #38 | No Control ⁽²⁾ | NA |
| Handwrap Product Curing Unit #36 | No Control ⁽²⁾ | NA |
| Handwrap Product Finishing Unit #36/#38 | Cyclone and Baghouse in series | \$629 |

- (1) While Line #37 has proven that control via any analyzed particulate air pollution control device is cost prohibitive. However, Line #37 will continue to employ the low energy wet venturi scrubber as a means of maintaining lowest possible emissions from these units.
- (2) To minimize emissions from these units JM will continue to employ Best Management Practices.

Site Description/Air Quality Designations

The JM Defiance 03 Facility is located in Air Quality Control Region (AQCR) 177. The area is attainment or attainment/unclassifiable for total suspended particulates, particulate matter less than 10 microns, sulfur dioxide, nitrogen oxides, carbon monoxide, volatile organic compounds (ozone) and lead.

Ambient Air Quality Monitoring Requirements

U.S. EPA regulations require a year of ambient air quality data to be obtained as part of the PSD application. An applicant may conduct monitoring on-site, model to demonstrate a “de minimus” impact, or used existing air quality data to fill some of the requirements of a PSD ambient air quality analysis. If monitoring is required, U.S. EPA has set up specific conditions on the acceptability of existing air quality monitors is to ensure the monitor is representative of air quality in the area.

In this instance, JM has conducted ambient air quality modeling that predicts the ambient air quality impact of the source(s) to be less than the monitoring de minimus concentrations for each of the pollutants. Therefore, JM would not be required to conduct pre-application monitoring. A summary is below:

| <u>Pollutant</u> | <u>Averaging Period</u> | <u>Predicted Concentration</u> | <u>Monitoring De Minimus Concentration</u> |
|------------------|-------------------------|--------------------------------|--|
| PM ₁₀ | 24-hour high | 4.48 ug/m ³ | 10 ug/m ³ |

Modeling

Only PM10 exceeded the PSD significant emission rates. Air quality dispersion modeling was conducted to assess the effect of these sources on ambient air quality standards and PSD increments. The U.S. EPA Industrial Source Complex-Short Term (ISCST3, Version 00101) model was used for the refined modeling analysis. .

The ISCST3, Version 00101 model was the appropriate model for the simple to intermediate terrain portion of the analysis due to the need to incorporate building wake effects, the need to predict both short-term and long-term (annual) average concentrations, and the need to incorporate impacts from multiple and separated emissions units.

The ISCST3, Version 00101 model was run with the regulatory default options (stack-tip downwash, buoyancy-induced dispersion, final plume rise), default wind speed profile categories, default potential temperature gradient, and no pollutant decay. Building downwash was assessed using either the Huber-Snyder or Schulman-Sire downwash methodology, depending on the stack and nearby building heights.

The ISCST3, Version 00101 model was run utilizing the National Weather Service meteorological data processed using the U.S. EPA PCRAMMET program. OEPA provided five years of the most recent PCRAMMET processed meteorological data on our bulletin board system. Following OEPA modeling guidance concerning representative meteorological data for various counties, the Fort Wayne Surface, Flint Upper Air (1987-1991) PCRAMMET data were used in the refined modeling analysis.

Building wake effects will influence emissions from stacks with heights less than Good Engineering Practice (GEP). The ISCST3, Version 00101 model requires input of building heights and projected building widths for 36 wind directions. The U.S. EPA Building Profile Input Program (BPIP) was used to determine the direction-specific building dimensions.

Significant Impact Analysis

ISCST3 was applied to the sources at the proposed facility to determine if the proposed facility would have impacts above the PSD significant impact increments. Peak facility impacts are presented in the table below:

| | | <u>Facility Impacts</u> | <u>PSD Significance Increments</u> |
|------------------|--------------|-----------------------------|--|
| PM ₁₀ | 24-hour high | 4.48 ug/m ³ | 5 ug/m ³ |
| | Annual | 0.18 ug/m ³ | 1 ug/m ³ |

As part of the permitting package, JM has requested to voluntarily limit the allowable on the following emissions units: P031, P032, P033, P034, P035 and P036. These units will share the three (3) new baghouses with the proposed emissions units in this permit action. These units were added to the permit action and the lower allowables will be implemented at the same time of the modifications and new installations.

The modeling analyses used past actual emission rates for the existing state of sources with new allowable, changed stack heights or which were otherwise being included in the modeling analyses as negative emissions. The proposed facility configuration was modeled using potential allowables.

PSD and NAAQS Analyses

The SIA modeling shows that the highest PM₁₀ impacts for the 24-hour and annual averaging times are 4.48 µg/m³ and 0.18 µg/m³, respectively. These concentrations do not exceed the PSD significant impact levels, 5 µg/m³ and 1 µg/m³, respectively. Since the SIA analysis does not exceed the PSD significance impact thresholds, PSD and NAAQS modeling analyses are not required.

Toxic Analysis

The worst case toxic (highest rate, lowest MAGLC) to be increased by this permit is Formaldehyde. After changes to existing sources allowables and existing stack heights, the net impact due to this permit will be 5.85 ug/m³, 1-hour, which is below the MAGLC of 6.45 ug/m³.

Secondary Impact

The closest Class I area to the JM Facility are the Dolley Sods and otter Creek Class I wilderness areas which over 250 miles to the southeast. Federal PSD regulation regulations require that the reviewing authority provide written notification of projects which may affect a Class 1 area. "May effect" is typically interpreted by EPA as a major source or major modification within 100 kilometers. Since the JM Facility is located greater than 100 kilometers from any Class I area, and all modeled impacts are below Significant Impact Levels, the JM Facility was not subject to the visibility analysis modeling.

Most of the designated vegetation screening levels are equivalent to or exceed NAAQS and/or PSD increments, so that satisfaction of NAAQS and PSD increment assures compliance with

sensitive vegetation screening levels. For SO₂ 3-hour and annual averaging periods, sensitive screening levels are more stringent than comparable NAAQS standards. The JM facility does not have significant emissions of SO₂.

It is not expected that there will be regional population, commercial, or industrial growth associated with this project.

Conclusions

Based upon the analysis of the permit to install application and its supporting documentation provided by the JM, the Ohio EPA staff has determined the proposed increase will comply with all applicable State and Federal environmental regulations and that the requirements for BACT are satisfied. Therefore, the Ohio EPA staff recommends that a permit to install be issued to the JM Defiance 03 Facility.



State of Ohio Environmental Protection Agency

Street Address:

Lazarus Gov. Center
122 S. Front Street
Columbus, OH 43215

TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov. Center
P.O. Box 1049
Columbus, OH 43216-1049

**RE: DRAFT PERMIT TO INSTALL
DEFIANCE COUNTY
Application No: 03-13522**

CERTIFIED MAIL

| | |
|-----|------------------------------|
| | TOXIC REVIEW |
| Y | PSD |
| | SYNTHETIC MINOR |
| | CEMS |
| | MACT |
| | NSPS |
| NNN | NESHAPS |
| | NETTING |
| | MAJOR NON-ATTAINMENT |
| Y | MODELING SUBMITTED |
| | GASOLINE DISPENSING FACILITY |

DATE: 1/16/2001

Johns Manville International Inc.
Ned Ewers
P.O. Box 7188
Defiance, OH 43512

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43266-0149.

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$4200** will be due. Please do not submit any payment now.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Very truly yours,

Thomas G. Rigo
Field Operations and Permit Section
Division of Air Pollution Control

CC: USEPA NWDO IN MI

DRAFT PERMIT TO INSTALL 03-13522

Application Number: 03-13522

APS Premise Number: 0320010004

Permit Fee: **To be entered upon final issuance**

Name of Facility: Johns Manville International Inc.

Person to Contact: Ned Ewers

Address: P.O. Box 7188
Defiance, OH 43512

Location of proposed air contaminant source(s) [emissions unit(s)]:
1410 Columbus Avenue
Defiance, Ohio

Description of proposed emissions unit(s):
Increase of pipe insulation manufacturing capacity. Which includes modification of two existing lines and addition of two lines.

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Part I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install General Terms and Conditions

1. Monitoring and Related Recordkeeping and Reporting Requirements

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - i. The date, place (as defined in the permit), and time of sampling or measurements.
 - ii. The date(s) analyses were performed.
 - iii. The company or entity that performed the analyses.
 - iv. The analytical techniques or methods used.
 - v. The results of such analyses.
 - vi. The operating conditions existing at the time of sampling or measurement.
- b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
 - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See B.11 below if no deviations occurred during the quarter.
 - iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year for the previous six calendar

months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.

- iv. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

2. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

3. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

4. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

5. Severability Clause

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

6. General Requirements

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.
- b. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.

- c. This permit may be modified, reopened, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d. This permit does not convey any property rights of any sort, or any exclusive privilege.
- e. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

7. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit To Install fees within 30 days after the issuance of this Permit To Install.

8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

9. Compliance Requirements

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.

- iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
- i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

10. Permit To Operate Application

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).
- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within thirty (30) days after commencing operation of the source(s) covered by this permit.

11. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

B. State Only Enforceable Permit To Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

4. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

5. Termination of Permit To Install

This permit to install shall terminate within eighteen months of the effective date of the permit to install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

6. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources are inadequate or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities prove to be inadequate or cannot meet applicable standards.

7. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

8. Applicability

This Permit to Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

9. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit To Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

10. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted

quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

C. Permit To Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

**SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS**

| <u>Pollutant</u> | <u>Tons Per Year</u> |
|------------------|----------------------|
| PE | 127.66 (*64.97) |
| OC | 45.64 |
| NOx | 32.50 |
| CO | 54.84 |
| SO ₂ | 11.17 |
| Fluorides | 3.81 (*1.16) |

*net increase

Johns Manville International Inc.

Facility ID: 0320010004

PTI Application: 03-13522

Issued: To be entered upon final issuance

Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions

None

B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|--|--|---|
| P003 - Handwrap Product Curing Unit #36 (Modification to transfer from manual operation to semi-automatic operation which allows for increase in production) | 40 <u>CFR</u> Part 52.21 OAC rule 3745-31-10 through 20 | See A.I.2.a. |
| | 40 <u>CFR</u> Part 63 Subpart NNN | See A.I.2.b |
| | OAC rule 3745-31-05(A)(3) | The requirements of this rule also include compliance with the requirements of 40 <u>CFR</u> Part 52.21, OAC rule 3745-31-10 through 20, OAC rule 3745-17-07(A) and 40 CFR Part 63 Subpart NNN. |
| | | 0.84 lb particulate emissions (PE)/hr, 3.68 tons PE/year (see A.2.b) |
| | | 0.98 lb organic compounds (OC)/hr, 4.31 tons OC/year |
| | | 0.41 lb nitrogen oxide (NOx)/hr, 1.81 tons NOx/year |
| | | 0.41 lb carbon monoxide (CO)/hr, 1.79 tons CO/year |
| | OAC rule 3745-21-07(G) | Exempt (see A.II.1). |
| | OAC rule 3745-17-11(B) | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| | OAC rule 3745-17-07(A) | Visible PE from the stack servicing this emissions unit shall not exceed 20% opacity as a 6-minute average except as provided by rule. |

2. Additional Terms and Conditions

- 2.a** Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that no control technologies for PE were cost effective.
- 2.b** The owner or operator subject to the provisions of this subpart shall demonstrate compliance with the requirements of this subpart by no later than June 14, 2002, for an existing wool fiberglass manufacturing line producing a bonded pipe product.
- 2.c** All PE is assumed to be PM₁₀.

II. Operational Restrictions

- 1. The use of photochemically reactive materials, as defined in OAC rule 3745-21-01(C)(5), in this emissions unit is prohibited.

III. Monitoring and/or Recordkeeping Requirements

- 1. The permittee shall maintain records of the following information for this emissions unit:
 - a. the company identification for each liquid organic material employed in this emissions unit; and
 - b. documentation on whether or not each liquid organic material employed is a photochemically reactive material.
- 2. The permittee shall perform checks at least five (5) days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any abnormal visible emission incident; and
 - e. any corrective actions taken to eliminate the abnormal visible emissions.
- 3. Notwithstanding the frequency of reporting requirements specified in section IV. Reporting Requirements, the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly reading on this emissions unit if the following conditions are met:
 - a. for one full quarter this emissions unit visual observations indicate no abnormal visible emissions; and
 - b. the permittee continues to comply with all the recordkeeping and monitoring requirements specified in section III.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify each day during which a photochemically reactive material was employed. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.
2. The permittee shall submit semiannual written reports which (a) identify all days during which any abnormal visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the abnormal visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance Methods Requirements: Compliance with the emission limitations in section A.I of the terms and conditions of this permit shall be determined in accordance with the following methods:

- a. Emission Limitation: 0.84 lb PE/hr, 3.68 tons PE/yr

Applicable Compliance Method: The hourly emission limitation represents the emissions unit's potential to emit determined by multiplying the maximum process rate as indicated in the permit application by an emission factor derived from stack testing of a similar emissions unit. If required the permittee shall demonstrate compliance by testing in accordance with Method 5 of 40 CFR Part 60, Appendix A.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- b. Emission Limitation: 0.98 lb OC/hr, 4.31 tons OC/yr

Applicable Compliance Method: The hourly emission limitation represents the emissions unit's potential to emit determined by multiplying the maximum process rate as indicated in the permit application by an emission factor derived from stack testing of a similar emissions unit. If required the permittee shall demonstrate compliance by testing in accordance with Method 18, Method 25, and/or Method 25A of 40 CFR Part 60, Appendix A.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- c. Emission Limitation: 0.41 lb NO_x/hr, 1.81 tons NO_x/yr

Applicable Compliance Method: The hourly emission limitation represents the emissions unit's potential to emit determined by multiplying the maximum process rate as indicated in the permit application by an emission factor derived from stack testing of a similar emissions unit. If required the permittee shall demonstrate compliance by testing in accordance with Method 7 of 40 CFR Part 60, Appendix A.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- d. Emission Limitation: 0.41 lb CO/hr, 1.79 tons CO/yr

Applicable Compliance Method: The hourly emission limitation represents the emissions unit's potential to emit determined by multiplying the maximum process rate as indicated in the permit application by an emission factor derived from stack testing of a similar emissions unit. If required the permittee shall demonstrate compliance by testing in accordance with Method 10 of 40 CFR Part 60, Appendix A.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- e. Emission Limitation: 20% opacity as a 6-minute average, except as provided by rule

Applicable Compliance Method: OAC rule 3745-17-03(B)(1)

VI. Miscellaneous Requirements

1. Prevention of Significant Deterioration (PSD)

- a. Emissions units P003, P040, P042, P043, P044, P048, P049, P050, P051, and P052, as described in this Permit to Install (PTI), is subject to the applicable provisions of the Prevention of Significant Deterioration (PSD) regulations as promulgated by the United States Environmental Protection Agency (U.S. EPA). The authority to apply and enforce the PSD regulations has been delegated to the Ohio EPA.

