



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL MODIFICATION
DEFIANCE COUNTY**

CERTIFIED MAIL

Street Address:

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov.
Center

Application No: 03-10931

DATE: 12/6/2001

Johns Manville International Inc. Plt08
G R Bonin
925 Carpenter Road
Defiance, OH 43512

Enclosed Please find a modification to the Ohio EPA Permit To Install referenced above which will modify the terms and conditions.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
236 East Town Street, Room 300
Columbus, Ohio 43215

Very truly yours,

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

CC: USEPA

NWDO



**Permit To Install
Terms and Conditions**

**Issue Date: 12/6/2001
Effective Date: 12/6/2001**

FINAL ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 03-10931

Application Number: 03-10931
APS Premise Number: 0320010005
Permit Fee: **\$2300**
Name of Facility: Johns Manville International Inc. Plt08
Person to Contact: G R Bonin
Address: 925 Carpenter Road
Defiance, OH 43512

Location of proposed air contaminant source(s) [emissions unit(s)]:
**925 Carpenter Road
Defiance, Ohio**

Description of proposed emissions unit(s):
Modification (2 of 2) of Line 89 to resolve notice of violation.

The above named entity is hereby granted a modification to the permit to install described above pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this modification 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 source(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 included in the application, the above described source(s) of pollutants will be granted the necessary operating permits.

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.10 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. Source Operation and Operating Permit Requirements After Completion of Construction

- 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 cannot meet the requirements of this permit 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 cannot meet the requirements of this permit 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)

<u>Pollutant</u>	<u>Tons Per Year</u>
PE	66.8 (*14.9)
OC	29.46
NO _x	70.22(*39.56)
CO	126.03(*76.80)
SO ₂	15.05
formaldehyde	13.98

*net increase

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Johns Manville International Inc. Plt08

PTI Application: **03-10931**

Modification Issued: 12/6/2001

Facility ID: **0320010005**

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Johns]

PTI A₁

Modification Issued: 12/6/2001

Emissions Unit ID: P047

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>
P047 - Fiberglass melt furnace; Line no. 89 (Administrative modification of PTI 03-10931 issued April 29, 1998)	OAC rule 3745-31-05(D) OAC rule 3745-31-05(A)(3) OAC rule 3745-17-11(B) OAC rule 3745-17-07(A)	66.80 tons particulate emissions (PE) per rolling, 365-day period (see A.I.2.a) Control requirements (see A.I.2.b) 1.00 lb PE/hr, 4.38 tons PE/yr (see A.I.2.c) Visible particulate emissions shall not exceed 0% opacity as a 6-minute average. See A.I.2.d See A.I.2.d

2. Additional Terms and Conditions

- 2.a The permittee has requested a federal enforceable restriction of 66.80 tons PE per rolling 365-day period for purposes of avoiding PSD (see A.II.1).
- 2.b "Best Available Technology" (BAT) for this emissions unit has been determined to be the use of three baghouse dust collectors, operated in parallel to provide full time control of emissions during individual baghouse cleaning cycles.
- 2.c All PE is assumed to be in the form of PM₁₀.
- 2.d The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

II. Operational Restrictions

1. Combined annual PE from Line 89, which includes emissions units P047, P048, P049, P050, P051, P052, P054 and P055, shall not exceed 66.80 tons, based upon a rolling, 365-day summation of emissions.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the emission levels specified in the following table:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of PE (Tons)</u>
1	5.57
1-2	11.13
1-3	16.70
1-4	22.27
1-5	27.83
1-6	33.40
1-7	38.97
1-8	44.53
1-9	50.10
1-10	55.67
1-11	61.23
1-12	66.80

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual emission limitation for PE shall be based upon a rolling, 365-day summation of the daily emissions.

2. The pressure drop across the baghouse shall be maintained within the range of 0.5-10 inches of water while the emissions unit is in operation.

III. Monitoring and/or Recordkeeping Requirements

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

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Johns]

PTI A₁

Modification Issued: 12/6/2001

Emissions Unit ID: P047

Modification Issued: 12/6/2001

2. The permittee shall maintain the following daily records for this emissions unit:
 - a. the operating hours for each day; and
 - b. the calculated PE rate, based upon the emission factor curve, in pounds per hour.
3. The permittee shall maintain the following daily records for Line 89, which includes emissions units P047, P048, P049, P048, P049, P050, P051, P052, P054 and P055.
 - a. for the first 12 months of operation under the provisions of this permit, the cumulative monthly PE rate for all product groups manufactured on this line; and
 - b. after the first 12 months of operation, under the provisions of this permit, the cumulative PE rate for all product groups manufactured on this line, based on a rolling 365-day summation of PE .

IV. Reporting Requirements

1. The permittee shall submit pressure drop deviation (excursion) reports that identify that all periods of time during which the pressure drops 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.
2. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 365-day emission limitation for PE and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative emission levels. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

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: 66.80 tons particulate emissions (PE) per rolling 365-day period

Applicable Compliance Method: Compliance with the rolling 365-day emission limitation shall be demonstrated by the recordkeeping requirements specified in section A.III.3.

- b. Emission Limitation: 1.00 lb PE/hr and 4.38 TPY

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 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% opacity as a 6-minute average

Applicable Compliance Method: Method 9 of 40 CFR Part 60, Appendix A

VI. Miscellaneous Requirements

None

Modification Issued: 12/6/2001

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>
P047 - Fiberglass melt furnace; Line no. 89 (modification to allow for increase in the melt capacity)		

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

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Johns]

PTI A₁

Modification Issued: 12/6/2001

Emissions Unit ID: P047

None

Modification Issued: 12/6/2001

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>
P048 - Fiberglass forming module A; Line no. 89 (Administrative modification of PTI 03-10931 issued April 29, 1998)	OAC rule 3745-31-05(D) 40 CFR Part 63 Subpart NNN 40 CFR Part 60 Subpart PPP OAC rule 3745-17-07(A) OAC rule 3745-17-11(B) OAC rule 3745-21-07(G)

ModifApplicable Emissions
Limitations/Control Measures

None (See A.II.5)

66.80 tons particulate
emissions (PE) per rolling
365-day period (see A.I.2.a)

8.30 tons nitrogen oxide
(NOx)/yr (see A.I.2.a)

The requirements of this rule
also include compliance with
40 CFR Part 60 Subpart PPP
and OAC rule
3745-17-07(A).