In accordance with 40 CFR 124.15, 124.19, and 124.20 the following shall apply:

- i. The effective date of the permit shall be 30 days after the service of notice to any public commentors the final decision to issue, modify or revoke and re-issue the permit, unless the service of notice is by mail, in which case the effective date of the permit shall be 33 days after the service notice; and
- ii. If an appeal is made to the Environmental Appeals Board of the U.S. EPA, the effective date of the permit is suspended until such time as the appeal is resolved or denied.

Appeals will be addressed to:

United State Environmental Protection Agency
Environmental Appeals Board
401 M Street, SW (MC-113do)
Washington, DC 21460

Johns Manville International Inc.
PTI Application: 03-13522
Issued: To be entered upon final issuance

Facility ID: 0320010004
Emissions Unit ID: P003

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|--|--------------------------------------|--|
| P003 - Handwrap Product Curing Unit #36 (modification to transfer from manual operation to semi-automatic operation which allows for increase in production) | | See B.III. |

2. Additional Terms and Conditions

- 2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install for this permit action as evaluated based on the actual materials (binder resin) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). This analysis is based upon the combined modeling of "all" air emission sources emitting air toxics that are contained in this PTI. The following summarizes the results of the modeling for the "worst case" pollutant(s) for all sources combined:

- a. Pollutant: formaldehyde
 TLV (mg/m3): 0.271
 Maximum Hourly Emission Rate (lbs/hr): 3.37
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 5.85
 MAGLC (ug/m3): 6.45

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be

satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
 - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
3. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.
4. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|---|---|---|
| P011 - Line #31 Forming and Collection Unit (Modification involves increase in production to debottleneck the operation of this line. This unit will feed new Line#30 Product Curing Unit.) | 40 <u>CFR</u> Part 52.21 OAC rule 3745-31-10 through 20 | See A.I.2.a. |
| | 40 <u>CFR</u> Part 63 Subpart NNN | See A.I.2.b |
| | OAC rule 3745-31-05(A)(3) | The requirements of this rule also include compliance with the requirements of 40 <u>CFR</u> Part 52.21, OAC rule 3745-31-10 through 20, OAC rule 3745-17-07(A) and 40 CFR Part 63 Subpart NNN. |
| | | 7.94 lbs particulate emissions (PE)/hr, 34.76 tons PE/year (see A.I.2.b) |
| | | 2.40 lbs organic compounds (OC)/hr, 10.53 tons OC/year |
| | | 0.88 lb nitrogen oxide (NO _x)/hr, 3.83 tons NO _x /year |
| | 2.11 lbs carbon monoxide (CO)/hr, 9.26 tons CO/year | |
| | 0.99 lb sulfur dioxide (SO ₂)/hr, 4.35 tons SO ₂ /year | |
| | 0.39 lb fluorides/hr, 1.71 tons fluorides/yr | |
| | OAC rule 3745-21-07(G) | Exempt (see A.II.1). |
| | OAC rule 3745-17-11(B) | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |

OAC rule 3745-17-07(A)

Visible PE from the stack servicing this emissions unit shall not exceed 20% opacity as a 6-minute average except as provided by rule.

2. Additional Terms and Conditions

- 2.a** Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that no control technologies for PE were cost effective.
- 2.b** The owner or operator subject to the provisions of this subpart shall demonstrate compliance with the requirements of this subpart by no later than June 14, 2002, for an existing wool fiberglass manufacturing line producing a bonded pipe product..
- 2.c** All PE is assumed to be PM₁₀.

II. Operational Restrictions

- 1. The use of photochemically reactive materials, as defined in OAC rule 3745-21-01(C)(5), in this emissions unit is prohibited.

III. Monitoring and/or Recordkeeping Requirements

- 1. The permittee shall maintain records of the following information for this emissions unit:
 - a. the company identification for each liquid organic material employed in this emissions unit; and
 - b. documentation on whether or not each liquid organic material employed is a photochemically reactive material.
- 2. The permittee shall perform checks at least five (5) days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any abnormal visible emission incident; and
 - e. any corrective actions taken to eliminate the abnormal visible emissions.
- 3. Notwithstanding the frequency of reporting requirements specified in section IV. Reporting Requirements, the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly reading on this emissions unit if the following conditions are met:

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- a. for one full quarter this emissions unit visual observations indicate no abnormal visible emissions; and
- b. the permittee continues to comply with all the recordkeeping and monitoring requirements specified in section III.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify each day during which a photochemically reactive material was employed. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.
2. The permittee shall submit semiannual written reports which (a) identify all days during which any abnormal visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the abnormal visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Emissions Testing: The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. the emissions testing shall be conducted within 6 months after modification of this emissions.
 - b. The emissions testing shall be conducted to demonstrate compliance with the allowable mass emission rate for PE and fluorides.
 - c. The following test method shall be employed to demonstrate compliance with the allowable mass emission rate: for PE, Method 5 of 40 CFR Part 60, for fluorides, Method 13 or Method 26 as specified in 40 CFR Part 60, Appendix A.
 - d. The test shall be conducted while the emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the Director or appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements: Compliance with the emission limitations in section A.I of the terms and conditions of this permit shall be determined in accordance with the following methods:

- a. Emission Limitation: 7.94 lbs PE/hr, 34.76 tons PE/yr

Applicable Compliance Method: Compliance with the lb/hr limitation shall be determined through the testing required in section A.V.1 of the terms and conditions of the permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- b. Emission Limitation: 2.40 lbs OC/hr, 10.53 tons OC/yr

Applicable Compliance Method: The hourly emission limitation represents the emissions unit's potential to emit determined by multiplying the maximum process rate as indicated in the permit application by an emission factor derived from stack testing of a similar emissions unit. If required the permittee shall demonstrate compliance by testing in accordance with Method 18, Method 25, and/or Method 25A of 40 CFR Part 60, Appendix A.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- c. Emission Limitation: 0.88 lb NO_x/hr, 3.83 tons NO_x/yr

Applicable Compliance Method: The hourly emission limitation represents the emissions unit's potential to emit determined by multiplying the maximum process rate as indicated in the permit application by an emission factor derived from stack testing of a similar emissions unit. If required the permittee shall demonstrate compliance by testing in accordance with Method 7 of 40 CFR Part 60, Appendix A.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- d. Emission Limitation: 2.11 lbs CO/hr, 9.26 tons CO/yr

Applicable Compliance Method: The hourly emission limitation represents the emissions unit's potential to emit determined by multiplying the maximum process rate as indicated in the permit application by an emission factor derived from stack testing of a similar emissions unit. If required the permittee shall demonstrate compliance by testing in accordance with Method 10 of 40 CFR Part 60, Appendix A.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- e. Emission Limitation: 0.99 lb SO₂/hr, 4.35 tons SO₂/yr

Applicable Compliance Method: The hourly emission limitation represents the emissions unit's potential to emit determined by multiplying the maximum process rate as indicated in the permit application by an emission factor derived from stack testing of a similar emissions unit. If required the permittee shall demonstrate compliance by testing in accordance with Method 6 of 40 CFR Part 60, Appendix A.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- f. Emission Limitation: 0.39 lb fluorides/hr, 1.71 tons fluorides/yr

Applicable Compliance Method: Compliance with the lb/hr limitation shall be determined through the testing required in section A.V.1 of the terms and conditions of the permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- g. Emission Limitation: 20% opacity as a 6-minute average, except as provided by rule

Applicable Compliance Method: OAC rule 3745-17-03(B)(1)

VI. Miscellaneous Requirements

1. Prevention of Significant Deterioration (PSD)

- a. Emissions units P003, P040, P042, P043, P044, P048, P049, P050, P051, and P052, as described in this Permit to Install (PTI), is subject to the applicable provisions of the Prevention of Significant Deterioration (PSD) regulations as promulgated by the United States Environmental Protection Agency (U.S. EPA). The authority to apply and enforce the PSD regulations has been delegated to the Ohio EPA.

In accordance with 40 CFR 124.15, 124.19, and 124.20 the following shall apply:

- i. The effective date of the permit shall be 30 days after the service of notice to any public commentors the final decision to issue, modify or revoke and re-issue the permit, unless the service of notice is by mail, in which case the effective date of the permit shall be 33 days after the service notice; and
- ii. If an appeal is made to the Environmental Appeals Board of the U.S. EPA, the effective date of the permit is suspended until such time as the appeal is resolved or denied.

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Facility ID: 0320010004

Emissions Unit ID: P011

Appeals will be addressed to:

United State Environmental Protection Agency
Environmental Appeals Board
401 M Street, SW (MC-113do)
Washington, DC 21460

Johns Manville International Inc.
PTI Application: 03-13522
Issued: To be entered upon final issuance

Facility ID: 0320010004
Emissions Unit ID: P011

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|--|--------------------------------------|--|
| P011 - Line #31 Forming and Collection Unit (Modification involves increase in production to debottleneck the operation of this line. This unit will feed new Line #30 Product Curing Unit.) | | See B.III |

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install for this permit action as evaluated based on the actual materials (binder resin) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). This analysis is based upon the combined modeling of "all" air emission sources emitting air toxics that are contained in this PTI. The following summarizes the results of the modeling for the "worst case" pollutant(s) for all sources combined:

- a. Pollutant: formaldehyde
 TLV (mg/m3): 0.271
 Maximum Hourly Emission Rate (lbs/hr): 3.37
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 5.85
 MAGLC (ug/m3): 6.45

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the

permittee shall conduct an evaluation to determine that the “Air Toxic Policy” will still be still satisfied. If, upon evaluation, the permittee determines that the “Air Toxic Policy” will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the “Air Toxic Policy” include the following:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
 - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
3. If the permittee determines that the “Air Toxic Policy” will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a “modification” under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.
4. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the “Air Toxic Policy:”
- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the “Air Toxic Policy”; and
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the “Air Toxic Policy” for the change.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|---|--|--|
| P040 - Handwrap Product Curing Unit # 38 (Modification to transfer from manual operation to semi-automatic operation which allows for increase in production) | 40 <u>CFR</u> Part 52.21 OAC rule 3745-31-10 through 20 | See A.I.2.a. |
| | 40 <u>CFR</u> Part 63 Subpart NNN | See A.I.2.b |
| | OAC rule 3745-31-05(A)(3) | The requirements of this rule also include compliance with the requirements of 40 <u>CFR</u> Part 52.21, OAC rule 3745-31-10 through 20, OAC rule 3745-17-07(A), and 40 <u>CFR</u> Part 63 Subpart NNN . |
| | | 0.84 lb particulate emissions (PE)/hr, 3.68 tons PE/year (see A.2.c) |
| | | 0.98 lb organic compounds (OC)/hr, 4.31 tons OC/year |
| | | 0.41 lb nitrogen oxide (NOx)/hr, 1.81 tons NOx/year |
| | | 0.41 lb carbon monoxide (CO)/hr, 1.79 tons CO/year |
| | OAC rule 3745-21-07(G) | Exempt (see A.II.1). |
| | OAC rule 3745-17-11(B) | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| | OAC rule 3745-17-07(A) | Visible PE from the stack servicing this emissions unit shall not exceed 20% opacity as a 6-minute average except as provided by rule. |

2. Additional Terms and Conditions

- 2.a** Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that no control technologies for PE were cost effective.
- 2.b** The owner or operator subject to the provisions of this subpart shall demonstrate compliance with the requirements of this subpart by no later than June 14, 2002, for an existing wool fiberglass manufacturing line producing a bonded pipe product.
- 2.c** All PE is assumed to be PM₁₀.

II. Operational Restrictions

- 1. The use of photochemically reactive materials, as defined in OAC rule 3745-21-01(C)(5), in this emissions unit is prohibited.

III. Monitoring and/or Recordkeeping Requirements

- 1. The permittee shall maintain records of the following information for this emissions unit:
 - a. the company identification for each liquid organic material employed in this emissions unit; and
 - b. documentation on whether or not each liquid organic material employed is a photochemically reactive material.
- 2. The permittee shall perform checks at least five (5) days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any abnormal visible emission incident; and
 - e. any corrective actions taken to eliminate the abnormal visible emissions.
- 3. Notwithstanding the frequency of reporting requirements specified in section IV. Reporting Requirements, the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly reading on this emissions unit if the following conditions are met:
 - a. for one full quarter this emissions unit visual observations indicate no abnormal visible emissions; and
 - b. the permittee continues to comply with all the recordkeeping and monitoring requirements specified in section III.

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Facility ID: 0320010004
Emissions Unit ID: P040

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify each day during which a photochemically reactive material was employed. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.
2. The permittee shall submit semiannual written reports which (a) identify all days during which any abnormal visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the abnormal visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance Methods Requirements: Compliance with the emission limitations in section A.I of the terms and conditions of this permit shall be determined in accordance with the following methods:

- a. Emission Limitation: 0.84 lb PE/hr, 3.68 tons PE/yr

Applicable Compliance Method: The hourly emission limitation represents the emissions unit's potential to emit determined by multiplying the maximum process rate as indicated in the permit application by an emission factor derived from stack testing of a similar emissions unit. If required the permittee shall demonstrate compliance by testing in accordance with Method 5 of 40 CFR Part 60, Appendix A.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- b. Emission Limitation: 0.98 lb OC/hr, 4.31 tons OC/yr

Applicable Compliance Method: The hourly emission limitation represents the emissions unit's potential to emit determined by multiplying the maximum process rate as indicated in the permit application by an emission factor derived from stack testing of a similar emissions unit. If required the permittee shall demonstrate compliance by testing in accordance with Method 18, Method 25, and/or Method 25A of 40 CFR Part 60, Appendix A.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- c. Emission Limitation: 0.41 lb NO_x/hr, 1.81 tons NO_x/yr

Applicable Compliance Method: The hourly emission limitation represents the emissions unit's potential to emit determined by multiplying the maximum process rate as indicated in the permit application by an emission factor derived from stack testing of a similar emissions unit. If required the permittee shall demonstrate compliance by testing in accordance with Method 7 of 40 CFR Part 60, Appendix A.

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Emissions Unit ID: P040

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- d. Emission Limitation: 0.41 lb CO/hr, 1.79 tons CO/yr

Applicable Compliance Method: The hourly emission limitation represents the emissions unit's potential to emit determined by multiplying the maximum process rate as indicated in the permit application by an emission factor derived from stack testing of a similar emissions unit. If required the permittee shall demonstrate compliance by testing in accordance with Method 10 of 40 CFR Part 60, Appendix A.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- e. Emission Limitation: 20% opacity as a 6-minute average, except as provided by rule

Applicable Compliance Method: OAC rule 3745-17-03(B)(1)

VI. Miscellaneous Requirements

1. Prevention of Significant Deterioration (PSD)

- a. Emissions units P003, P040, P042, P043, P044, P048, P049, P050, P051, and P052, as described in this Permit to Install (PTI), is subject to the applicable provisions of the Prevention of Significant Deterioration (PSD) regulations as promulgated by the United States Environmental Protection Agency (U.S. EPA). The authority to apply and enforce the PSD regulations has been delegated to the Ohio EPA.

In accordance with 40 CFR 124.15, 124.19, and 124.20 the following shall apply:

- i. The effective date of the permit shall be 30 days after the service of notice to any public commentors the final decision to issue, modify or revoke and re-issue the permit, unless the service of notice is by mail, in which case the effective date of the permit shall be 33 days after the service notice; and
- ii. If an appeal is made to the Environmental Appeals Board of the U.S. EPA, the effective date of the permit is suspended until such time as the appeal is resolved or denied.

Appeals will be addressed to:

United State Environmental Protection Agency
Environmental Appeals Board
401 M Street, SW (MC-113do)
Washington, DC 21460

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Facility ID: 0320010004
Emissions Unit ID: P040

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|--|--------------------------------------|--|
| P040 - Handwrap Product Curing Unit #38 (modification to transfer from manual operation to semi-automatic operation which allows for increase in production) | | See B.III. |

2. **Additional Terms and Conditions**

- 2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install for this permit action as evaluated based on the actual materials (binder resin) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). This analysis is based upon the combined modeling of "all" air emission sources emitting air toxics that are contained in this PTI. The following summarizes the results of the modeling for the "worst case" pollutant(s) for all sources combined:
 - a. Pollutant: formaldehyde
 TLV (mg/m3): 0.271
 Maximum Hourly Emission Rate (lbs/hr): 3.37
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 5.85
 MAGLC (ug/m3): 6.45
2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still

satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
 - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
3. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.
4. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|--|---|--|
| P042 - Line #37 Forming and Collection Unit (Modification to allow for increase in production) | 40 <u>CFR</u> Part 52.21 OAC rule 3745-31-10 through 20 | See A.I.2.a. |
| | 40 <u>CFR</u> Part 63 Subpart NNN | See A.I.2.b. |
| | OAC rule 3745-31-05(A)(3) | The requirements of this rule also include compliance with the requirements of 40 <u>CFR</u> Part 52.21, OAC rule 3745-31-10 through 20, 40 <u>CFR</u> Part 63 Subpart NNN, and OAC rule 3745-17-07(A) |
| | | Use of venturi scrubber (see A.I.2.c) |
| | | 5.83 lbs particulate emissions (PE)/hr, 25.54 tons PE/yr (see A.I.2.d) |
| | | 1.81 lbs organic compounds (OC)/hr, 7.93 tons OC/yr |
| | 2.85 lbs nitrogen oxide (NO _x)/hr, 12.48 tons NO _x /yr | |
| | 2.22 lbs carbon monoxide (CO)/hr, 9.72 tons CO/yr | |
| | 1.22 lbs sulfur dioxide (SO ₂)/hr, 5.34 tons SO ₂ /yr | |
| | 0.48 lb fluorides/hr, 2.1 tons fluorides/yr | |
| | OAC rule 3745-21-07(G) | Exempt (see A.II.1). |
| | OAC rule 3745-17-11(B) | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |

OAC rule 3745-17-07(A)

Visible PE from the stack servicing this emissions unit shall not exceed 20% opacity as a 6-minute average except as provided by rule.

2. Additional Terms and Conditions

- 2.a** Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that no control technologies for PE were cost effective. The venturi scrubber control requirement established under OAC rule 3745-31-05(A)(3) is not considered BACT (see A.I.2.c).
- 2.b** The owner or operator subject to the provisions of this subpart shall demonstrate compliance with the requirements of this subpart by no later than June 14, 2002, for an existing wool fiberglass manufacturing line producing a bonded pipe product.
- 2.c** In 1994 PTI # 03-07940 was issued requiring emissions unit P042 and P043 to be controlled with a venturi scrubber. The use of a venturi scrubber meeting a mass emission limitation of 5.83 lbs PE/hr was established as "Best Available Technology" (BAT) under OAC rule 3745-31-05. The BAT determination was made in accordance with OAC rule 3745-31-02(A)(2) from a request by the permittee to voluntarily limit the allowable emissions of PE for purposes of avoiding PSD.
- 2.d** All PE is assumed to be PM₁₀.

II. Operational Restrictions

- 1. The use of photochemically reactive materials, as defined in OAC rule 3745-21-01(C)(5), in this emissions unit is prohibited.
- 2. The pressure drop across the scrubber shall be continuously maintained at a value of not less than 5 inches of water at all times while the emissions unit is in operation.
- 3. The scrubber water flow rate shall be continuously maintained at a value of not less than 300 gallons per minute at all times while the emissions unit is in operation.

III. Monitoring and/or Recordkeeping Requirements

- 1. The permittee shall maintain records of the following information for this emissions unit:
 - a. the company identification for each liquid organic material employed in this emissions unit; and
 - b. documentation on whether or not each liquid organic material employed is a photochemically reactive material.
- 2. The permittee shall properly install, operate and maintain equipment to continuously monitor the static pressure drop across the scrubber and the scrubber water flow rate while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

3. The permittee shall collect and record the following information each day:
 - a. the pressure drop across the scrubber, in inches of water, on once per shift basis;
 - b. the scrubber water flow rate, in gallons per minute, on once per shift basis; and
 - c. the operating times for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.
4. The permittee shall perform checks at least five (5) days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any abnormal visible emission incident; and
 - e. any corrective actions taken to eliminate the abnormal visible emissions.
5. Notwithstanding the frequency of reporting requirements specified in section IV. Reporting Requirements, the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly reading on this emissions unit if the following conditions are met:
 - a. for one full quarter this emissions unit visual observations indicate no abnormal visible emissions; and
 - b. the permittee continues to comply with all the recordkeeping and monitoring requirements specified in section III.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify each day during which a photochemically reactive material was employed. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.
2. The permittee shall submit deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:
 - a. the static pressure drop across the scrubber; and
 - b. the scrubber water flow rate.
3. The permittee shall submit semiannual written reports which (a) identify all days during which any abnormal visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the abnormal visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

Johns Manville International Inc.
PTI Application: 03-13522
Issued: To be entered upon final issuance

Facility ID: 0320010004
Emissions Unit ID: P042

V. Testing Requirements

1. Emissions Testing: The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. the emissions testing shall be conducted within 6 months after modification of this emissions.
 - b. The emissions testing shall be conducted to demonstrate compliance with the mass allowable emission rate of 5.83 lbs PE/hr and 0.48 lb fluorides/hr.
 - c. The following test method(s) shall be employed to demonstrate compliance with the requirements specified in A.V.2.b: for PE, Method 5 as specified in 40 CFR Part 60, Appendix A; for fluorides Method 13 or Method 26 as specified in 40 CFR Part 60, Appendix A.
 - d. The test shall be conducted while the emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the Director or appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements: Compliance with the emission limitations in section A.I of the terms and conditions of this permit shall be determined in accordance with the following methods:
 - a. Emission Limitation: 5.83 lbs PE/hr, 25.54 tons PE/yr

Applicable Compliance Method: Compliance with the lb/hr limitation shall be determined through testing required in section A.V.1 of the terms and conditions of the permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- b. Emission Limitation: 1.81 lbs OC/hr, 7.93 tons OC/yr

Applicable Compliance Method: The hourly emission limitation represents the emissions unit's potential to emit determined by multiplying the maximum process rate as indicated in the permit application by an emission factor derived from stack testing of a similar emissions unit. If required the permittee shall demonstrate compliance by testing in accordance with Method 18, Method 25, and/or Method 25A of 40 CFR Part 60, Appendix A.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- c. Emission Limitation: 2.85 lbs NO_x/hr, 12.48 tons NO_x/yr

Applicable Compliance Method: The hourly emission limitation represents the emissions unit's potential to emit determined by multiplying the maximum process rate as indicated in the permit application by an emission factor derived from stack testing of a similar emissions unit. If required the permittee shall demonstrate compliance by testing in accordance with Method 7 of 40 CFR Part 60, Appendix A.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- d. Emission Limitation: 2.22 lbs CO/hr, 9.72 tons CO/yr

Applicable Compliance Method: The hourly emission limitation represents the emissions unit's potential to emit determined by multiplying the maximum process rate as indicated in the permit application by an emission factor derived from stack testing of a similar emissions unit. If required the permittee shall demonstrate compliance by testing in accordance with Method 10 of 40 CFR Part 60, Appendix A.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- e. Emission Limitation: 1.22 lbs SO₂/hr, 5.34 tons SO₂/yr

Applicable Compliance Method: The hourly emission limitation represents the emissions unit's potential to emit determined by multiplying the maximum process rate as indicated in the permit application by an emission factor derived from stack testing of a similar emissions unit. If required the permittee shall demonstrate compliance by testing in accordance with Method 6 of 40 CFR Part 60, Appendix A.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- f. Emission Limitation: 0.48 lb fluorides/hr, 2.10 tons fluorides/yr

Applicable Compliance Method: Compliance with the lb/hr limitation shall be determined through testing required in section A.V.1 of the terms and conditions of the permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- g. Emission Limitation: 20% opacity as a 6-minute average, except as provided by rule

Applicable Compliance Method: OAC rule 3745-17-03(B)(1)

VI. Miscellaneous Requirements

1. Prevention of Significant Deterioration (PSD)

- a. Emissions units P003, P040, P042, P043, P044, P048, P049, P050, P051, and P052, as described in this Permit to Install (PTI), is subject to the applicable provisions of the Prevention of Significant Deterioration (PSD) regulations as promulgated by the United States Environmental Protection Agency (U.S. EPA). The authority to apply and enforce the PSD regulations has been delegated to the Ohio EPA.

In accordance with 40 CFR 124.15, 124.19, and 124.20 the following shall apply:

- i. The effective date of the permit shall be 30 days after the service of notice to any public commentors the final decision to issue, modify or revoke and re-issue the permit, unless the service of notice is by mail, in which case the effective date of the permit shall be 33 days after the service notice; and
- ii. If an appeal is made to the Environmental Appeals Board of the U.S. EPA, the effective date of the permit is suspended until such time as the appeal is resolved or denied.

Appeals will be addressed to:

United State Environmental Protection Agency
Environmental Appeals Board
401 M Street, SW (MC-113do)
Washington, DC 21460

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|--|--------------------------------------|--|
| P042 - Line #37 Forming and Collection Unit (Modification to allow for increase in production) | | See B.III. |

2. **Additional Terms and Conditions**

- 2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install for this permit action as evaluated based on the actual materials (binder resin) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). This analysis is based upon the combined modeling of "all" air emission sources emitting air toxics that are contained in this PTI. The following summarizes the results of the modeling for the "worst case" pollutant(s) for all sources combined:
 - a. Pollutant: formaldehyde
 TLV (mg/m3): 0.271
 Maximum Hourly Emission Rate (lbs/hr): 3.37
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 5.85
 MAGLC (ug/m3): 6.45
2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
 - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
3. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.
4. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|---|--|--|
| P043 - Line #37 Product Curing Unit (Increase in production due to increase from emissions unit P042) | 40 <u>CFR</u> Part 52.21 OAC rule 3745-31-10 through 20 | See A.I.2.a |
| | 40 <u>CFR</u> Part 63 Subpart NNN OAC rule 3745-31-05(A)(3) | See A.I.2.b The requirements of this rule also include compliance with the requirements of 40 <u>CFR</u> Part 52.21, OAC rule 3745-31-10 through 20, OAC rule 3745-17-07(A), and 40 <u>CFR</u> Part 63 Subpart NNN. 0.79 lb particulate emissions (PE)/hr, 3.46 tons PE/year (see A.I.2.c) 1.02 lbs organic compounds (OC)/hr, 4.47 tons OC/year 1.67 lbs nitrogen oxide (NO _x)/hr, 7.32 tons NO _x /year 2.22 lbs carbon monoxide (CO)/hr, 9.72 tons CO/year |
| | OAC rule 3745-21-07(G) | Exempt (see A.II.1). |
| | OAC rule 3745-17-11(B) | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| | OAC rule 3745-17-07(A) | Visible PE from the stack servicing this emissions unit shall not exceed 20% opacity as a 6-minute average except as provided by rule. |

2. Additional Terms and Conditions

- 2.a** Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that no control technologies for PE were cost effective. The venturi scrubber control requirement established under OAC rule 3745-31-05(A)(3) is not considered BACT (see A.I.2.c).
- 2.b** The owner or operator subject to the provisions of this subpart shall demonstrate compliance with the requirements of this subpart by no later than June 14, 2002, for an existing wool fiberglass manufacturing line producing a bonded pipe product.
- 2.c** In 1994, PTI # 03-07940 was issued requiring emissions unit P042 and P043 to be controlled with a venturi scrubber. The use of a venturi scrubber meeting a mass emission limitation of 0.79 lb PE/hr was established as "Best Available Technology" (BAT) under OAC rule 3745-31-05. The BAT determination was made in accordance with OAC rule 3745-31-02(A)(2) from a request by the permittee to voluntarily limit the allowable emissions of PE for purposes of avoiding PSD.
- 2.d** All PE is assumed to be PM₁₀.

II. Operational Restrictions

- 1. The use of photochemically reactive materials, as defined in OAC rule 3745-21-01(C)(5), in this emissions unit is prohibited.
- 2. The pressure drop across the scrubber shall be continuously maintained at a value of not less than 5 inches of water at all times while the emissions unit is in operation.
- 3. The scrubber water flow rate shall be continuously maintained at a value of not less than 300 gallons per minute at all times while the emissions unit is in operation.

III. Monitoring and/or Recordkeeping Requirements

- 1. The permittee shall maintain records of the following information for this emissions unit:
 - a. the company identification for each liquid organic material employed in this emissions unit; and;
 - b. documentation on whether or not each liquid organic material employed is a photochemically reactive material.
- 2. The permittee shall properly install, operate and maintain equipment to continuously monitor the static pressure drop across the scrubber and the scrubber water flow rate while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.
- 3. The permittee shall collect and record the following information each day:
 - a. the pressure drop across the scrubber, in inches of water, on once per shift basis;
 - b. the scrubber water flow rate, in gallons per minute, on once per shift basis; and

- c. the operating times for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.
4. The permittee shall perform checks at least five (5) days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any abnormal visible emission incident; and
 - e. any corrective actions taken to eliminate the abnormal visible emissions.
5. Notwithstanding the frequency of reporting requirements specified in section IV. Reporting Requirements, the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly reading on this emissions unit if the following conditions are met:
 - a. for one full quarter this emissions unit visual observations indicate no abnormal visible emissions; and
 - b. the permittee continues to comply with all the recordkeeping and monitoring requirements specified in section III.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify each day during which a photochemically reactive material was employed. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.
2. The permittee shall submit deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:
 - a. the static pressure drop across the scrubber; and
 - b. the scrubber water flow rate.
3. The permittee shall submit semiannual written reports which (a) identify all days during which any abnormal visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the abnormal visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Emissions Testing: The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. the emissions testing shall be conducted within 6 months after modification of this emissions.