Use of venturi scrubber (see
A.I.2.b)

9.99 lbs PE/hr, 42.96 tons
PE/yr (see A.I.2.c)

1.93 lbs NOx /hr, 8.3 tons
NOx/yr

1.66 lbs organic compounds
(OC)/hr, 7.14 tons OC/yr

9.10 lb carbon monoxide
(CO)/hr, 39.13 tons CO/yr

0.80 lb formaldehyde/hr, 3.44
tons formaldehyde/yr

1.00 lb Sulfur Dioxide
(SO2)/hr, 4.30 tons SO2/yr

See A.I.2.d

See A.I.2.e

See A.I.2.f

See A.I.2.g

Modification Issued: 12/6/2001**2. Additional Terms and Conditions**

- 2.a** The permittee has requested a federal enforceable restriction of 66.80 tons PE per rolling, 365-day period for purposes of avoiding PSD (see A.II.2). The permittee has also requested a federally enforceable restriction of 8.30 tons NO_x per year based on an annual operating hours restriction (see A.II.1).
- 2.b** "Best Available Technology" (BAT) for this emissions unit has been determined to be the use of a venturi scrubber.
- 2.c** All PE is assumed to be in the form of PM₁₀.
- 2.d** 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 building insulation product.
- 2.e** The permittee shall not cause to be discharged into the atmosphere from this emissions unit, any gases which contain particulate matter (PM) in excess of 5.5 kg/Mg (11.0 lbs/ton) of glass pulled.
- 2.f** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- 2.g** Visible PE shall not exceed 20% opacity, as a 6 minute average, except as provided by rule.

II. Operational Restrictions

- 1. The maximum annual operating hours for this emissions unit shall not exceed 8600, based upon a rolling, 12-month summation of the operating hours. This is an existing emissions unit, and for purposes of demonstrating compliance with the 12-month rolling annual operating hours restrictions, the permittee shall use existing records verified by the Ohio EPA field office.
- 2. Combined annual PE from Line 89, which includes emissions units P047, P048, P049, P050, P051, P052, P054 and P055, shall not exceed 66.80 tons, based upon a rolling, 365-day summation of emissions.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the emission levels specified in the following table:

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Modification Issued: 12/6/2001

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of PE (Tons)</u>
1	
1-2	
1-3	5.57
1-4	11.13
1-5	16.70
1-6	22.27
1-7	27.83
1-8	33.40
1-9	38.97
1-10	44.53
1-11	50.10
1-12	55.67
	61.23
	66.80

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual emission limitation for PE shall be based upon a rolling, 365-day summation of the daily emissions.

3. The pressure drop across the scrubber shall be continuously maintained at a value of not less than 10 inches of water at all times while the emissions unit is in operation.
4. The scrubber water flow rate shall be continuously maintained at a value of not less than 440 gallons per minute at all times while the emissions unit is in operation.
5. 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 owner or operator subject to the provisions of 40 CFR Part 60 Subpart PPP who uses a wet scrubbing control device to comply with the mass emission standard shall install, calibrate, maintain, and operate monitoring devices that measure the gas pressure drop across each scrubber and the scrubbing liquid flow rate to each scrubber. The pressure drop monitor is to be certified by its manufacturer to be accurate within ± 250 pascal (± 1 inch water gauge) over its operating range, and the flow rate monitor is to be certified by its manufacturer to be accurate within ± 5 percent over its operating range.
2. All monitoring devices required under 40 CFR Part 60 Subpart PPP are to be recalibrated

quarterly in accordance with procedures under section 60.13(b).

3. The permittee shall collect and record the following information each day:
 - a. the pressure drop across the scrubber, in inches of water, at least once every 4 hours;
 - b. the scrubber water flow rate, in gallons per minute, at least once every 4 hours; and
 - c. the operating times for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.
4. The permittee shall maintain the following daily records for this emissions units:
 - a. the company identification for each product group manufactured;
 - b. the hours of production for each product group manufactured, in hours per day;
 - c. the calculated PE factor (lbs PE/hour of production), based upon the emission factor curve, for each product group manufactured; and
 - d. the total PE rate (lbs/day), for all product group manufactured, $(b_1 \times c_1) + (b_2 \times c_2) + (b_n \times c_n)$.
5. The permittee shall maintain the following daily records for Line 89, which includes emissions units P047, P048, P049, P048, P049, P050, P051, P052, P054 and P055.
 - a. for the first 12 months of operation under the provisions of this permit, the cumulative monthly PE rate for all product groups manufactured on this line; and
 - b. after the first 12 months of operation, under the provisions of this permit, the cumulative PE rate for all product groups manufactured on this line, based on a rolling 365-day summation of PE .
6. 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.
7. Pursuant to the general provisions of NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times for this emissions unit:
 - a. construction date (no later than 30 days after such date);

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- b. anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
- c. actual start-up date (within 15 days after such date); and
- d. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
Lazarus Government Center
P.O. Box 1049
Columbus, OH 43216-1049

and Ohio EPA, Northwest District Office
347 North Dunbridge Road
Bowling Green, OH 43402

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports for this emissions unit which identify all exceedance of the rolling, 12-month operating hours limitation. 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.

These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 365-day emission limitation for PE and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative emission levels. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.
4. The permittee shall submit deviation (excursion) reports that identify each day during which a photochemically reactive material was employed. These deviation reports shall be submitted in

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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. within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test (s).
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for PE, OC, Formaldehyde, NO_x, SO₂, CO and the NSPS standard for PM.
 - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates and NSPS standard:
 - i. PE, Method 5 of 40 CFR Part 60, Appendix A. (including the back half of the sampling train)
 - ii. NSPS PM standard, Method 5E of 40 CFR Part 60, Appendix A
 - iii. OC, Method 18, 25 and/or 25A of 40 CFR Part 60, Appendix A.
 - iv. NO_x, Method 7 of 40 CFR Part 60, Appendix A.
 - v. CO, Method 10 of 40 CFR Part 60, Appendix A.
 - vi. SO₂, Method 6 of 40 CFR Part 60, Appendix A.
 - vii. formaldehyde, Method 316 or 318 of 40 CFR Part 63, Appendix A.
 - d. The test(s) shall be conducted while the emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the 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

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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: 66.80 tons particulate emissions (PE) per rolling 365-day period

Applicable Compliance Method: Compliance with the rolling 12-month emission limitation shall be demonstrated by the recordkeeping requirements specified in section A.III.5.
 - b. Emission Limitation: 9.99 lbs PE/hr and 42.96 TPY

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 this permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8600 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: 1.66 lbs OC/hr and 7.14 TPY

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 this permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8600 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: 1.93 lbs NO_x/hr and 8.30 TPY

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 this permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8600 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: 9.10 lbs CO/hr and 39.13 TPY

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 this permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8600 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: 0.80 lb Formaldehyde/hr and 3.44 TPY

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 this permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8600 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: 1.00 lb SO₂/hr and 4.30 TPY

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 this permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8600 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.