- b. The emissions testing shall be conducted to demonstrate compliance with the mass allowable emission rate of 0.79 lb PE/hr.
- c. The following test method shall be employed to demonstrate compliance with the requirements specified in A.V.2.b: for PE, Method 5 as specified in 40 CFR Part 60, Appendix A.
- d. The test shall be conducted while the emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the Director or appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

- 2. Compliance Methods Requirements: Compliance with the emission limitations in section A.I of the terms and conditions of this permit shall be determined in accordance with the following methods:

- a. Emission Limitation: 0.79 lb PE/hr, 3.46 tons PE/yr

Applicable Compliance Method: Compliance with the lb/hr limitation shall be determined through testing required in section A.V.1 of the terms and conditions of the permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- b. Emission Limitation: 1.02 lbs OC/hr, 4.47 tons OC/yr

Applicable Compliance Method: The hourly emission limitation represents the emissions unit's potential to emit determined by multiplying the maximum process rate as indicated in the permit application by an emission factor derived from stack testing of a similar emissions unit. If required the permittee shall demonstrate compliance by testing in accordance with Method 18, Method 25 and/or Method 25 of 40 CFR Part 60, Appendix A.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- c. Emission Limitation: 1.67 lbs NO_x/hr, 7.32 tons NO_x/yr

Applicable Compliance Method: The hourly emission limitation represents the emissions unit's potential to emit determined by multiplying the maximum process rate as indicated in the permit application by an emission factor derived from stack testing of a similar emissions unit. If required the permittee shall demonstrate compliance by testing in accordance with Method 7 of 40 CFR Part 60, Appendix A.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- d. Emission Limitation: 2.22 lbs CO/hr, 9.72 tons CO/yr

Applicable Compliance Method: The hourly emission limitation represents the emissions unit's potential to emit determined by multiplying the maximum process rate as indicated in the permit application by an emission factor derived from stack testing of a similar emissions unit. If required the permittee shall demonstrate compliance by testing in accordance with Method 10 of 40 CFR Part 60, Appendix A.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- e. Emission Limitation: 20% opacity as a 6-minute average, except as provided by rule

Applicable Compliance Method: OAC rule 3745-17-03(B)(1)

VI. Miscellaneous Requirements

1. Prevention of Significant Deterioration (PSD)

- a. Emissions units P003, P040, P042, P043, P044, P048, P049, P050, P051, and P052, as described in this Permit to Install (PTI), is subject to the applicable provisions of the Prevention of Significant Deterioration (PSD) regulations as promulgated by the United States Environmental Protection Agency (U.S. EPA). The authority to apply and enforce the PSD regulations has been delegated to the Ohio EPA.

In accordance with 40 CFR 124.15, 124.19, and 124.20 the following shall apply:

- i. The effective date of the permit shall be 30 days after the service of notice to any public commentors the final decision to issue, modify or revoke and re-issue the permit, unless the service of notice is by mail, in which case the effective date of the permit shall be 33 days after the service notice; and

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Emissions Unit ID: P043

- ii. If an appeal is made to the Environmental Appeals Board of the U.S. EPA, the effective date of the permit is suspended until such time as the appeal is resolved or denied.

Appeals will be addressed to:

United State Environmental Protection Agency
Environmental Appeals Board
401 M Street, SW (MC-113do)
Washington, DC 21460

Johns Manville International Inc.
PTI Application: 03-13522
Issued: To be entered upon final issuance

Facility ID: 0320010004
Emissions Unit ID: P043

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|---|--------------------------------------|--|
| P043 - Line #37 Product Curing Unit (Increase in production due to increase from emissions unit P042) | | See B.III. |

2. **Additional Terms and Conditions**

- 2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install for this permit action as evaluated based on the actual materials (binder resin) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). This analysis is based upon the combined modeling of "all" air emission sources emitting air toxics that are contained in this PTI. The following summarizes the results of the modeling for the "worst case" pollutant(s) for all sources combined:
 - a. Pollutant: formaldehyde
 TLV (mg/m3): 0.271
 Maximum Hourly Emission Rate (lbs/hr): 3.37
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 5.85
 MAGLC (ug/m3): 6.45
2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
 - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
3. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.
4. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|--|---|---|
| P044 - Line #37 Product Finishing Unit (Increase in production due to increase from emissions unit P042) | 40 <u>CFR</u> Part 52.21 OAC rule 3745-31-10 through 20 OAC rule 3745-31-05(A)(3) OAC rule 3745-17-11(B) OAC rule 3745-17-07(A) | control requirements (see A.I.2.a) The requirements of this rule also include compliance with the requirements of 40 <u>CFR</u> Part 52.21, OAC rule 3745-31-10 through 20 and OAC rule 3745-17-07(A). 0.86 lb particulate emissions (PE)/hr, 3.77 tons PE/yr (see A.I.2.b) The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). Visible PE from the stack servicing this emissions unit shall not exceed 20% opacity as a 6-minute average except as provided by rule. |

2. Additional Terms and Conditions

- 2.a The permittee shall employ best available control technology (BACT) on this emissions unit. BACT has been determined to be the use of a control system consisting of baghouse(s) and cyclone(s) connected in series. The control system shall achieve a mass outlet rate of 0.86 lb PE/hr (This mass outlet rate is consistent with a 99% removal efficiency).
- 2.b All PE is assumed to be PM₁₀.

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Issued: To be entered upon final issuance

Facility ID: 0320010004
Emissions Unit ID: P044

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range 0.5 to 12 inches of water while the emission unit is in operation.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a once per shift basis.

IV. Reporting Requirements

1. The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

V. Testing Requirements

1. Emissions Testing: The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. the emissions testing shall be conducted within 6 months after modification of this emissions.
 - b. The emissions testing shall be conducted to demonstrate compliance with the mass allowable emission rate of 0.86 lb PE/hr.
 - c. The following test method shall be employed to demonstrate compliance with the requirements specified in A.V.2.b: for PE, Method 5 as specified in 40 CFR Part 60, Appendix A.
 - d. The test shall be conducted while the emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the Director or appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements: Compliance with the emission limitations in section A.I of the terms and conditions of this permit shall be determined in accordance with the following methods:

- a. Emission Limitation: 0.86 lb PE/hr, 3.77 tons PE/yr

Applicable Compliance Method: Compliance with the lb/hr limitation shall be determined through testing required in section A.V.1 of the terms and conditions of the permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- b. Emission Limitation: 20% opacity as a 6-minute average, except as provided by rule

Applicable Compliance Method: OAC rule 3745-17-03(B)(1)

VI. Miscellaneous Requirements

1. Prevention of Significant Deterioration (PSD)

- a. Emissions units P003, P040, P042, P043, P044, P048, P049, P050, P051, and P052, as described in this Permit to Install (PTI), is subject to the applicable provisions of the Prevention of Significant Deterioration (PSD) regulations as promulgated by the United States Environmental Protection Agency (U.S. EPA). The authority to apply and enforce the PSD regulations has been delegated to the Ohio EPA.

In accordance with 40 CFR 124.15, 124.19, and 124.20 the following shall apply:

- i. The effective date of the permit shall be 30 days after the service of notice to any public commentors the final decision to issue, modify or revoke and re-issue the permit, unless the service of notice is by mail, in which case the effective date of the permit shall be 33 days after the service notice; and
- ii. If an appeal is made to the Environmental Appeals Board of the U.S. EPA, the effective date of the permit is suspended until such time as the appeal is resolved or denied.

Appeals will be addressed to:

United State Environmental Protection Agency
Environmental Appeals Board
401 M Street, SW (MC-113do)
Washington, DC 21460

Johns Manville International Inc.

PTI Application: 03-13522

Issued: To be entered upon final issuance

Facility ID: 0320010004

Emissions Unit ID: P044

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|--|--------------------------------------|--|
| P044 - Line #37 Product Finishing Unit (Increase in production due to increase from emissions unit P042) | | |

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|---|--------------------------------------|---|
| P048 - Handwrap Product Finishing Unit #36/#38 (Modification to increase emissions due to semi-automation of emissions units P003 & P040) | 40 <u>CFR</u> Part 52.21 | control requirements (see A.I.2.a) |
| | OAC rule 3745-31-10 through 20 | |
| | OAC rule 3745-31-05(A)(3) | The requirements of this rule also include compliance with the requirements of 40 <u>CFR</u> Part 52.21, OAC rule 3745-31-10 through 20 and OAC rule 3745-17-07(A). 0.43 lb particulate emissions (PE)/hr, 1.88 tons PE/year (see A.I.2.b) |
| | OAC rule 3745-17-11(B) | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| | OAC rule 3745-17-07(A) | Visible PE from the stack servicing this emissions unit shall not exceed 20% opacity as a 6-minute average except as provided by rule. |

2. Additional Terms and Conditions

- 2.a The permittee shall employ best available control technology (BACT) on this emissions unit. BACT has been determined to be the use of a control system consisting of baghouse(s) and cyclone(s) connected in series. The control system shall achieve a mass outlet rate of 0.43 lb PE/hr (This mass outlet rate is consistent with a 99% removal efficiency).
- 2.b All PE is assumed to be PM₁₀.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range 0.5-12.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a once per shift basis.

IV. Reporting Requirements

1. The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

V. Testing Requirements

1. Emissions Testing: The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. the emissions testing shall be conducted within 6 months after modification of this emissions.
 - b. The emissions testing shall be conducted to demonstrate compliance with the mass allowable emission rate of 0.43 lb PE/hr.
 - c. The following test method shall be employed to demonstrate compliance with the requirements specified in A.V.2.b: for PE, Method 5 as specified in 40 CFR Part 60, Appendix A.
 - d. The test shall be conducted while the emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the Director or appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request

additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements: Compliance with the emission limitations in section A.I of the terms and conditions of this permit shall be determined in accordance with the following methods:

- a. Emission Limitation: 0.43 lb PE/hr, 1.88 tons PE/yr

Applicable Compliance Method: Compliance with the lb/hr limitation shall be determined through testing required in section A.V.1 of the terms and conditions of the permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- b. Emission Limitation: 20% opacity as a 6-minute average, except as provided by rule

Applicable Compliance Method: OAC rule 3745-17-03(B)(1)

VI. Miscellaneous Requirements

1. Prevention of Significant Deterioration (PSD)

- a. Emissions units P003, P040, P042, P043, P044, P048, P049, P050, P051, and P052, as described in this Permit to Install (PTI), is subject to the applicable provisions of the Prevention of Significant Deterioration (PSD) regulations as promulgated by the United States Environmental Protection Agency (U.S. EPA). The authority to apply and enforce the PSD regulations has been delegated to the Ohio EPA.

In accordance with 40 CFR 124.15, 124.19, and 124.20 the following shall apply:

- i. The effective date of the permit shall be 30 days after the service of notice to any public commentors the final decision to issue, modify or revoke and re-issue the permit, unless the service of notice is by mail, in which case the effective date of the permit shall be 33 days after the service notice; and
- ii. If an appeal is made to the Environmental Appeals Board of the U.S. EPA, the effective date of the permit is suspended until such time as the appeal is resolved or denied.

Appeals will be addressed to:

United State Environmental Protection Agency
Environmental Appeals Board
401 M Street, SW (MC-113do)
Washington, DC 21460

Johns Manville International Inc.
PTI Application: 03-13522
Issued: To be entered upon final issuance

Facility ID: 0320010004
Emissions Unit ID: P048

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|---|--------------------------------------|--|
| P048 - Handwrap Product Finishing Unit #36/#38 (Modification to increase emissions due to semi-automation of emissions units P003 & P040) | | |

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|---|--|--|
| P049 - Line #30 Product Curing Unit | 40 <u>CFR</u> Part 52.21 OAC rule 3745-31-10 through 20 | See A.I.2.a |
| | 40 <u>CFR</u> Part 63 Subpart NNN OAC rule 3745-31-05(A)(3) | See A.I.2.b The requirements of this rule also include compliance with the requirements of 40 <u>CFR</u> Part 52.21, OAC rule 3745-31-10 through 20, 40 <u>CFR</u> Part 63 Subpart NNN and OAC rule 3745-17-07(A). 0.53 lb particulate emissions (PE)/hr, 2.30 tons PE/year (see A.I.2.c) 0.67 lb organic compounds (OC)/hr, 2.92 tons OC/year 0.25 lb nitrogen oxide (NOx)/hr, 1.1 tons NOx/year 1.06 lbs carbon monoxide (CO)/hr, 4.66 tons CO/year |
| | OAC rule 3745-21-07(G) | Exempt (see A.II.1). |
| | OAC rule 3745-17-11(B) | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| | OAC rule 3745-17-07(A) | Visible PE from the stack servicing this emissions unit shall not exceed 20% opacity as a 6-minute average except as provided by rule. |

2. Additional Terms and Conditions

- 2.a** Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that no control technologies for PE were cost effective.
- 2.b** The owner or operator subject to the provisions of this subpart shall demonstrate compliance with the requirements of this subpart by no later than June 14, 2002, for an existing wool fiberglass manufacturing line producing a bonded pipe product.
- 2.c** All PE is assumed to be PM₁₀.

II. Operational Restrictions

- 1. The use of photochemically reactive materials, as defined in OAC rule 3745-21-01(C)(5), in this emissions unit is prohibited.

III. Monitoring and/or Recordkeeping Requirements

- 1. The permittee shall maintain records of the following information for this emissions unit:
 - a. the company identification for each liquid organic material employed in this emissions unit; and
 - b. documentation on whether or not each liquid organic material employed is a photochemically reactive material.
- 2. The permittee shall perform checks at least five (5) days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any abnormal visible emission incident; and
 - e. any corrective actions taken to eliminate the abnormal visible emissions.
- 3. Notwithstanding the frequency of reporting requirements specified in section IV. Reporting Requirements, the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly reading on this emissions unit if the following conditions are met:
 - a. for one full quarter this emissions unit visual observations indicate no abnormal visible emissions; and
 - b. the permittee continues to comply with all the recordkeeping and monitoring requirements specified in section III.