- h. Emission Limitation: 20% opacity as a 6-minute average

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

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- i. Emission Limitation: 11.0 lbs PM/ton of glass pulled (5.5 kg/Mg)

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

VI. Miscellaneous Requirements

None

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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 - Fiberglass forming module A; Line no. 89 (increase in production due to modification of emissions unit P047)		

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 resins) 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). The following summarizes the results of the modeling for the "worst case" pollutant(s):

- a. Pollutant: phenol

TLV (mg/m3): 19

Maximum Hourly Emission Rate (lbs/hr): 0.55

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 4.76

MAGLC (ug/m3): 452.4

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 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.

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IV. Reporting Requirements

None

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V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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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>
P049 - Fiberglass forming module B; Line no. 89 (Administrative modification of PTI 03-10931 issued April 29, 1998)	OAC rule 3745-31-05(D)
	40 CFR Part 63 Subpart NNN
	40 CFR Part 60 Subpart PPP
	OAC rule 3745-17-07(A)
	OAC rule 3745-17-11(B)
	OAC rule 3745-21-07(G)

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Applicable Emissions <u>Limitations/Control</u> <u>Measures</u>	See A.I.2.e
66.80 tons particulate emissions (PE) per rolling 365-day period (see A.I.2.a)	See A.I.2.f
8.30 tons nitrogen oxide (NO _x)/yr (see A.I.2.a)	See A.I.2.g
The requirements of this rule also include compliance with 40 CFR Part 60 Subpart PPP and OAC rule 3745-17-07(A).	None (See A.II.5)
Use of venturi scrubber (see A.I.2.b)	
9.02 lbs PE/hr, 38.79 tons PE/yr (see A.I.2.c)	
1.93 lbs NO _x /hr, 8.3 tons NO _x /yr	
1.66 lbs organic compounds (OC)/hr, 7.14 tons OC/yr	
9.10 lb carbon monoxide (CO)/hr, 39.13 tons CO/yr	
0.80 lb formaldehyde/hr, 3.44 tons formaldehyde/yr	
1.00 lb Sulfur Dioxide (SO ₂)/hr, 4.30 tons SO ₂ /yr	
See A.I.2.d	

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2. Additional Terms and Conditions

- 2.a** The permittee has requested a federal enforceable restriction of 66.80 tons PE per rolling, 365-day period for purposes of avoiding PSD (see A.II.2). The permittee has also requested a federally enforceable restriction of 8.30 tons NOx per year based on an annual operating hours restriction (see A.II.1).
- 2.b** "Best Available Technology" (BAT) for this emissions unit has been determined to be the use of a venturi scrubber.
- 2.c** All PE is assumed to be in the form of PM₁₀.
- 2.d** 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 building insulation product.
- 2.e** The permittee shall not cause to be discharged into the atmosphere from this emissions unit, any gases which contain particulate matter (PM) in excess of 5.5 kg/Mg (11.0 lbs/ton) of glass pulled.
- 2.f** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- 2.g** Visible PE shall not exceed 20% opacity, as a 6 minute average, except as provided by rule.

II. Operational Restrictions

- 1. The maximum annual operating hours for this emissions unit shall not exceed 8600, based upon a rolling, 12-month summation of the operating hours. This is an existing emissions unit, and for purposes of demonstrating compliance with the 12-month rolling annual operating hours restrictions, the permittee shall use existing records verified by the Ohio EPA field office.
- 2. Combined annual PE from Line 89, which includes emissions units P047, P048, P049, P050, P051, P052, P054 and P055, shall not exceed 66.80 tons, based upon a rolling, 365-day summation of emissions.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the emission levels specified in the following table:

<u>Month(s)</u>	1
	1-2
	1-3
	1-4

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	<u>Maximum Allowable Cumulative Emissions of PE (Tons)</u>
1-5	
1-6	
1-7	
1-8	
1-9	5.57
1-10	11.13
1-11	16.70
1-12	22.27
	27.83
	33.40
	38.97
	44.53
	50.10
	55.67
	61.23
	66.80

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual emission limitation for PE shall be based upon a rolling, 365-day summation of the daily emissions.

3. The pressure drop across the scrubber shall be continuously maintained at a value of not less than 9.5 inches of water at all times while the emissions unit is in operation.
4. The scrubber water flow rate shall be continuously maintained at a value of not less than 370 gallons per minute at all times while the emissions unit is in operation.
5. 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 owner or operator subject to the provisions of 40 CFR Part 60 Subpart PPP who uses a wet scrubbing control device to comply with the mass emission standard shall install, calibrate, maintain, and operate monitoring devices that measure the gas pressure drop across each scrubber and the scrubbing liquid flow rate to each scrubber. The pressure drop monitor is to be certified by its manufacturer to be accurate within ± 250 pascal (± 1 inch water gauge) over its operating range, and the flow rate monitor is to be certified by its manufacturer to be accurate within ± 5 percent over its operating range.
2. All monitoring devices required under 40 CFR Part 60 Subpart PPP are to be recalibrated

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quarterly in accordance with procedures under section 60.13(b).

3. The permittee shall collect and record the following information each day:
 - a. the pressure drop across the scrubber, in inches of water, at least once every 4 hours;
 - b. the scrubber water flow rate, in gallons per minute, at least once every 4 hours; and
 - c. the operating times for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.
4. The permittee shall maintain the following daily records for this emissions units:
 - a. the company identification for each product group manufactured;
 - b. the hours of production for each product group manufactured, in hours per day;
 - c. the calculated PE factor (lbs PE/hour of production), based upon the emission factor curve, for each product group manufactured; and
 - d. the total PE rate (lbs/day), for all product group manufactured, $(b_1 \times c_1) + (b_2 \times c_2) + (b_n \times c_n)$.
5. The permittee shall maintain the following daily records for Line 89, which includes emissions units P047, P048, P049, P048, P049, P050, P051, P052, P054 and P055.
 - a. for the first 12 months of operation under the provisions of this permit, the cumulative monthly PE rate for all product groups manufactured on this line; and
 - b. after the first 12 months of operation, under the provisions of this permit, the cumulative PE rate for all product groups manufactured on this line, based on a rolling 365-day summation of PE .
6. 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.

7. Pursuant to the general provisions of NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times for this emissions unit:
- construction date (no later than 30 days after such date);
 - anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
 - actual start-up date (within 15 days after such date); and
 - date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
Lazarus Government Center
P.O. Box 1049
Columbus, OH 43216-1049

and Ohio EPA, Northwest District Office
347 North Dunbridge Road
Bowling Green, OH 43402

IV. Reporting Requirements

- The permittee shall submit deviation (excursion) reports for this emissions unit which identify all exceedance of the rolling, 12-month operating hours limitation. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.
- 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:
 - the static pressure drop across the scrubber; and
 - the scrubber water flow rate.