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PTI Application: 03-13522
Issued: To be entered upon final issuance

Facility ID: 0320010004
Emissions Unit ID: P049

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify each day during which a photochemically reactive material was employed. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.
2. The permittee shall submit semiannual written reports which (a) identify all days during which any abnormal visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the abnormal visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance Methods Requirements: Compliance with the emission limitations in section A.I of the terms and conditions of this permit shall be determined in accordance with the following methods:

- a. Emission Limitation: 0.53 lb PE/hr, 2.30 tons PE/yr

Applicable Compliance Method: The hourly emission limitation represents the emissions unit's potential to emit determined by multiplying the maximum process rate as indicated in the permit application by an emission factor derived from stack testing of a similar emissions unit. If required the permittee shall demonstrate compliance by testing in accordance with Method 5 of 40 CFR Part 60, Appendix A.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- b. Emission Limitation: 0.67 lb OC/hr, 2.92 tons OC/yr

Applicable Compliance Method: The hourly emission limitation represents the emissions unit's potential to emit determined by multiplying the maximum process rate as indicated in the permit application by an emission factor derived from stack testing of a similar emissions unit. If required the permittee shall demonstrate compliance by testing in accordance with Method 18, Method 25, and/or Method 25 of 40 CFR Part 60, Appendix A.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- c. Emission Limitation: 0.25 lb NO_x/hr, 1.1 tons NO_x/yr

Applicable Compliance Method: The hourly emission limitation represents the emissions unit's potential to emit determined by multiplying the maximum process rate as indicated in the permit application by an emission factor derived from stack testing of a similar emissions unit. If required the permittee shall demonstrate compliance by testing in accordance with Method 7 of 40 CFR Part 60, Appendix A.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- d. Emission Limitation: 1.06 lbs CO/hr, 4.66 tons CO/yr

Applicable Compliance Method: The hourly emission limitation represents the emissions unit's potential to emit determined by multiplying the maximum process rate as indicated in the permit application by an emission factor derived from stack testing of a similar emissions unit. If required the permittee shall demonstrate compliance by testing in accordance with Method 10 of 40 CFR Part 60, Appendix A.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- e. Emission Limitation: 20% opacity as a 6-minute average, except as provided by rule

Applicable Compliance Method: OAC rule 3745-17-03(B)(1)

VI. Miscellaneous Requirements

1. Prevention of Significant Deterioration (PSD)

- a. Emissions units P003, P040, P042, P043, P044, P048, P049, P050, P051, and P052, as described in this Permit to Install (PTI), is subject to the applicable provisions of the Prevention of Significant Deterioration (PSD) regulations as promulgated by the United States Environmental Protection Agency (U.S. EPA). The authority to apply and enforce the PSD regulations has been delegated to the Ohio EPA.

In accordance with 40 CFR 124.15, 124.19, and 124.20 the following shall apply:

- i. The effective date of the permit shall be 30 days after the service of notice to any public commentors the final decision to issue, modify or revoke and re-issue the permit, unless the service of notice is by mail, in which case the effective date of the permit shall be 33 days after the service notice; and
- ii. If an appeal is made to the Environmental Appeals Board of the U.S. EPA, the effective date of the permit is suspended until such time as the appeal is resolved or denied.

Appeals will be addressed to:

United State Environmental Protection Agency
Environmental Appeals Board
401 M Street, SW (MC-113do)
Washington, DC 21460

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|---|--------------------------------------|--|
| P049 - Line #30 Product Curing Unit | | See B.III. |

2. **Additional Terms and Conditions**

- 2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install for this permit action as evaluated based on the actual materials (binder resin) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). This analysis is based upon the combined modeling of "all" air emission sources emitting air toxics that are contained in this PTI. The following summarizes the results of the modeling for the "worst case" pollutant(s) for all sources combined:
 - a. Pollutant: formaldehyde
 TLV (mg/m3): 0.271
 Maximum Hourly Emission Rate (lbs/hr): 3.37
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 5.85
 MAGLC (ug/m3): 6.45
2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
 - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
3. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.
4. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|---|---|---|
| P050 - Line #30 Product Finishing Unit | 40 <u>CFR</u> Part 52.21 OAC rule 3745-31-10 through 20 OAC rule 3745-31-05(A)(3) OAC rule 3745-17-11(B) OAC rule 3745-17-07(A) | control requirements (see A.I.2.a) The requirements of this rule also include compliance with the requirements of 40 <u>CFR</u> Part 52.21, OAC rule 3745-31-10 through 20 and OAC rule 3745-17-07(A). 0.86 lb particulate emissions (PE)/hr, 3.77 tons PE/yr (see A.I.2.b) The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). Visible PE from the stack servicing this emissions unit shall not exceed 20% opacity as a 6-minute average except as provided by rule. |

2. Additional Terms and Conditions

- 2.a The permittee shall employ best available control technology (BACT) on this emissions unit. BACT has been determined to be the use of a control system consisting of baghouse(s) and cyclone(s) connected in series. The control system shall achieve a mass outlet rate of 0.86 lb PE/hr (This mass outlet rate is consistent with a 99% removal efficiency).
- 2.b All PE is assumed to be PM₁₀.

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Facility ID: 0320010004
Emissions Unit ID: P050

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 0.5-12.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a once per shift basis.

IV. Reporting Requirements

1. The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

V. Testing Requirements

1. Emissions Testing: The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. the emissions testing shall be conducted within 6 months after modification of this emissions.
 - b. The emissions testing shall be conducted to demonstrate compliance with the mass allowable emission rate of 0.86 lb PE/hr.
 - c. The following test method shall be employed to demonstrate compliance with the requirements specified in A.V.2.b: for PE, Method 5 as specified in 40 CFR Part 60, Appendix A.
 - d. The test shall be conducted while the emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the Director or appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements: Compliance with the emission limitations in section A.I of the terms and conditions of this permit shall be determined in accordance with the following methods:

- a. Emission Limitation: 0.86 lb PE/hr, 3.77 tons PE/yr

Applicable Compliance Method: Compliance with the lb/hr limitation shall be determined through testing required in section A.V.1 of the terms and conditions of the permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- b. Emission Limitation: 20% opacity as a 6-minute average, except as provided by rule

Applicable Compliance Method: OAC rule 3745-17-03(B)(1)

VI. Miscellaneous Requirements

1. Prevention of Significant Deterioration (PSD)

- a. Emissions units P003, P040, P042, P043, P044, P048, P049, P050, P051, and P052, as described in this Permit to Install (PTI), is subject to the applicable provisions of the Prevention of Significant Deterioration (PSD) regulations as promulgated by the United States Environmental Protection Agency (U.S. EPA). The authority to apply and enforce the PSD regulations has been delegated to the Ohio EPA.

In accordance with 40 CFR 124.15, 124.19, and 124.20 the following shall apply:

- i. The effective date of the permit shall be 30 days after the service of notice to any public commentors the final decision to issue, modify or revoke and re-issue the permit, unless the service of notice is by mail, in which case the effective date of the permit shall be 33 days after the service notice; and
- ii. If an appeal is made to the Environmental Appeals Board of the U.S. EPA, the effective date of the permit is suspended until such time as the appeal is resolved or denied.

Appeals will be addressed to:

United State Environmental Protection Agency
Environmental Appeals Board
401 M Street, SW (MC-113do)
Washington, DC 21460

Johns Manville International Inc.
PTI Application: 03-13522
Issued: To be entered upon final issuance

Facility ID: 0320010004
Emissions Unit ID: P050

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|---|--------------------------------------|--|
| P050 - Line #30 Product Finishing Unit | | |

2. Additional Terms and Conditions

- 2.a None.

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|---|--|---|
| P051 - Line #38 Product Curing Unit | 40 <u>CFR</u> Part 52.21 OAC rule 3745-31-10 through 20 | See A.I.2.a |
| | 40 <u>CFR</u> Part 63 Subpart NNN OAC rule 3745-31-05(A)(3) | See A.I.2.b The requirements of this rule also include compliance with the requirements of 40 <u>CFR</u> Part 52.21, OAC rule 3745-31-10 through 20, OAC rule 3745-17-07(A) and 40 <u>CFR</u> Part 63 Subpart NNN. 2.02 lbs particulate emissions (PE)/hr, 8.84 tons PE/year (see A.I.2.c) 2.56 lb organic compounds (OC)/hr, 11.21 tons OC/year 0.97 lb nitrogen oxide (NO _x)/hr, 4.25 tons NO _x /year 4.09 lbs carbon monoxide (CO)/hr, 17.92 tons CO/year 0.34 lb sulfur dioxide (SO ₂)/hr, 1.51 tons SO ₂ /yr |
| | OAC rule 3745-21-07(G) | Exempt (see A.II.1). |
| | OAC rule 3745-17-11(B) | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| | OAC rule 3745-17-07(A) | Visible PE from the stack servicing this emissions unit shall not exceed 20% opacity as a 6-minute average except as provided by rule. |

2. Additional Terms and Conditions

- 2.a** Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that no control technologies for PE were cost effective.
- 2.b** The owner or operator subject to the provisions of this subpart shall demonstrate compliance with the requirements of this subpart by no later than June 14, 2002, for an existing wool fiberglass manufacturing line producing a bonded pipe product.
- 2.c** All PE is assumed to be PM₁₀.

II. Operational Restrictions

- 1. The use of photochemically reactive materials, as defined in OAC rule 3745-21-01(C)(5), in this emissions unit is prohibited.

III. Monitoring and/or Recordkeeping Requirements

- 1. The permittee shall maintain records of the following information for this emissions unit:
 - a. the company identification for each liquid organic material employed in this emissions unit; and
 - b. documentation on whether or not each liquid organic material employed is a photochemically reactive material.
- 2. The permittee shall perform checks at least five (5) days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any abnormal visible emission incident; and
 - e. any corrective actions taken to eliminate the abnormal visible emissions.
- 3. Notwithstanding the frequency of reporting requirements specified in section IV. Reporting Requirements, the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly reading on this emissions unit if the following conditions are met:
 - a. for one full quarter this emissions unit visual observations indicate no abnormal visible emissions; and
 - b. the permittee continues to comply with all the recordkeeping and monitoring requirements specified in section III.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify each day during which a photochemically reactive material was employed. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.
2. The permittee shall submit semiannual written reports which (a) identify all days during which any abnormal visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the abnormal visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance Methods Requirements: Compliance with the emission limitations in section A.I of the terms and conditions of this permit shall be determined in accordance with the following methods:

- a. Emission Limitation: 2.02 lb PE/hr, 8.84 tons PE/yr

Applicable Compliance Method: The hourly emission limitation represents the emissions unit's potential to emit determined by multiplying the maximum process rate as indicated in the permit application by an emission factor derived from stack testing of a similar emissions unit. If required the permittee shall demonstrate compliance by testing in accordance with Method 5 of 40 CFR Part 60, Appendix A.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- b. Emission Limitation: 2.56 lbs OC/hr, 11.21 tons OC/yr

Applicable Compliance Method: The hourly emission limitation represents the emissions unit's potential to emit determined by multiplying the maximum process rate as indicated in the permit application by an emission factor derived from stack testing of a similar emissions unit. If required the permittee shall demonstrate compliance by testing in accordance with Method 18, Method 25 and/or Method 25A of 40 CFR Part 60, Appendix A.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- c. Emission Limitation: 0.97 lb NO_x/hr, 4.25 tons NO_x/yr

Applicable Compliance Method: The hourly emission limitation represents the emissions unit's potential to emit determined by multiplying the maximum process rate as indicated in the permit application by an emission factor derived from stack testing of a similar emissions unit. If required the permittee shall demonstrate compliance by testing in accordance with Method 7 of 40 CFR Part 60, Appendix A.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- d. Emission Limitation: 4.09 lbs CO/hr, 17.92 tons CO/yr

Applicable Compliance Method: The hourly emission limitation represents the emissions unit's potential to emit determined by multiplying the maximum process rate as indicated in the permit application by an emission factor derived from stack testing of a similar emissions unit. If required the permittee shall demonstrate compliance by testing in accordance with Method 10 of 40 CFR Part 60, Appendix A.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- e. Emission Limitation: 0.34 lb SO₂/hr, 1.51 tons SO₂/yr

Applicable Compliance Method: The hourly emission limitation represents the emissions unit's potential to emit determined by multiplying the maximum process rate as indicated in the permit application by an emission factor derived from stack testing of a similar emissions unit. If required the permittee shall demonstrate compliance by testing in accordance with Method 6 of 40 CFR Part 60, Appendix A.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- f. Emission Limitation: 20% opacity as a 6-minute average, except as provided by rule

Applicable Compliance Method: OAC rule 3745-17-03(B)(1)

VI. Miscellaneous Requirements

1. Prevention of Significant Deterioration (PSD)

- a. Emissions units P003, P040, P042, P043, P044, P048, P049, P050, P051, and P052, as described in this Permit to Install (PTI), is subject to the applicable provisions of the Prevention of Significant Deterioration (PSD) regulations as promulgated by the United States Environmental Protection Agency (U.S. EPA). The authority to apply and enforce the PSD regulations has been delegated to the Ohio EPA.

In accordance with 40 CFR 124.15, 124.19, and 124.20 the following shall apply:

- i. The effective date of the permit shall be 30 days after the service of notice to any public commentors the final decision to issue, modify or revoke and re-issue the permit, unless the service of notice is by mail, in which case the effective date of the permit shall be 33 days after the service notice; and

Johns Manville International Inc.

PTI Application: 03-13522

Issued: To be entered upon final issuance

Facility ID: 0320010004

Emissions Unit ID: P051

- ii. If an appeal is made to the Environmental Appeals Board of the U.S. EPA, the effective date of the permit is suspended until such time as the appeal is resolved or denied.

Appeals will be addressed to:

United State Environmental Protection Agency
Environmental Appeals Board
401 M Street, SW (MC-113do)
Washington, DC 21460

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|---|--------------------------------------|--|
| P051 - Line #38 Product Curing Unit | | See B.III. |

2. **Additional Terms and Conditions**

- 2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install for this permit action as evaluated based on the actual materials (binder resin) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). This analysis is based upon the combined modeling of "all" air emission sources emitting air toxics that are contained in this PTI. The following summarizes the results of the modeling for the "worst case" pollutant(s) for all sources combined:
 - a. Pollutant: formaldehyde
 TLV (mg/m3): 0.271
 Maximum Hourly Emission Rate (lbs/hr): 3.37
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 5.85
 MAGLC (ug/m3): 6.45
2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
 - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
3. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.
4. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|---|---|--|
| P052 - Line #38 Product Finishing Unit | 40 <u>CFR</u> Part 52.21 OAC rule 3745-31-10 through 20 OAC rule 3745-31-05(A)(3) OAC rule 3745-17-11(B) OAC rule 3745-17-07(A) | control requirements (see A.I.2.a) The requirements of this rule also include compliance with the requirements of 40 <u>CFR</u> Part 52.21, OAC rule 3745-31-10 through 20 and OAC rule 3745-17-07(A). 1.20 lbs particulate emissions (PE)/hr, 5.26 tons PE/yr The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). Visible PE from the stack servicing this emissions unit shall not exceed 20% opacity as a 6-minute average except as provided by rule. |

2. Additional Terms and Conditions

- 2.a The permittee shall employ best available control technology (BACT) on this emissions unit. BACT has been determined to be the use of a control system consisting of baghouse(s) and cyclone(s) connected in series. The control system shall achieve a mass outlet rate of 1.20 lbs PE/hr (This mass outlet rate is consistent with a 99% removal efficiency).
- 2.b All PE is assumed to be PM₁₀.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 0.5 to 12 inches of water while the emission unit is in operation.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a once per shift basis.