These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

- The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 365-day emission limitation for PE and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative emission levels. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.
- The permittee shall submit deviation (excursion) reports that 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.

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. within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test (s).
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for PE, OC, Formaldehyde, NO_x, SO₂, CO and the NSPS standard for PM.
 - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates and NSPS standard:
 - i. PE, Method 5 of 40 CFR Part 60, Appendix A. (including the back half of the sampling train)
 - ii. NSPS PM standard, Method 5E of 40 CFR Part 60, Appendix A
 - iii. OC, Method 18, 25 and/or 25A of 40 CFR Part 60, Appendix A.
 - iv. NO_x, Method 7 of 40 CFR Part 60, Appendix A.
 - v. CO, Method 10 of 40 CFR Part 60, Appendix A.
 - vi. SO₂, Method 6 of 40 CFR Part 60, Appendix A.
 - vii. formaldehyde, Method 316 or 318 of 40 CFR Part 63, Appendix A.
 - d. The test(s) shall be conducted while the emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the 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: 66.80 tons particulate emissions (PE) per rolling 365-day period

Applicable Compliance Method: Compliance with the rolling 12-month emission limitation shall be demonstrated by the recordkeeping requirements specified in section A.III.5.

- b. Emission Limitation: 9.02 lbs PE/hr and 38.79 TPY

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 this permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8600 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: 1.66 lbs OC/hr and 7.14 TPY

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 this permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8600 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: 1.93 lbs NOx/hr and 8.30 TPY

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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 this permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8600 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: 9.10 lbs CO/hr and 39.13 TPY

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 this permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8600 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: 0.80 lb Formaldehyde/hr and 3.44 TPY

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 this permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8600 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: 1.00 lb SO₂/hr and 4.30 TPY

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 this permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8600 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.

- h. Emission Limitation: 20% opacity as a 6-minute average

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Facility ID: 0320010005

Emissions Unit ID: P049

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

- i. Emission Limitation: 11.0 lbs PM/ton of glass pulled (5.5 kg/Mg)

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

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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 - Fiberglass module B; Line no. 89 (Increase in production due to modification of emissions unit P047)		

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 resins) 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). The following summarizes the results of the modeling for the "worst case" pollutant(s):

a. Pollutant: phenol

Modification Issued: 12/6/2001TLV (mg/m³): 19

Maximum Hourly Emission Rate (lbs/hr): 0.39

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 2.49MAGLC (ug/m³): 452.4

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 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

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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

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Emissions Unit ID: P049

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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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>
P050 - Fiberglass forming module C; Line no. 89 (Administrative modification of PTI 03-10931 issued April 29, 1998)	OAC rule 3745-31-05(D)
	40 CFR Part 63 Subpart NNN
	40 CFR Part 60 Subpart PPP
	OAC rule 3745-17-07(A)
	OAC rule 3745-17-11(B)
	OAC rule 3745-21-07(G)

Applicable Emissions Limitations/Control Measures	See A.I.2.e
66.80 tons particulate emissions (PE) per rolling 365-day period (see A.I.2.a)	See A.I.2.f
8.30 tons nitrogen oxide (NO _x)/yr (see A.I.2.a)	See A.I.2.g
The requirements of this rule also include compliance with 40 CFR Part 60 Subpart PPP and OAC rule 3745-17-07(A).	None (See A.II.5)
Use of venturi scrubber (see A.I.2.b)	
7.76 lbs PE/hr, 33.37 tons PE/yr (see A.I.2.c)	
1.93 lbs NO _x /hr, 8.30 tons NO _x /yr	
1.66 lbs organic compounds (OC)/hr, 7.14 tons OC/yr	
9.10 lb carbon monoxide (CO)/hr, 39.13 tons CO/yr	
0.80 lb formaldehyde/hr, 3.44 tons formaldehyde/yr	
1.00 lb Sulfur Dioxide (SO ₂)/hr, 4.30 tons SO ₂ /yr	
See A.I.2.d	

Modification Issued: 12/6/2001**2. Additional Terms and Conditions**

- 2.a** The permittee has requested a federal enforceable restriction of 66.80 tons PE per rolling, 365-day period for purposes of avoiding PSD (see A.II.2). The permittee has also requested a federally enforceable restriction of 8.30 tons NO_x per year based on an annual operating hours restriction (see A.II.1).
- 2.b** "Best Available Technology" (BAT) for this emissions unit has been determined to be the use of a venturi scrubber.
- 2.c** All PE is assumed to be in the form of PM₁₀.
- 2.d** 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 building insulation product.
- 2.e** The permittee shall not cause to be discharged into the atmosphere from this emissions unit, any gases which contain particulate matter (PM) in excess of 5.5 kg/Mg (11.0 lbs/ton) of glass pulled.
- 2.f** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- 2.g** Visible PE shall not exceed 20% opacity, as a 6 minute average, except as provided by rule.

II. Operational Restrictions

- 1. The maximum annual operating hours for this emissions unit shall not exceed 8600, based upon a rolling, 12-month summation of the operating hours. This is an existing emissions unit, and for purposes of demonstrating compliance with the 12-month rolling annual operating hours restrictions, the permittee shall use existing records verified by the Ohio EPA field office.
- 2. Combined annual PE from Line 89, which includes emissions units P047, P048, P049, P050, P051, P052, P054 and P055, shall not exceed 66.80 tons, based upon a rolling, 365-day summation of emissions.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the emission levels specified in the following table:

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Emissions Unit ID: P050

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of PE (Tons)</u>
1	5.57
1-2	11.13
1-3	16.70
1-4	22.27
1-5	27.83
1-6	33.40
1-7	38.97
1-8	44.53
1-9	50.10
1-10	55.67
1-11	61.23
1-12	66.80

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual emission limitation for PE shall be based upon a rolling, 365-day summation of the daily emissions.