IV. Reporting Requirements

1. The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

V. Testing Requirements

1. Emissions Testing: The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. the emissions testing shall be conducted within 6 months after modification of this emissions.
 - b. The emissions testing shall be conducted to demonstrate compliance with the mass allowable emission rate of 1.20 lbs PE/hr
 - c. The following test method shall be employed to demonstrate compliance with the requirements specified in A.V.2.b: for PE, Method 5 as specified in 40 CFR Part 60, Appendix A.
 - d. The test shall be conducted while the emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the Director or appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid

characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements: Compliance with the emission limitations in section A.I of the terms and conditions of this permit shall be determined in accordance with the following methods:

- a. Emission Limitation: 1.20 lbs PE/hr, 5.26 tons PE/yr

Applicable Compliance Method: Compliance with the lb/hr limitation shall be determined through testing required in section A.V.1 of the terms and conditions of the permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- b. Emission Limitation: 20% opacity as a 6-minute average, except as provided by rule

Applicable Compliance Method: OAC rule 3745-17-03(B)(1)

VI. Miscellaneous Requirements

1. Prevention of Significant Deterioration (PSD)

- a. Emissions units P003, P040, P042, P043, P044, P048, P049, P050, P051, and P052, as described in this Permit to Install (PTI), is subject to the applicable provisions of the Prevention of Significant Deterioration (PSD) regulations as promulgated by the United States Environmental Protection Agency (U.S. EPA). The authority to apply and enforce the PSD regulations has been delegated to the Ohio EPA.

In accordance with 40 CFR 124.15, 124.19, and 124.20 the following shall apply:

- i. The effective date of the permit shall be 30 days after the service of notice to any public commentors the final decision to issue, modify or revoke and re-issue the permit, unless the service of notice is by mail, in which case the effective date of the permit shall be 33 days after the service notice; and
- ii. If an appeal is made to the Environmental Appeals Board of the U.S. EPA, the effective date of the permit is suspended until such time as the appeal is resolved or denied.

Johns Manville International Inc.

PTI Application: 03-13522

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Emissions Unit ID: P052

Appeals will be addressed to:

United State Environmental Protection Agency
Environmental Appeals Board
401 M Street, SW (MC-113do)
Washington, DC 21460

Johns Manville International Inc.
PTI Application: 03-13522
Issued: To be entered upon final issuance

Facility ID: 0320010004
Emissions Unit ID: P052

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|---|--------------------------------------|--|
| P052 - Line #38 Product Finishing Unit | | |

2. Additional Terms and Conditions

- 2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|--|--------------------------------------|---|
| P031 - Line #31 Product Finishing Unit (modification) modification involves lowering emission limitation | OAC rule 3745-31-05(A)(3) | The requirement of this rule also include compliance with the requirements of OAC rule 3745-17-07(A). control requirements (See A.I.2.a) |
| | OAC rule 3745-17-11(B) | 1.10 lbs particulate emissions (PE)/hr, 4.82 tons PE/yr (see A.I.2.b) The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| | OAC rule 3745-17-07(A) | Visible PE from the stack servicing this emissions unit shall not exceed 20% opacity as a 6-minute average except as provided by rule. |

2. **Additional Terms and Conditions**

- 2.a The BAT determination was made in accordance with OAC rule 3745-31-02(A)(2) from a request by the permittee to voluntarily lower allowable emissions of PE to federally enforceable limitations of 1.10 lbs per hour (this allowable emission limitation is consistent with a 99% removal efficiency) and 4.82 tons per year based on the use of a control system consisting of baghouse(s) and cyclone(s) connected in series.

The reduced PE limitations were applied to PSD modeling requirements to demonstrate that PSD significant impact levels were not triggered.

- 2.b All PE is assumed to be PM₁₀.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 0.5-12.0 inches of water while the emissions unit is in operation.

Johns Manville International Inc.
PTI Application: 03-13522
Issued: To be entered upon final issuance

Facility ID: 0320010004
Emissions Unit ID: P031

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a once per shift basis.

IV. Reporting Requirements

1. The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

V. Testing Requirements

1. Emissions Testing: The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. the emissions testing shall be conducted within 6 months after operation under the provisions of this permit.
 - b. The emissions testing shall be conducted to demonstrate compliance with the mass allowable emission rate of 1.10 lb PE/hr.
 - c. The following test method shall be employed to demonstrate compliance with the requirements specified in A.V.2.b: for PE, Method 5 as specified in 40 CFR Part 60, Appendix A.
 - d. The test shall be conducted while the emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the Director or appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request

additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements: Compliance with the emission limitations in section A.I of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitation: 1.10 lbs PE/hr, 4.82 tons PE/yr

Applicable Compliance Method: Compliance with the lb/hr limitation shall be determined through testing required in section A.V.1 of the terms and conditions of the permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

b. Emission Limitation: 20% opacity as a 6-minute average, except as provided by rule

Applicable Compliance Method: OAC rule 3745-17-03(B)(1)

VI. Miscellaneous Requirements

None

Johns Manville International Inc.
PTI Application: 03-13522
Issued: To be entered upon final issuance

Facility ID: 0320010004
Emissions Unit ID: P031

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|--|--------------------------------------|--|
| P031 - Line #31 Product Finishing Unit (modification) modification involves lowering emission limitation | | |

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|--|--------------------------------------|---|
| P032 - Line #32 Product Finishing Unit (modification) modification involves lowering emission limitation | OAC rule 3745-31-05(A)(3) | The requirement of this rule also include compliance with the requirements of OAC rule 3745-17-07(A). control requirements (See A.I.2.a) |
| | OAC rule 3745-17-11(B) | 1.10 lbs particulate emissions (PE)/hr, 4.82 tons PE/yr (see A.I.2.b) The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| | OAC rule 3745-17-07(A) | Visible PE from the stack servicing this emissions unit shall not exceed 20% opacity as a 6-minute average except as provided by rule. |

2. **Additional Terms and Conditions**

- 2.a The BAT determination was made in accordance with OAC rule 3745-31-02(A)(2) from a request by the permittee to voluntarily lower allowable emissions of PE to federally enforceable limitations of 1.10 lbs per hour (this allowable emission limitation is consistent with a 99% removal efficiency) and 4.82 tons per year based on the use of a control system consisting of baghouse(s) and cyclone(s) connected in series.

The reduced PE limitations were applied to PSD modeling requirements to demonstrate that PSD significant impact levels were not triggered.

- 2.b All PE is assumed to be PM₁₀.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 0.5-12.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a once per shift basis.

IV. Reporting Requirements

1. The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

V. Testing Requirements

1. Emissions Testing: The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. the emissions testing shall be conducted within 6 months after operation under the provisions of this permit.
 - b. The emissions testing shall be conducted to demonstrate compliance with the mass allowable emission rate of 1.10 lb PE/hr
 - c. The following test method shall be employed to demonstrate compliance with the requirements specified in A.V.2.b: for PE, Method 5 as specified in 40 CFR Part 60, Appendix A.
 - d. The test shall be conducted while the emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the Director or appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request

additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements: Compliance with the emission limitations in section A.I of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitation: 1.10 lbs PE/hr, 4.82 tons PE/yr

Applicable Compliance Method: Compliance with the lb/hr limitation shall be determined through testing required in section A.V.1 of the terms and conditions of the permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

b. Emission Limitation: 20% opacity as a 6-minute average, except as provided by rule

Applicable Compliance Method: OAC rule 3745-17-03(B)(1)

VI. Miscellaneous Requirements

None

Johns Manville International Inc.

PTI Application: 03-13522

Issued: To be entered upon final issuance

Facility ID: 0320010004

Emissions Unit ID: P032

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|--|--------------------------------------|--|
| P032 - Line #32 Product Finishing Unit (modification) modification involves lowering emission limitation | | |

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|--|--------------------------------------|---|
| P033 - Line #33 Product Finishing Unit (modification) modification involves lowering emission limitation | OAC rule 3745-31-05(A)(3) | The requirement of this rule also include compliance with the requirements of OAC rule 3745-17-07(A). control requirements (See A.I.2.a) |
| | OAC rule 3745-17-11(B) | 1.10 lbs particulate emissions (PE)/hr, 4.82 tons PE/yr (see A.I.2.b) The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| | OAC rule 3745-17-07(A) | Visible PE from the stack servicing this emissions unit shall not exceed 20% opacity as a 6-minute average except as provided by rule. |

2. **Additional Terms and Conditions**

- 2.a The BAT determination was made in accordance with OAC rule 3745-31-02(A)(2) from a request by the permittee to voluntarily lower allowable emissions of PE to federally enforceable limitations of 1.10 lbs per hour (this allowable emission limitation is consistent with a 99% removal efficiency) and 4.82 tons per year based on the use of a control system consisting of baghouse(s) and cyclone(s) connected in series.

The reduced PE limitations were applied to PSD modeling requirements to demonstrate that PSD significant impact levels were not triggered.

- 2.b All PE is assumed to be PM₁₀.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 0.5-12.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a once per shift basis.

IV. Reporting Requirements

1. The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

V. Testing Requirements

1. Emissions Testing: The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. the emissions testing shall be conducted within 6 months after operation under the provisions of this permit.
 - b. The emissions testing shall be conducted to demonstrate compliance with the mass allowable emission rate of 1.10 lb PE/hr.
 - c. The following test method shall be employed to demonstrate compliance with the requirements specified in A.V.2.b: for PE, Method 5 as specified in 40 CFR Part 60, Appendix A.
 - d. The test shall be conducted while the emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the Director or appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request

additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements: Compliance with the emission limitations in section A.I of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitation: 1.10 lbs PE/hr, 4.82 tons PE/yr

Applicable Compliance Method: Compliance with the lb/hr limitation shall be determined through testing required in section A.V.1 of the terms and conditions of the permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

b. Emission Limitation: 20% opacity as a 6-minute average, except as provided by rule

Applicable Compliance Method: OAC rule 3745-17-03(B)(1)

VI. Miscellaneous Requirements

None

Johns Manville International Inc.
PTI Application: 03-13522
Issued: To be entered upon final issuance

Facility ID: 0320010004
Emissions Unit ID: P033

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|--|--------------------------------------|--|
| P033 - Line #33 Product Finishing Unit (modification) modification involves lowering emission limitation | | |

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|--|--------------------------------------|---|
| P034 - Line #34 Product Finishing Unit (modification) modification involves lowering emission limitation | OAC rule 3745-31-05(A)(3) | The requirement of this rule also include compliance with the requirements of OAC rule 3745-17-07(A). control requirements (See A.I.2.a) |
| | OAC rule 3745-17-11(B) | 1.10 lbs particulate emissions (PE)/hr, 4.82 tons PE/yr (see A.I.2.b) The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| | OAC rule 3745-17-07(A) | Visible PE from the stack servicing this emissions unit shall not exceed 20% opacity as a 6-minute average except as provided by rule. |

2. **Additional Terms and Conditions**

- 2.a The BAT determination was made in accordance with OAC rule 3745-31-02(A)(2) from a request by the permittee to voluntarily lower allowable emissions of PE to federally enforceable limitations of 1.10 lbs per hour (this allowable emission limitation is consistent with a 99% removal efficiency) and 4.82 tons per year based on the use of a control system consisting of baghouse(s) and cyclone(s) connected in series.

The reduced PE limitations were applied to PSD modeling requirements to demonstrate that PSD significant impact levels were not triggered.

- 2.b All PE is assumed to be PM₁₀.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 0.5-12.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a once per shift basis.

IV. Reporting Requirements

1. The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

V. Testing Requirements

1. Emissions Testing: The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. the emissions testing shall be conducted within 6 months after operation under the provisions of this permit.
 - b. The emissions testing shall be conducted to demonstrate compliance with the mass allowable emission rate of 1.10 lb PE/hr.
 - c. The following test method shall be employed to demonstrate compliance with the requirements specified in A.V.2.b: for PE, Method 5 as specified in 40 CFR Part 60, Appendix A.
 - d. The test shall be conducted while the emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the Director or appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request

additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements: Compliance with the emission limitations in section A.I of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitation: 1.10 lbs PE/hr, 4.82 tons PE/yr

Applicable Compliance Method: Compliance with the lb/hr limitation shall be determined through testing required in section A.V.1 of the terms and conditions of the permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

b. Emission Limitation: 20% opacity as a 6-minute average, except as provided by rule

Applicable Compliance Method: OAC rule 3745-17-03(B)(1)

VI. Miscellaneous Requirements

None

Johns Manville International Inc.
PTI Application: 03-13522
Issued: To be entered upon final issuance

Facility ID: 0320010004
Emissions Unit ID: P034

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|--|--------------------------------------|--|
| P034 - Line #34 Product Finishing Unit (modification) modification involves lowering emission limitation | | |

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|--|--------------------------------------|--|
| P035 - Line #35 Product Finishing Unit (modification) modification involves lowering emission limitation | OAC rule 3745-31-05(A)(3) | The requirement of this rule also include compliance with the requirements of OAC rule 3745-17-07(A). control requirements (See A.I.2.a) 1.20 lbs particulate emissions (PE)/hr, 5.26 tons PE/yr (see A.I.2.b) |
| | OAC rule 3745-17-11(B) | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| | OAC rule 3745-17-07(A) | Visible PE from the stack servicing this emissions unit shall not exceed 20% opacity as a 6-minute average except as provided by rule. |

2. **Additional Terms and Conditions**

- 2.a The BAT determination was made in accordance with OAC rule 3745-31-02(A)(2) from a request by the permittee to voluntarily lower allowable emissions of PE to federally enforceable limitations of 1.20 lbs per hour (this allowable emission limitation is consistent with a 99% removal efficiency) and 5.26 tons per year based on the use of a control system consisting of baghouse(s) and cyclone(s) connected in series.

The reduced PE limitations were applied to PSD modeling requirements to demonstrate that PSD significant impact levels were not triggered.

- 2.b All PE is assumed to be PM₁₀.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 0.5-12.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a once per shift basis.

IV. Reporting Requirements

1. The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

V. Testing Requirements

1. Emissions Testing: The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. the emissions testing shall be conducted within 6 months after operation under the provisions of this permit.
 - b. The emissions testing shall be conducted to demonstrate compliance with the mass allowable emission rate of 1.20 lbs PE/hr.
 - c. The following test method shall be employed to demonstrate compliance with the requirements specified in A.V.2.b: for PE, Method 5 as specified in 40 CFR Part 60, Appendix A.
 - d. The test shall be conducted while the emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the Director or appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request

additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements: Compliance with the emission limitations in section A.I of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitation: 1.20 lbs PE/hr, 5.26 tons PE/yr

Applicable Compliance Method: Compliance with the lb/hr limitation shall be determined through testing required in section A.V.1 of the terms and conditions of the permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

b. Emission Limitation: 20% opacity as a 6-minute average, except as provided by rule

Applicable Compliance Method: OAC rule 3745-17-03(B)(1)

VI. Miscellaneous Requirements

None

Johns Manville International Inc.
PTI Application: 03-13522
Issued: To be entered upon final issuance

Facility ID: 0320010004
Emissions Unit ID: P035

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|--|--------------------------------------|--|
| P035 - Line #35 Product Finishing Unit (modification) modification involves lowering emission limitation | | |

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|--|--------------------------------------|--|
| P036 - Line #36 Product Finishing Unit (modification) modification involves lowering emission limitation | OAC rule 3745-31-05(A)(3) | The requirement of this rule also include compliance with the requirements of OAC rule 3745-17-07(A). control requirements (See A.I.2.a) 1.40 lbs particulate emissions (PE)/hr, 6.13 tons PE/yr (see A.I.2.b) |
| | OAC rule 3745-17-11(B) | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| | OAC rule 3745-17-07(A) | Visible PE from the stack servicing this emissions unit shall not exceed 20% opacity as a 6-minute average except as provided by rule. |

2. **Additional Terms and Conditions**

- 2.a The BAT determination was made in accordance with OAC rule 3745-31-02(A)(2) from a request by the permittee to voluntarily lower allowable emissions of PE to federally enforceable limitations of 1.40 lbs per hour (this allowable emission limitation is consistent with a 99% removal efficiency) and 6.13 tons per year based on the use of a control system consisting of baghouse(s) and cyclone(s) connected in series.

The reduced PE limitations were applied to PSD modeling requirements to demonstrate that PSD significant impact levels were not triggered.

- 2.b All PE is assumed to be PM₁₀.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 0.5-12.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a once per shift basis.

IV. Reporting Requirements

1. The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

V. Testing Requirements

1. Emissions Testing: The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. the emissions testing shall be conducted within 6 months after operation under the provisions of this permit.
 - b. The emissions testing shall be conducted to demonstrate compliance with the mass allowable emission rate of 1.40 lbs PE/hr.
 - c. The following test method shall be employed to demonstrate compliance with the requirements specified in A.V.2.b: for PE, Method 5 as specified in 40 CFR Part 60, Appendix A.
 - d. The test shall be conducted while the emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the Director or appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request

Johns Manville International Inc.

PTI Application: 03-13522

Issued: To be entered upon final issuance

Facility ID: 0320010004

Emissions Unit ID: P036

additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

2. Compliance Methods Requirements: Compliance with the emission limitations in section A.I of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitation: 1.40 lbs PE/hr, 6.13 tons PE/yr

Applicable Compliance Method: Compliance with the lb/hr limitation shall be determined through testing required in section A.V.1 of the terms and conditions of the permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

b. Emission Limitation: 20% opacity as a 6-minute average, except as provided by rule

Applicable Compliance Method: OAC rule 3745-17-03(B)(1)

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|--|--------------------------------------|--|
| P036 - Line #36 Product Finishing Unit (modification) modification involves lowering emission limitation | | |

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

SIC CODE 3296 SCC CODE 3-05-017-99 EMISSIONS UNIT ID P003

EMISSIONS UNIT DESCRIPTION Handwrap Product Curing Unit #36

DATE INSTALLED 3/01/01

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

| Pollutants | Air Quality Description | Actual Emissions Rate | | PTI Allowable | |
|--------------------|-------------------------|-----------------------|---------------|-----------------|---------------|
| | | Short Term Rate | Tons Per Year | Short Term Rate | Tons Per Year |
| Particulate Matter | | | | | |
| PM ₁₀ | attainment | 0.11 | 0.47 | 0.84 | 3.68 |
| Sulfur Dioxide | attainment | 0.01 | 0.06 | | |
| Organic Compounds | attainment | 0.13 | 0.55 | 0.98 | 4.31 |
| Nitrogen Oxides | attainment | 0.06 | 0.23 | 0.41 | 1.81 |
| Carbon Monoxide | attainment | 0.06 | 0.23 | 0.41 | 1.79 |
| Lead | | | | | |
| Other: Air Toxics | | | | | |

APPLICABLE FEDERAL RULES:

NSPS? _____ NESHAP? _____ PSD? **Y** _____ OFFSET POLICY? _____

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ _____

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? NNN YES _____ NO _____

IDENTIFY THE AIR CONTAMINANTS: formaldehyde

NEW SOURCE REVIEW FORM B

PTI Number: 03-13522

Facility ID: 0320010004

FACILITY NAME Johns Manville International Inc.

FACILITY DESCRIPTION Increase of pipe insulation manufacturing capacity. Which includes modification of four existing lines and addition of two lines. CITY/TWP Defiance

SIC CODE 3296 SCC CODE 3-05-017-99 EMISSIONS UNIT ID P040

EMISSIONS UNIT DESCRIPTION Handwrap Product Curing Unit #38

DATE INSTALLED 3/01/01

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

| Pollutants | Air Quality Description | Actual Emissions Rate | | PTI Allowable | |
|--------------------|-------------------------|-----------------------|---------------|-----------------|---------------|
| | | Short Term Rate | Tons Per Year | Short Term Rate | Tons Per Year |
| Particulate Matter | | | | | |
| PM ₁₀ | attainment | 0.11 | 0.47 | 0.84 | 3.68 |
| Sulfur Dioxide | attainment | 0.01 | 0.06 | | |
| Organic Compounds | attainment | 0.13 | 0.55 | 0.98 | 4.31 |
| Nitrogen Oxides | attainment | 0.06 | 0.23 | 0.41 | 1.81 |
| Carbon Monoxide | attainment | 0.06 | 0.23 | 0.41 | 1.79 |
| Lead | | | | | |
| Other: Air Toxics | | | | | |

APPLICABLE FEDERAL RULES:

NSPS? _____ NESHAP? _____ PSD? **Y** _____ OFFSET POLICY? _____

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ _____

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? NNN YES _____ NO _____

IDENTIFY THE AIR CONTAMINANTS: formaldehyde

NEW SOURCE REVIEW FORM B

PTI Number: 03-13522

Facility ID: 0320010004

FACILITY NAME Johns Manville International Inc.

FACILITY DESCRIPTION Increase of pipe insulation manufacturing capacity. Which includes modification of four existing lines and addition of two lines. CITY/TWP Defiance

SIC CODE 3296 SCC CODE 3-05-017-99 EMISSIONS UNIT ID P042

EMISSIONS UNIT DESCRIPTION Line #37 Forming and collection Unit

DATE INSTALLED 3/01/01

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

| Pollutants | Air Quality Description | Actual Emissions Rate | | PTI Allowable | |
|--------------------|-------------------------|-----------------------|---------------|-----------------|---------------|
| | | Short Term Rate | Tons Per Year | Short Term Rate | Tons Per Year |
| Particulate Matter | | | | | |
| PM ₁₀ | attainment | 0.11 | 0.47 | 5.83 | 25.54 |
| Sulfur Dioxide | attainment | 0.01 | 0.06 | 1.22 | 5.34 |
| Organic Compounds | attainment | 0.13 | 0.55 | 1.81 | 7.93 |
| Nitrogen Oxides | attainment | 0.06 | 0.23 | 2.85 | 12.48 |
| Carbon Monoxide | attainment | 0.06 | 0.23 | 2.22 | 9.72 |
| Lead | | | | | |
| Other: Air Toxics | | | | 0.48 | 2.10 |

APPLICABLE FEDERAL RULES:

NSPS? _____ NESHAP? _____ PSD? **Y** _____ OFFSET POLICY? _____

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ _____

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? NNN YES _____ NO _____

IDENTIFY THE AIR CONTAMINANTS: formaldehyde

NEW SOURCE REVIEW FORM B

PTI Number: 03-13522

Facility ID: 0320010004

FACILITY NAME Johns Manville International Inc.

FACILITY DESCRIPTION Increase of pipe insulation manufacturing capacity. Which includes modification of four existing lines and addition of two lines. CITY/TWP Defiance

SIC CODE 3296 SCC CODE 3-05-017-99 EMISSIONS UNIT ID P043

EMISSIONS UNIT DESCRIPTION Line #37 Product Curing Unit

DATE INSTALLED 3-01-01

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

| Pollutants | Air Quality Description | Actual Emissions Rate | | PTI Allowable | |
|--------------------|-------------------------|-----------------------|---------------|-----------------|---------------|
| | | Short Term Rate | Tons Per Year | Short Term Rate | Tons Per Year |
| Particulate Matter | | | | | |
| PM ₁₀ | attainment | | | 0.79 | 3.46 |
| Sulfur Dioxide | | | | | |
| Organic Compounds | attainment | | | 1.02 | 4.47 |
| Nitrogen Oxides | attainment | | | 1.67 | 7.32 |
| Carbon Monoxide | attainment | | | 2.22 | 9.72 |
| Lead | | | | | |
| Other: Air Toxics | | | | | |

APPLICABLE FEDERAL RULES:

NSPS? _____ NESHAP? _____ PSD? **Y** _____ OFFSET POLICY? _____

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ _____

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? NNN YES _____ NO _____

IDENTIFY THE AIR CONTAMINANTS: formaldehyde

NEW SOURCE REVIEW FORM B

PTI Number: 03-13522

Facility ID: 0320010004

FACILITY NAME Johns Manville International Inc.

FACILITY DESCRIPTION Increase of pipe insulation manufacturing capacity. Which includes modification of four existing lines and addition of two lines. CITY/TWP Defiance

SIC CODE 3296 SCC CODE 3-05-017-99 EMISSIONS UNIT ID P044

EMISSIONS UNIT DESCRIPTION Line #37 Product Finishing Unit

DATE INSTALLED 3/01/01

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

| Pollutants | Air Quality Description | Actual Emissions Rate | | PTI Allowable | |
|--------------------|-------------------------|-----------------------|---------------|-----------------|---------------|
| | | Short Term Rate | Tons Per Year | Short Term Rate | Tons Per Year |
| Particulate Matter | | | | | |
| PM ₁₀ | attainment | 0.4 | 1.56 | 0.86 | 3.77 |
| Sulfur Dioxide | | | | | |
| Organic Compounds | | | | | |
| Nitrogen Oxides | | | | | |
| Carbon Monoxide | | | | | |
| Lead | | | | | |
| Other: Air Toxics | | | | | |

APPLICABLE FEDERAL RULES:

NPSPS? _____ NESHAP? _____ PSD? **Y** _____ OFFSET POLICY? _____

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? no

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ _____

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? NNN YES _____ NO _____

IDENTIFY THE AIR CONTAMINANTS: _____

NEW SOURCE REVIEW FORM B

PTI Number: 03-13522

Facility ID: 0320010004

FACILITY NAME Johns Manville International Inc.

FACILITY DESCRIPTION Increase of pipe insulation manufacturing capacity. Which includes modification of four existing lines and addition of two lines. CITY/TWP Defiance

SIC CODE 3296 SCC CODE 3-05-017-99 EMISSIONS UNIT ID P048

EMISSIONS UNIT DESCRIPTION Handwrap Product Finishing Unit #36/38

DATE INSTALLED 3/01/01

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

| Pollutants | Air Quality Description | Actual Emissions Rate | | PTI Allowable | |
|--------------------|-------------------------|-----------------------|---------------|-----------------|---------------|
| | | Short Term Rate | Tons Per Year | Short Term Rate | Tons Per Year |
| Particulate Matter | | | | | |
| PM ₁₀ | attainment | 0.48 | 1.78 | 0.43 | 1.88 |
| Sulfur Dioxide | | | | | |
| Organic Compounds | | | | | |
| Nitrogen Oxides | | | | | |
| Carbon Monoxide | | | | | |
| Lead | | | | | |
| Other: Air Toxics | | | | | |

APPLICABLE FEDERAL RULES:

NPSPS? _____ NESHAP? _____ PSD? **Y** _____ OFFSET POLICY? _____

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? no

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ _____

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? NNN YES _____ NO _____

IDENTIFY THE AIR CONTAMINANTS: _____

NEW SOURCE REVIEW FORM B

PTI Number: 03-13522

Facility ID: 0320010004

FACILITY NAME Johns Manville International Inc.

FACILITY DESCRIPTION Increase of pipe insulation manufacturing capacity. Which includes modification of four existing lines and addition of two lines. CITY/TWP Defiance

SIC CODE 3296 SCC CODE 3-05-017-99 EMISSIONS UNIT ID P049

EMISSIONS UNIT DESCRIPTION Line #30 Product Curing Unit

DATE INSTALLED 3/01/01

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

| Pollutants | Air Quality Description | Actual Emissions Rate | | PTI Allowable | |
|--------------------|-------------------------|-----------------------|---------------|-----------------|---------------|
| | | Short Term Rate | Tons Per Year | Short Term Rate | Tons Per Year |
| Particulate Matter | | | | | |
| PM ₁₀ | attainment | | | 0.53 | 2.30 |
| Sulfur Dioxide | | | | | |
| Organic Compounds | attainment | | | 0.67 | 2.92 |
| Nitrogen Oxides | attainment | | | 0.25 | 1.10 |
| Carbon Monoxide | attainment | | | 1.06 | 4.66 |
| Lead | | | | | |
| Other: Air Toxics | | | | | |

APPLICABLE FEDERAL RULES:

NSPS? _____ NESHAP? _____ PSD? **Y** _____ OFFSET POLICY? _____

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ _____

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? NNN YES _____ NO _____

IDENTIFY THE AIR CONTAMINANTS: formaldehyde

NEW SOURCE REVIEW FORM B

PTI Number: 03-13522

Facility ID: 0320010004

FACILITY NAME Johns Manville International Inc.

FACILITY DESCRIPTION Increase of pipe insulation manufacturing capacity. Which includes modification of four existing lines and addition of two lines. CITY/TWP Defiance

SIC CODE 3296 SCC CODE 3-05-017-99 EMISSIONS UNIT ID P050

EMISSIONS UNIT DESCRIPTION Line #30 Product Finishing Unit

DATE INSTALLED 3/01/01

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

| Pollutants | Air Quality Description | Actual Emissions Rate | | PTI Allowable | |
|--------------------|-------------------------|-----------------------|---------------|-----------------|---------------|
| | | Short Term Rate | Tons Per Year | Short Term Rate | Tons Per Year |
| Particulate Matter | | | | | |
| PM ₁₀ | attainment | | | 0.86 | 3.77 |
| Sulfur Dioxide | | | | | |
| Organic Compounds | | | | | |
| Nitrogen Oxides | | | | | |
| Carbon Monoxide | | | | | |
| Lead | | | | | |
| Other: Air Toxics | | | | | |

APPLICABLE FEDERAL RULES:

NPSPS? _____ NESHAP? _____ PSD? **Y** _____ OFFSET POLICY? _____

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? no

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? _____ \$ _____

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? NNN YES _____ NO _____

IDENTIFY THE AIR CONTAMINANTS: _____

NEW SOURCE REVIEW FORM B

PTI Number: 03-13522

Facility ID: 0320010004

FACILITY NAME Johns Manville International Inc.