3. The pressure drop across the scrubber shall be continuously maintained at a value of not less than 9.5 inches of water at all times while the emissions unit is in operation.
4. The scrubber water flow rate shall be continuously maintained at a value of not less than 270 gallons per minute at all times while the emissions unit is in operation.
5. 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 owner or operator subject to the provisions of 40 CFR Part 60 Subpart PPP who uses a wet scrubbing control device to comply with the mass emission standard shall install, calibrate, maintain, and operate monitoring devices that measure the gas pressure drop across each scrubber and the scrubbing liquid flow rate to each scrubber. The pressure drop monitor is to be certified by its manufacturer to be accurate within ± 250 pascal (± 1 inch water gauge) over its operating range, and the flow rate monitor is to be certified by its manufacturer to be accurate within ± 5 percent over its operating range.
2. All monitoring devices required under 40 CFR Part 60 Subpart PPP are to be recalibrated quarterly in accordance with procedures under section 60.13(b).
3. The permittee shall collect and record the following information each day:

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- a. the pressure drop across the scrubber, in inches of water, at least once every 4 hours;
 - b. the scrubber water flow rate, in gallons per minute, at least once every 4 hours; and
 - c. the operating times for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.
4. The permittee shall maintain the following daily records for this emissions units:
- a. the company identification for each product group manufactured;
 - b. the hours of production for each product group manufactured, in hours per day;
 - c. the calculated PE factor (lbs PE/hour of production), based upon the emission factor curve, for each product group manufactured; and
 - d. the total PE rate (lbs/day), for all product group manufactured, $(b_1 \times c_1) + (b_2 \times c_2) + (b_n \times c_n)$.
5. The permittee shall maintain the following daily records for Line 89, which includes emissions units P047, P048, P049, P048, P049, P050, P051, P052, P054 and P055.
- a. for the first 12 months of operation under the provisions of this permit, the cumulative monthly PE rate for all product groups manufactured on this line; and
 - b. after the first 12 months of operation, under the provisions of this permit, the cumulative PE rate for all product groups manufactured on this line, based on a rolling 365-day summation of PE .
6. 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.
7. Pursuant to the general provisions of NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times for this emissions unit:

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- a. construction date (no later than 30 days after such date);
- b. anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
- c. actual start-up date (within 15 days after such date); and
- d. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
Lazarus Government Center
P.O. Box 1049
Columbus, OH 43216-1049

and Ohio EPA, Northwest District Office
347 North Dunbridge Road
Bowling Green, OH 43402

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports for this emissions unit which identify all exceedance of the rolling, 12-month operating hours limitation. 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.

These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 365-day emission limitation for PE and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative emission levels. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.
4. The permittee shall submit deviation (excursion) reports that 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.

V. Testing Requirements

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1. Emissions Testing: The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test (s).
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for PE, OC, Formaldehyde, NO_x, SO₂, CO and the NSPS standard for PM.
 - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates and NSPS standard:
 - i. PE, Method 5 of 40 CFR Part 60, Appendix A. (including the back half of the sampling train)
 - ii. NSPS PM standard, Method 5E of 40 CFR Part 60, Appendix A
 - iii. OC, Method 18, 25 and/or 25A of 40 CFR Part 60, Appendix A.
 - iv. NO_x, Method 7 of 40 CFR Part 60, Appendix A.
 - v. CO, Method 10 of 40 CFR Part 60, Appendix A.
 - vi. SO₂, Method 6 of 40 CFR Part 60, Appendix A.
 - vii. formaldehyde, Method 316 or 318 of 40 CFR Part 63, Appendix A.
 - d. The test(s) shall be conducted while the emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the 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

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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: 66.80 tons particulate emissions (PE) per rolling 365-day period

Applicable Compliance Method: Compliance with the rolling 12-month emission limitation shall be demonstrated by the recordkeeping requirements specified in section A.III.5.

- b. Emission Limitation: 7.76 lbs PE/hr and 33.37 TPY

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 this permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8600 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: 1.66 lbs OC/hr and 7.14 TPY

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 this permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8600 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: 1.93 lbs NOx/hr and 8.30 TPY

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 this permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the

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maximum operating schedule of 8600 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:9.10 lbs CO/hr and 39.13 TPY

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 this permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8600 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:0.80 lb Formaldehyde/hr and 3.44 TPY

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 this permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8600 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: 1.00 lb SO₂/hr and 4.30 TPY

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 this permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8600 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.

- h. Emission Limitation: 20% opacity as a 6-minute average

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

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- i. Emission Limitation: 11.0 lbs PM/ton of glass pulled (5.5 kg/Mg)

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

VI. Miscellaneous Requirements

None

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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 - Fiberglass forming module C; Line no. 89(Increase in production due to modification of emissions unit P047)		

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 resins) 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). The following summarizes the results of the modeling for the "worst case" pollutant(s):

- a. Pollutant: phenol

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TLV (mg/m³): 19

Maximum Hourly Emission Rate (lbs/hr): 0.39

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 2.49

MAGLC (ug/m³): 452.4

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 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

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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

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V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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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>
P051 - Fiberglass cure oven; Line no. 89 (Administrative modification of PTI 03-10931 issued April 29, 1998)	OAC rule 3745-31-05(D)
	40 CFR Part 63 Subpart NNN
	40 CFR Part 60 Subpart PPP
	OAC rule 3745-17-07(A)
	OAC rule 3745-17-11(B)
	OAC rule 3745-21-07(G)

Applicable Emissions	See A.I.2.e
<u>Limitations/Control</u>	
<u>Measures</u>	See A.I.2.f
66.80 tons particulate emissions (PE) per rolling 365-day period (see A.I.2.a)	See A.I.2.g None (See A.II.5)
45.32 tons nitrogen oxide (NO _x)/yr (see A.I.2.a)	
The requirements of this rule also include compliance with 40 CFR Part 60 Subpart PPP and OAC rule 3745-17-07(A).	
Use of thermal oxidizer (see A.I.2.b)	
1.63 lbs PE/hr, 7.01 tons PE/yr (see A.I.2.c)	
10.54 lbs (NO _x)/hr, 45.32 tons NO _x /yr	
1.21 lbs organic compounds (OC)/hr, 5.20 tons OC/yr	
2.01 lb carbon monoxide (CO)/hr, 8.64 tons CO/yr	
0.50 lb formaldehyde/hr, 2.15 tons formaldehyde/yr	
0.50 lb Sulfur Dioxide (SO ₂)/hr, 2.15 tons SO ₂ /yr	
See A.I.2.d	

Modification Issued: 12/6/2001**2. Additional Terms and Conditions**

- 2.a** The permittee has requested a federal enforceable restriction of 66.80 tons PE per rolling, 365-day period for purposes of avoiding PSD (see A.II.2). The permittee has also requested a federally enforceable restriction of 45.32 tons NO_x per year based on an annual operating hours restriction (see A.II.1).
- 2.b** "Best Available Technology" (BAT) for this emissions unit has been determined to be the use of a thermal oxidizer.
- 2.c** All PE is assumed to be in the form of PM₁₀.
- 2.d** 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 building insulation product.
- 2.e** The permittee shall not cause to be discharged into the atmosphere from this emissions unit, any gases which contain particulate matter (PM) in excess of 5.5 kg/Mg (11.0 lbs/ton) of glass pulled.
- 2.f** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- 2.g** Visible PE shall not exceed 20% opacity, as a 6 minute average, except as provided by rule.

II. Operational Restrictions

- 1. The maximum annual operating hours for this emissions unit shall not exceed 8600, based upon a rolling, 12-month summation of the operating hours. This is an existing emissions unit, and for purposes of demonstrating compliance with the 12-month rolling annual operating hours restrictions, the permittee shall use existing records verified by the Ohio EPA field office.
- 2. Combined annual PE from Line 89, which includes emissions units P047, P048, P049, P050, P051, P052, P054 and P055, shall not exceed 66.80 tons, based upon a rolling, 365-day summation of emissions.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the emission levels specified in the following table:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of PE (Tons)</u>
1	5.57
1-2	11.13
1-3	16.70
1-4	22.27
1-5	27.83
1-6	33.40
1-7	38.97
1-8	44.53
1-9	50.10
1-10	55.67
1-11	61.23
1-12	66.80

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual emission limitation for PE shall be based upon a rolling, 365-day summation of the daily emissions.

4. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 1550 degrees Fahrenheit as measured at the bed center thermocouple.
5. 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 operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall collect and record the following information each day:
 - a. all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was less than 1550 degrees Fahrenheit as measured at the bed center thermocouple.
 - b. a log of the downtime for the capture (collection) system, control device, and monitoring

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equipment, when the associated emissions unit was in operation.

3. The permittee shall maintain the following daily records for this emissions units:
 - a. the company identification for each product group manufactured;
 - b. the hours of production for each product group manufactured, in hours per day;
 - c. the calculated PE factor (lbs PE/hour of production), based upon the emission factor curve, for each product group manufactured; and
 - d. the total PE rate (lbs/day), for all product group manufactured, $(b_1 \times c_1) + (b_2 \times c_2) + (b_n \times c_n)$.
4. The permittee shall maintain the following daily records for Line 89, which includes emissions units P047, P048, P049, P048, P049, P050, P051, P052, P054 and P055.
 - a. for the first 12 months of operation under the provisions of this permit, the cumulative monthly PE rate for all product groups manufactured on this line; and
 - b. after the first 12 months of operation, under the provisions of this permit, the cumulative PE rate for all product groups manufactured on this line, based on a rolling 365-day summation of PE .
5. 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.
6. Pursuant to the general provisions of NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times for this emissions unit:
 - a. construction date (no later than 30 days after such date);
 - b. anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
 - c. actual start-up date (within 15 days after such date); and
 - d. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
Lazarus Government Center
P.O. Box 1049
Columbus, OH 43216-1049

and Ohio EPA, Northwest District Office
347 North Dunbridge Road
Bowling Green, OH 43402

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports for this emissions unit which identify all exceedance of the rolling, 12-month operating hours limitation. 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 which identify all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified above. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.
3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 365-day emission limitation for PE and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative emission levels. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.
4. The permittee shall submit deviation (excursion) reports that 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.

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. within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test (s).
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable

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mass emission rate(s) for PE, OC, Formaldehyde, NO_x, SO₂, CO and the NSPS standard for PM.

- c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates and NSPS standard:
- i. PE, Method 5 of 40 CFR Part 60, Appendix A. (including the back half of the sampling train)
 - ii. NSPS PM standard, Method 5E of 40 CFR Part 60, Appendix A
 - iii. OC, Method 18, 25 and/or 25A of 40 CFR Part 60, Appendix A.
 - iv. NO_x, Method 7 of 40 CFR Part 60, Appendix A.
 - v. CO, Method 10 of 40 CFR Part 60, Appendix A.
 - vi. SO₂, Method 6 of 40 CFR Part 60, Appendix A.
 - vii. formaldehyde, Method 316 or 318 of 40 CFR Part 63, Appendix A.
- d. The test(s) shall be conducted while the emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the 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.

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Emissions Unit ID: P051

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:66.80 tons particulate emissions (PE) per rolling 365-day period
- Applicable Compliance Method: Compliance with the rolling 12-month emission limitation shall be demonstrated by the recordkeeping requirements specified in section A.III.5.
- b. Emission Limitation: 1.63 lbs PE/hr and 7.01 TPY
- 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 this permit.
- The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8600 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:1.21 lbs OC/hr and 5.20 TPY
- 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 this permit.
- The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8600 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:10.54 lbs NOx/hr and 45.32 TPY
- 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 this permit.
- The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8600 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.

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- e. Emission Limitation: 2.01 lbs CO/hr and 8.64 TPY

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 this permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8600 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: 0.50 lb Formaldehyde/hr and 2.15 TPY

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 this permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8600 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: 0.50 lb SO₂/hr and 2.15 TPY

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 this permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8600 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.

- h. Emission Limitation: 20% opacity as a 6-minute average

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

- i. Emission Limitation: 11.0 lbs PM/ton of glass pulled (5.5 kg/Mg)

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

VI. Miscellaneous Requirements

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Johns Manville International Inc. Plt08

PTI Application: **02 10021**

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Facility ID: **0320010005**

Emissions Unit ID: P051

None

Modification Issued: 12/6/2001

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 - Fiberglass cure oven; Line no. 89 (Increase in production due to modification of emissions unit P047)		

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

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Modification Issued: 12/6/2001

Emissions Unit ID: P051

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>	OAC rule 3745-21-07(G)
P052 - Fiberglass cooling; Line no. 89 (Administrative modification of PTI 03-10931 issued April 29, 1998)	OAC rule 3745-31-05(D)	
	OAC rule 3745-31-05(A)(3)	
	40 CFR Part 63 Subpart NNN	
	40 CFR Part 60 Subpart PPP	
	OAC rule 3745-17-07(A)	
	OAC rule 3745-17-11(B)	

Applicable Emissions
Limitations/Control
Measures

66.80 tons particulate
emissions (PE) per rolling
365-day period (see A.I.2.a)

The requirements of this rule
also include compliance with
40 CFR Part 60 Subpart PPP
and OAC rule
3745-17-07(A).

Use of venturi scrubber (see
A.I.2.b)

1.53 lbs PE/hr, 6.58 tons
PE/yr (see A.I.2.c)

0.66 lbs organic compounds
(OC)/hr, 2.84 tons OC/yr

0.35 lb formaldehyde/hr,
1.51 tons formaldehyde/yr

See A.I.2.d

See A.I.2.e

See A.I.2.f

See A.I.2.g

None (See A.II.5)

Modification Issued: 12/6/2001**2. Additional Terms and Conditions**

- 2.a** The permittee has requested a federal enforceable restriction of 66.80 tons PE per rolling, 365-day period for purposes of avoiding PSD (see A.II.1).
- 2.b** "Best Available Technology" (BAT) for this emissions unit has been determined to be the use of a venturi scrubber.
- 2.c** All PE is assumed to be in the form of PM₁₀.
- 2.d** 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 building insulation product.
- 2.e** The permittee shall not cause to be discharged into the atmosphere from this emissions unit, any gases which contain particulate matter (PM) in excess of 5.5 kg/Mg (11.0 lbs/ton) of glass pulled.
- 2.f** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- 2.g** Visible PE shall not exceed 20% opacity, as a 6 minute average, except as provided by rule.