FACILITY DESCRIPTION Increase of pipe insulation manufacturing capacity. Which includes modification of four existing lines and addition of two lines. CITY/TWP Defiance

SIC CODE 3296 SCC CODE 3-05-017-99 EMISSIONS UNIT ID P051

EMISSIONS UNIT DESCRIPTION Line #38 Product Curing Unit

DATE INSTALLED 3/01/01

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

| Pollutants | Air Quality Description | Actual Emissions Rate | | PTI Allowable | |
|--------------------|-------------------------|-----------------------|---------------|-----------------|---------------|
| | | Short Term Rate | Tons Per Year | Short Term Rate | Tons Per Year |
| Particulate Matter | | | | | |
| PM ₁₀ | attainment | | | 2.02 | 8.84 |
| Sulfur Dioxide | attainment | | | 0.34 | 1.51 |
| Organic Compounds | attainment | | | 2.56 | 11.21 |
| Nitrogen Oxides | attainment | | | 0.97 | 4.25 |
| Carbon Monoxide | attainment | | | 4.09 | 17.92 |
| Lead | | | | | |
| Other: Air Toxics | | | | | |

APPLICABLE FEDERAL RULES:

NSPS? _____ NESHAP? _____ PSD? **Y** _____ OFFSET POLICY? _____

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ _____

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? NNN YES _____ NO _____

IDENTIFY THE AIR CONTAMINANTS: formaldehyde

NEW SOURCE REVIEW FORM B

PTI Number: 03-13522

Facility ID: 0320010004

FACILITY NAME Johns Manville International Inc.

FACILITY DESCRIPTION Increase of pipe insulation manufacturing capacity. Which includes modification of four existing lines and addition of two lines. CITY/TWP Defiance

SIC CODE 3296 SCC CODE 3-05-017-99 EMISSIONS UNIT ID P052

EMISSIONS UNIT DESCRIPTION Line #38 Product Finishing Unit

DATE INSTALLED 3/01/01

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

| Pollutants | Air Quality Description | Actual Emissions Rate | | PTI Allowable | |
|--------------------|-------------------------|-----------------------|---------------|-----------------|---------------|
| | | Short Term Rate | Tons Per Year | Short Term Rate | Tons Per Year |
| Particulate Matter | | | | | |
| PM ₁₀ | attainment | 1.2 | 5.26 | 1.2 | 5.26 |
| Sulfur Dioxide | | | | | |
| Organic Compounds | | | | | |
| Nitrogen Oxides | | | | | |
| Carbon Monoxide | | | | | |
| Lead | | | | | |
| Other: Air Toxics | | | | | |

APPLICABLE FEDERAL RULES:

NPSPS? _____ NESHAP? _____ PSD? **Y** _____ OFFSET POLICY? _____

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? no

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ _____

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? NNN YES _____ NO _____

IDENTIFY THE AIR CONTAMINANTS: _____

NEW SOURCE REVIEW FORM B

PTI Number: 03-13522

Facility ID: 0320010004

FACILITY NAME Johns Manville International Inc.

FACILITY DESCRIPTION Increase of pipe insulation manufacturing capacity. Which includes modification of four existing lines and addition of two lines. CITY/TWP Defiance

SIC CODE 3296 SCC CODE 3-05-017-99 EMISSIONS UNIT ID P011

EMISSIONS UNIT DESCRIPTION Line #31 Product Forming and Collection Unit (MODIFICATION)

DATE INSTALLED 3/01/01

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

| Pollutants | Air Quality Description | Actual Emissions Rate | | PTI Allowable | |
|--------------------|-------------------------|-----------------------|---------------|-----------------|---------------|
| | | Short Term Rate | Tons Per Year | Short Term Rate | Tons Per Year |
| Particulate Matter | | | | | |
| PM ₁₀ | attainment | 3.76 | | 7.94 | 34.76 |
| Sulfur Dioxide | attainment | 0.47 | | 0.99 | 4.35 |
| Organic Compounds | attainment | 1.14 | | 2.4 | 10.53 |
| Nitrogen Oxides | attainment | 0.41 | | 0.88 | 3.83 |
| Carbon Monoxide | attainment | 1.0 | | 2.11 | 9.26 |
| Lead | | | | | |
| Other: Air Toxics | | 0.22 | 0.91 | 0.39 | 1.71 |

APPLICABLE FEDERAL RULES:

NSPS? _____ NESHAP? _____ PSD? **Y** _____ OFFSET POLICY? _____

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ _____

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? NNN YES _____ NO _____

IDENTIFY THE AIR CONTAMINANTS: formaldehyde

NEW SOURCE REVIEW FORM B

PTI Number: 03-13522

Facility ID: 0320010004

FACILITY NAME Johns Manville International Inc.

FACILITY DESCRIPTION Increase of pipe insulation manufacturing capacity. Which includes modification of four existing lines and addition of two lines. CITY/TWP Defiance

SIC CODE 3296 SCC CODE 3-05-017-99 EMISSIONS UNIT ID P031

EMISSIONS UNIT DESCRIPTION Line #31 Product Finishing Unit (modification to lower allowable)

DATE INSTALLED 3/01/01

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

| Pollutants | Air Quality Description | Actual Emissions Rate | | PTI Allowable | |
|--------------------|-------------------------|-----------------------|---------------|-----------------|---------------|
| | | Short Term Rate | Tons Per Year | Short Term Rate | Tons Per Year |
| Particulate Matter | | | | | |
| PM ₁₀ | attainment | | | 1.10 | 4.82 |
| Sulfur Dioxide | | | | | |
| Organic Compounds | | | | | |
| Nitrogen Oxides | | | | | |
| Carbon Monoxide | | | | | |
| Lead | | | | | |
| Other: Air Toxics | | | | | |

APPLICABLE FEDERAL RULES:

NSPS? _____ NESHAP? _____ PSD? **Y** _____ OFFSET POLICY? _____

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? no

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ _____

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? NNN YES _____ NO _____

IDENTIFY THE AIR CONTAMINANTS: _____

NEW SOURCE REVIEW FORM B

PTI Number: 03-13522

Facility ID: 0320010004

FACILITY NAME Johns Manville International Inc.

FACILITY DESCRIPTION Increase of pipe insulation manufacturing capacity. Which includes modification of four existing lines and addition of two lines. CITY/TWP Defiance

SIC CODE 3296 SCC CODE 3-05-017-99 EMISSIONS UNIT ID P032

EMISSIONS UNIT DESCRIPTION Line #32 Product Finishing Unit (modification to lower allowable emissions)

DATE INSTALLED 3/01/01

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

| Pollutants | Air Quality Description | Actual Emissions Rate | | PTI Allowable | |
|--------------------|-------------------------|-----------------------|---------------|-----------------|---------------|
| | | Short Term Rate | Tons Per Year | Short Term Rate | Tons Per Year |
| Particulate Matter | | | | | |
| PM ₁₀ | attainment | | | 1.10 | 4.82 |
| Sulfur Dioxide | | | | | |
| Organic Compounds | | | | | |
| Nitrogen Oxides | | | | | |
| Carbon Monoxide | | | | | |
| Lead | | | | | |
| Other: Air Toxics | | | | | |

APPLICABLE FEDERAL RULES:

NSPS? _____ NESHAP? _____ PSD? **Y** _____ OFFSET POLICY? _____

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? no

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ _____

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? NNN YES _____ NO _____

IDENTIFY THE AIR CONTAMINANTS: _____

NEW SOURCE REVIEW FORM B

PTI Number: 03-13522

Facility ID: 0320010004

FACILITY NAME Johns Manville International Inc.

FACILITY DESCRIPTION Increase of pipe insulation manufacturing capacity. Which includes modification of four existing lines and addition of two lines. CITY/TWP Defiance

SIC CODE 3296 SCC CODE 3-05-017-99 EMISSIONS UNIT ID P033

EMISSIONS UNIT DESCRIPTION Line #33 Product Finishing Unit (modification to lower allowable emissions)

DATE INSTALLED 3/01/01

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

| Pollutants | Air Quality Description | Actual Emissions Rate | | PTI Allowable | |
|--------------------|-------------------------|-----------------------|---------------|-----------------|---------------|
| | | Short Term Rate | Tons Per Year | Short Term Rate | Tons Per Year |
| Particulate Matter | | | | | |
| PM ₁₀ | attainment | | | 1.10 | 4.82 |
| Sulfur Dioxide | | | | | |
| Organic Compounds | | | | | |
| Nitrogen Oxides | | | | | |
| Carbon Monoxide | | | | | |
| Lead | | | | | |
| Other: Air Toxics | | | | | |

APPLICABLE FEDERAL RULES:

NSPS? _____ NESHAP? _____ PSD? **Y** _____ OFFSET POLICY? _____

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? no

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ _____

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? NNN YES _____ NO _____

IDENTIFY THE AIR CONTAMINANTS: _____

NEW SOURCE REVIEW FORM B

PTI Number: 03-13522

Facility ID: 0320010004

FACILITY NAME Johns Manville International Inc.

FACILITY DESCRIPTION Increase of pipe insulation manufacturing capacity. Which includes modification of four existing lines and addition of two lines. CITY/TWP Defiance

SIC CODE 3296 SCC CODE 3-05-017-99 EMISSIONS UNIT ID P034

EMISSIONS UNIT DESCRIPTION Line #34 Product Finishing Unit (modification to lower allowable emissions)

DATE INSTALLED 3/01/01

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

| Pollutants | Air Quality Description | Actual Emissions Rate | | PTI Allowable | |
|--------------------|-------------------------|-----------------------|---------------|-----------------|---------------|
| | | Short Term Rate | Tons Per Year | Short Term Rate | Tons Per Year |
| Particulate Matter | | | | | |
| PM ₁₀ | attainment | | | 1.10 | 4.82 |
| Sulfur Dioxide | | | | | |
| Organic Compounds | | | | | |
| Nitrogen Oxides | | | | | |
| Carbon Monoxide | | | | | |
| Lead | | | | | |
| Other: Air Toxics | | | | | |

APPLICABLE FEDERAL RULES:

NSPS? _____ NESHAP? _____ PSD? **Y** _____ OFFSET POLICY? _____

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? no

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ _____

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? NNN YES _____ NO _____

IDENTIFY THE AIR CONTAMINANTS: _____

NEW SOURCE REVIEW FORM B

PTI Number: 03-13522

Facility ID: 0320010004

FACILITY NAME Johns Manville International Inc.

FACILITY DESCRIPTION Increase of pipe insulation manufacturing capacity. Which includes modification of four existing lines and addition of two lines. CITY/TWP Defiance

SIC CODE 3296 SCC CODE 3-05-017-99 EMISSIONS UNIT ID P035

EMISSIONS UNIT DESCRIPTION Line #35 Product Finishing Unit (modification to lower allowable emissions)

DATE INSTALLED 3/01/01

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

| Pollutants | Air Quality Description | Actual Emissions Rate | | PTI Allowable | |
|--------------------|-------------------------|-----------------------|---------------|-----------------|---------------|
| | | Short Term Rate | Tons Per Year | Short Term Rate | Tons Per Year |
| Particulate Matter | | | | | |
| PM ₁₀ | attainment | | | 1.20 | 5.26 |
| Sulfur Dioxide | | | | | |
| Organic Compounds | | | | | |
| Nitrogen Oxides | | | | | |
| Carbon Monoxide | | | | | |
| Lead | | | | | |
| Other: Air Toxics | | | | | |

APPLICABLE FEDERAL RULES:

NSPS? _____ NESHAP? _____ PSD? **Y** _____ OFFSET POLICY? _____

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? no

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ _____

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? NNN YES _____ NO _____

IDENTIFY THE AIR CONTAMINANTS: _____

PTI Number: 03-13522

Facility ID: 0320010004

FACILITY NAME Johns Manville International Inc.

FACILITY DESCRIPTION Increase of pipe insulation manufacturing capacity. Which includes modification of four existing lines and addition of two lines. CITY/TWP Defiance

SIC CODE 3296 SCC CODE 3-05-017-99 EMISSIONS UNIT ID P036

EMISSIONS UNIT DESCRIPTION Line #36 Product Finishing Unit (modification to lower allowable emissions)

DATE INSTALLED 3/01/01

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

| Pollutants | Air Quality Description | Actual Emissions Rate | | PTI Allowable | |
|--------------------|-------------------------|-----------------------|---------------|-----------------|---------------|
| | | Short Term Rate | Tons Per Year | Short Term Rate | Tons Per Year |
| Particulate Matter | | | | | |
| PM ₁₀ | attainment | | | 1.40 | 6.13 |
| Sulfur Dioxide | | | | | |
| Organic Compounds | | | | | |
| Nitrogen Oxides | | | | | |
| Carbon Monoxide | | | | | |
| Lead | | | | | |
| Other: Air Toxics | | | | | |

APPLICABLE FEDERAL RULES:

NSPS? _____ NESHAP? _____ PSD? **Y** _____ OFFSET POLICY? _____

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? no

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ _____

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? NNN YES _____ NO _____

IDENTIFY THE AIR CONTAMINANTS: _____

NEW SOURCE REVIEW FORM B

PTI Number: 03-13522

Facility ID: 0320010004

FACILITY NAME Johns Manville International Inc.

FACILITY DESCRIPTION Increase of pipe insulation manufacturing capacity. Which includes modification of four existing lines and addition of two lines. CITY/TWP Defiance

Ohio EPA Permit to Install Information Form Please describe below any documentation which is being submitted with this recommendation (must be sent the same day). Electronic items should be submitted with the e-mail transmitting the PTI terms, and in software that CO can utilize. If mailing any hard copy, this section must be printed as a cover page. All items must be clearly labeled indicating the PTI name and number. Submit **hard copy items to Pam McGraner**, AQM&P, DAPC, Central Office, and electronic files to **airpti@epa.state.oh.us**

| <i>Please fill out the following. If the checkbox does not work, replace it with an 'X'</i> | Electronic | Additional information File Name Convention (your PTI # plus this letter) | Hard Copy | None |
|---|--------------------------|--|-------------------------------------|--------------------------|
| Calculations (required) | <input type="checkbox"/> | 0000000c.wpd | <input checked="" type="checkbox"/> | |
| Modeling form/results | <input type="checkbox"/> | 0000000s.wpd | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| PTI Application (complete or partial)* | <input type="checkbox"/> | 0000000a.wpd | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| BAT Study | <input type="checkbox"/> | 0000000b.wpd | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Other/misc. | <input type="checkbox"/> | 0000000t.wpd | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

* Mandatory for netting, PSD, nonattainment NSR, 112(g), 21-07(G)(9)(g) and 21-09(U)(2)(f) - 2 complete copies.

Please complete (see comment bubble to the left for additional instructions):

NSR Discussion

See Permit Review Form

Please complete for these type permits (For PSD/NSR Permit, place mouse over this text):

Synthetic Minor Determination and/or **Netting Determination**
Permit To Install **ENTER PTI NUMBER HERE**

PLEASE PROVIDE ADDITIONAL NOTES OR COMMENTS AS NECESSARY:

NONE

Please complete:

SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

| <u>Pollutant</u> | <u>Tons Per Year</u> |
|------------------|----------------------|
| PE | 127.66 (*64.97) |
| OC | 45.64 |
| NOx | 32.50 |
| CO | 54.84 |
| SO ₂ | 11.17 |
| Fluorides | 3.81 (*1.16) |

*net increase