II. Operational Restrictions

- 1. The maximum annual operating hours for this emissions unit shall not exceed 8600, based upon a rolling, 12-month summation of the operating hours. This is an existing emissions unit, and for purposes of demonstrating compliance with the 12-month rolling annual operating hours restrictions, the permittee shall use existing records verified by the Ohio EPA field office.
- 2. Combined annual PE from Line 89, which includes emissions units P047, P048, P049, P050, P051, P052, P054 and P055, shall not exceed 66.80 tons, based upon a rolling, 365-day summation of emissions.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the emission levels specified in the following table:

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Emissions Unit ID: P052

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of PE (Tons)</u>
1	5.57
1-2	11.13
1-3	16.70
1-4	22.27
1-5	27.83
1-6	33.40
1-7	38.97
1-8	44.53
1-9	50.10
1-10	55.67
1-11	61.23
1-12	66.80

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual emission limitation for PE shall be based upon a rolling, 365-day summation of the daily emissions.

3. The pressure drop across the scrubber shall be continuously maintained at a value of not less than 8.5 inches of water at all times while the emissions unit is in operation.
4. The scrubber water flow rate shall be continuously maintained at a value of not less than 135 gallons per minute at all times while the emissions unit is in operation.
5. 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 owner or operator subject to the provisions of 40 CFR Part 60 Subpart PPP who uses a wet scrubbing control device to comply with the mass emission standard shall install, calibrate, maintain, and operate monitoring devices that measure the gas pressure drop across each scrubber and the scrubbing liquid flow rate to each scrubber. The pressure drop monitor is to be certified by its manufacturer to be accurate within ± 250 pascal (± 1 inch water gauge) over its operating range, and the flow rate monitor is to be certified by its manufacturer to be accurate within ± 5 percent over its operating range.
2. All monitoring devices required under 40 CFR Part 60 Subpart PPP are to be recalibrated quarterly in accordance with procedures under section 60.13(b).

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3. The permittee shall collect and record the following information each day:
 - a. the pressure drop across the scrubber, in inches of water, at least once every 4 hours;
 - b. the scrubber water flow rate, in gallons per minute, at least once every 4 hours; and
 - c. the operating times for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.
4. The permittee shall maintain the following daily records for this emissions units:
 - a. the company identification for each product group manufactured;
 - b. the hours of production for each product group manufactured, in hours per day;
 - c. the calculated PE factor (lbs PE/hour of production), based upon the emission factor curve, for each product group manufactured; and
 - d. the total PE rate (lbs/day), for all product group manufactured, $(b_1 \times c_1) + (b_2 \times c_2) + (b_n \times c_n)$.
5. The permittee shall maintain the following daily records for Line 89, which includes emissions units P047, P048, P049, P048, P049, P050, P051, P052, P054 and P055.
 - a. for the first 12 months of operation under the provisions of this permit, the cumulative monthly PE rate for all product groups manufactured on this line; and
 - b. after the first 12 months of operation, under the provisions of this permit, the cumulative PE rate for all product groups manufactured on this line, based on a rolling 365-day summation of PE .
6. 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.
7. Pursuant to the general provisions of NSPS, the source owner/operator is hereby advised of the

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Emissions Unit ID: P052

requirement to report the following at the appropriate times for this emissions unit:

- a. construction date (no later than 30 days after such date);
- b. anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
- c. actual start-up date (within 15 days after such date); and
- d. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
Lazarus Government Center
P.O. Box 1049
Columbus, OH 43216-1049

and Ohio EPA, Northwest District Office
347 North Dunbridge Road
Bowling Green, OH 43402

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports for this emissions unit which identify all exceedance of the rolling, 12-month operating hours limitation. 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.

These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 365-day emission limitation for PE and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative emission levels. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.
4. The permittee shall submit deviation (excursion) reports that 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.

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. within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test (s).
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for PE, OC, Formaldehyde, and the NSPS standard for PM.
 - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates and NSPS standard:
 - i. PE, Method 5 of 40 CFR Part 60, Appendix A. (including the back half of the sampling train)
 - ii. NSPS PM standard, Method 5E of 40 CFR Part 60, Appendix A
 - iii. OC, Method 18, 25 and/or 25A of 40 CFR Part 60, Appendix A.
 - iv. formaldehyde, Method 316 or 318 of 40 CFR Part 63, Appendix A.
 - d. The test(s) shall be conducted while the emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the 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: 66.80 tons particulate emissions (PE) per rolling 365-day period

Applicable Compliance Method: Compliance with the rolling 12-month emission limitation shall be demonstrated by the recordkeeping requirements specified in section A.III.5.

- b. Emission Limitation: 1.53 lbs PE/hr and 6.58 TPY

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 this permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8600 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: 0.66 lb OC/hr and 2.84 TPY

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 this permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8600 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: 0.35 lb Formaldehyde/hr and 1.51 TPY

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 this permit.

The tons/yr emission limitation was developed by multiplying the lb/hr limitation by the maximum operating schedule of 8600 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown

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Emissions Unit ID: P052

with the annual limitation.

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e. Emission Limitation: 20% opacity as a 6-minute average

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

f. Emission Limitation: 11.0 lbs PM/ton of glass pulled (5.5 kg/Mg)

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

VI. Miscellaneous Requirements

None

Modification Issued: 12/6/2001

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 - Fiberglass cooling table; Line no. 89(Increase in production due to modification of emissions unit P047)		

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 resins) 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). The following summarizes the results of the modeling for the "worst case" pollutant(s):

- a. Pollutant: phenol

TLV (mg/m3): 19

Maximum Hourly Emission Rate (lbs/hr): 1.43

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 10.94

MAGLC (ug/m3): 452.4

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 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.

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Modification Issued: 12/6/2001

Emissions Unit ID: P052

IV. Reporting Requirements

None

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Modification Issued: 12/6/2001

Emissions Unit ID: P052

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Modification Issued: 12/6/2001

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>
P054 - Fiberglass internal cullet silo; Line no. 89 (Administrative modification of PTI 03-10931 issued April 29, 1998)	OAC rule 3745-31-05(D)	66.80 tons particulate emissions (PE)/yr based upon a rolling, 365-day period (See A.I.2.a)
	OAC rule 3745-31-05(A)(3)	Use of baghouse (see A.I.2.b)
		0.1 lb PE/hr, 0.44 ton PE/yr (see A.I.2.c)
		Visible PE shall not exceed 0% opacity as a 6-minute average.
	OAC rule 3745-17-11(B)	See A.I.2.d.
	OAC rule 3745-17-07(A)	See A.I.2.d.

2. Additional Terms and Conditions

- 2.a The permittee has requested a federal enforceable restriction of 66.80 tons PE per rolling 365-day period for purposes of avoiding PSD (see A.II.1).
- 2.b "Best Available Technology" (BAT) for this emissions unit has been determined to be the use of a baghouse.
- 2.c All PE is assumed to be in the form of PM₁₀.

- 2.d** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

II. Operational Restrictions

1. Combined annual PE from Line 89, which includes emissions units P047, P048, P049, P050, P051, P052, P054 and P055, shall not exceed 66.80 tons, based upon a rolling, 365-day summation of emissions.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the emission levels specified in the following table:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of PE (Tons)</u>
1	5.57
1-2	11.13
1-3	16.70
1-4	22.27
1-5	27.83
1-6	33.40
1-7	38.97
1-8	44.53
1-9	50.10
1-10	55.67
1-11	61.23
1-12	66.80

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual emission limitation for PE shall be based upon a rolling, 365-day summation of the daily emissions.

2. The pressure drop across the baghouse shall be maintained within the range of 0.5-10 inches of water while the emissions unit is in operation.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be 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 hourly basis when the emissions unit is in operation.

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Emissions Unit ID: P054

2. The permittee shall maintain the following daily records for this emissions unit:

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- a. the operating hours for each day; and
 - b. the calculated PE rate, based upon the emission factor curve, in pounds per day.
3. The permittee shall maintain the following daily records for Line 89, which includes emissions units P047, P048, P049, P048, P049, P050, P051, P052, P054 and P055.
- a. for the first 12 months of operation under the provisions of this permit, the cumulative monthly PE rate for all product groups manufactured on this line; and
 - b. after the first 12 months of operation, under the provisions of this permit, the cumulative PE rate for all product groups manufactured on this line, based on a rolling 365-day summation of PE .

IV. Reporting Requirements

1. The permittee shall submit pressure drop deviation (excursion) reports that identify that all periods of time during which the pressure drops 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.
2. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 365-day emission limitation for PE and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative emission levels. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

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: 66.80 tons particulate emissions (PE) per rolling 365-day period

Applicable Compliance Method: Compliance with the rolling 365-day emission limitation shall be demonstrated by the recordkeeping requirements specified in section A.III.3.
 - b. Emission Limitation: 0.10 lb PE/hr and 0.44 TPY

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Emissions Unit ID: P054

Applicable Compliance Method: The hourly emission limitation represents the emissions unit's potential to emit determined by using the manufacturer's maximum designed outlet grain loading of 0.02 gr/scf, multiplied by the maximum flow rate of the silos dust collector (565 acfm).

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% opacity as a 6-minute average

Applicable Compliance Method: Method 9 of 40 CFR Part 60, Appendix A

VI. Miscellaneous Requirements

None

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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>
P054 - Fiberglass internal cullet silo; Line no. 89		

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

Modification Issued: 12/6/2001

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>
P055 - Fiberglass external cullet silo; Line no. 89 (Administrative modification of PTI 03-10931 issued April 29, 1998)	OAC rule 3745-31-05(D)	66.80 tons particulate emissions (PE)/yr based upon a rolling, 365-day period (See A.I.2.a)
	OAC rule 3745-31-05(A)(3)	Use of baghouse (see A.I.2.b)
		0.1 lb PE/hr, 0.44 ton PE/yr (see A.I.2.c)
		Visible PE shall not exceed 0% opacity as a 6-minute average.
	OAC rule 3745-17-11(B)	See A.I.2.d.
	OAC rule 3745-17-07(A)	See A.I.2.d.

2. Additional Terms and Conditions

- 2.a The permittee has requested a federal enforceable restriction of 66.80 tons PE per rolling 365-day period for purposes of avoiding PSD (see A.II.1).
- 2.b "Best Available Technology" (BAT) for this emissions unit has been determined to be the use of a baghouse.
- 2.c All PE is assumed to be in the form of PM₁₀.

- 2.d** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

II. Operational Restrictions

1. Combined annual PE from Line 89, which includes emissions units P047, P048, P049, P050, P051, P052, P054 and P055, shall not exceed 66.80 tons, based upon a rolling, 365-day summation of emissions.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the emission levels specified in the following table:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of PE (Tons)</u>
1	5.57
1-2	11.13
1-3	16.70
1-4	22.27
1-5	27.83
1-6	33.40
1-7	38.97
1-8	44.53
1-9	50.10
1-10	55.67
1-11	61.23
1-12	66.80

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual emission limitation for PE shall be based upon a rolling, 365-day summation of the daily emissions.

2. The pressure drop across the baghouse shall be maintained within the range of 0.5-10 inches of water while the emissions unit is in operation.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be 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 hourly basis when the emissions unit is in operation.

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Facility ID: **0320010005**

Emissions Unit ID: P055

Modification Issued: 12/6/2001

2. The permittee shall maintain the following daily records for this emissions unit:
 - a. the operating hours for each day; and
 - b. the calculated PE rate, based upon the emission factor curve, in pounds per day.
3. The permittee shall maintain the following daily records for Line 89, which includes emissions units P047, P048, P049, P048, P049, P050, P051, P052, P054 and P055.
 - a. for the first 12 months of operation under the provisions of this permit, the cumulative monthly PE rate for all product groups manufactured on this line; and
 - b. after the first 12 months of operation, under the provisions of this permit, the cumulative PE rate for all product groups manufactured on this line, based on a rolling 365-day summation of PE .

IV. Reporting Requirements

1. The permittee shall submit pressure drop deviation (excursion) reports that identify that all periods of time during which the pressure drops 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.
2. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 365-day emission limitation for PE and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative emission levels. These deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

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: 66.80 tons particulate emissions (PE) per rolling 365-day period
Applicable Compliance Method: Compliance with the rolling 365-day emission limitation shall be demonstrated by the recordkeeping requirements specified in section A.III.3.

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- b. Emission Limitation: 0.10 lb PE/hr and 0.44 TPY

Applicable Compliance Method: The hourly emission limitation represents the emissions unit's potential to emit determined by using the manufacturer's maximum designed outlet grain loading of 0.02 gr/scf, multiplied by the maximum flow rate of the silos dust collector (540 acfm).

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% opacity as a 6-minute average

Applicable Compliance Method: Method 9 of 40 CFR Part 60, Appendix A

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>
P055 - Fiberglass external cullet silo; Line no. 89		

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