State of Ohio Environmental Protection Agency

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

Street Address:
122 S. Front Street

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

Mailing Address:
Lazarus Gov. Center
P.O. Box 1049

Application No: 03-16294
Fac ID: 0320010005
DATE: 7/6/2006

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
309 South Fourth Street, Room 222
Columbus, Ohio 43215

Sincerely,

Michael W. Ahern

Michael W. Ahern, Manager
Permit Issuance and Data Management Section
Division of Air Pollution Control

CC: USEPA **NWDO**

STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

Permit To Install **Issue Date: 7/6/2006**
Terms and Conditions **Effective Date: 7/6/2006**

FINAL ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 03-16294

Application Number:	03-16294
Facility ID:	0320010005
Permit Fee:	**$10050**
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):
Administrative modification of PTI 03-16294 issued June 2, 2005 to update the testing requirements to better reflect what is required in 40 CFR Part 63 Subpart NNN.

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

Joseph P. Koncelik

Director

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 (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See B.9 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 (i.e., postmarked) to the appropriate Ohio EPA District Office or local air agency every six months, 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. If this permit is for an emissions unit located at a Title V facility, then 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.

d. The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

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 re-issuance, or modification

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, 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 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 any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

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 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 and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

9. Compliance Requirements

a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.

b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:

i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.

ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.

iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.

iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.

c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:

i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.

ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

10. Permit-To-Operate Application

a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be <u>obtained before</u> 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 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 ninety (90) 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.

12. 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.

13. Permit-To-Install

A permit-to-install must be obtained pursuant to OAC Chapter 3745-31 prior to "installation" of "any air contaminant source" as defined in OAC rule 3745-31-01, or "modification", as defined in OAC rule 3745-31-01, of any emissions unit included in this permit.

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

1. Compliance Requirements

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

2. Reporting 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 (i.e., postmarked) quarterly, 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. Authorization To Install or Modify

If applicable, authorization to install or modify any new or existing emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit 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.

5. Construction of New Sources(s)

This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. 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 this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit 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.

6. 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.

7. 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).

8. Construction Compliance Certification

If applicable, the applicant shall provide Ohio EPA with a written certification (see enclosed form if applicable) 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.

9. 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., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

C. Permit-To-Install Summary of Allowable Emissions

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

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

Pollutant	Tons Per Year
PE	155.73
CO	136.46
VOC	61.07
NOX	32.95
SO2	16.13

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P060 - raw material batch receiving system with baghouse (system consists of batch hopper, mixer, daybins, and material transfer operations)	OAC rule 3745-31-05(A)(3)	0.04 pounds (lbs) particulate emissions (PE)/hour (hr), 0.18 tons/year (tpy) PE (See A.I.2.b) See A.I.2.a Visible PE from the stack(s) servicing this emissions unit shall not exceed 5% opacity, as a six-minute average
	OAC rule 3745-17-07(A)	See A.I.2.c
	OAC rule 3745-17-11(B)	See A.I.2.c

2. Additional Terms and Conditions

2.a The "Best Available Technology" (BAT) control requirements for this emissions unit has been determined to be the use of a baghouse (Daybin dust collector) with an overall control efficiency of 99%.

2.b All PE is assume to be in the form of particulate matter less than 10 microns in size (PM10).

2.c 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

None

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;
   b. whether the emissions are representative of normal operations;
   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
   d. the total duration of any visible emission incident; and
   e. any corrective actions taken to minimize or eliminate the visible emissions.

2. Notwithstanding the frequency of reporting requirements specified in section A.IV, the permittee may reduce the frequency of visual observations for this emissions unit from at least 5 days per week to weekly readings if the following conditions are met:

   a. for 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

   b. the permittee continues to comply with all the record keeping and monitoring requirements specified in section A.III.1.

   The permittee shall revert to 5 days per week readings if any abnormal visible emissions are observed.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA, Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitations: 0.04 lbs PE/hr, 0.18 tpy PE

Applicable Compliance Method: The hourly allowable PE limitation was established by multiplying the maximum process weight rate (lb/hr) [as indicated in the permit application] by a controlled emission factor (lb/lb of glass] derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

b. Emission Limitation: Visible PE from the stack(s) serving this emissions unit shall not exceed 5% opacity, as a six-minute average.

Applicable Compliance Method: If required, compliance with the visible emission limitation for the baghouse stack shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P060 - batch receiving		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
P061 - electric glass melter 1 with baghouse	OAC rule 3745-31-05(A)(3)	OAC rule 3745-17-07(A)
		OAC rule 3745-17-11(B)
		OAC rule 3745-18-06(E)
	40 CFR Part 63 Subpart NNN	

Applicable Emissions Limitations/Control Measures

The requirements of this rule also include compliance with the requirements of 40 CFR Part 63 Subpart NNN.

0.34 pound (lb) particulate emissions (PE)/hour (hr), 1.49 tons/year (tpy) PE (See A.I.2.b)

Visible PE from the stack(s) servicing this emissions unit shall not exceed 5% opacity as a six-minute average.

0.45 lb sulfur dioxide (SO2)/hr, 1.97 tpy SO2

0.89 lb carbon monoxide (CO)/hr, 3.90 tpy CO

See A.I.2.a

The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 0.25 kilogram (kg) of particulate matter (PM) per megagram (Mg) (0.5 lb of PM per ton) of glass pulled.

See A.I.2.c

See A.I.2.c

See A.I.2.c

2. Additional Terms and Conditions

2.a The "Best Available Technology" (BAT) control requirements for this emissions unit has been determined to be the use of a baghouse (melter dust collector) with an overall control efficiency of 99%.

2.b All PE is assume to be in the form of particulate matter less than 10 microns in size (PM10).

2.c 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. On and after the date on which the performance test required to be conducted by 40 CFR 63.7 and 63.1384 is completed, the permittee must operate all affected control equipment and processes according to the following requirements:

   a. initiate corrective action within 1 hour of an alarm from a bag leak detection system and complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan.

   b. implement a Quality Improvement Plan (QIP) consistent with the compliance assurance monitoring provisions of 40 CFR part 64, subpart D when the bag leak detection system alarm is sounded for more than 5 percent of the total operating time in a 6-month block reporting period.

2. The permittee must initiate corrective action within 1 hour when the average glass pull rate of any 4-hour block period for glass melting furnaces equipped with continuous glass pull rate monitors exceeds the average glass pull rate established during the performance test as specified in 40 CFR 63.1384, by greater than 20 percent and complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan.

3. The permittee must implement a QIP consistent with the compliance assurance monitoring provisions of 40 CFR part 64, subpart D when the glass pull rate exceeds, by more than 20 percent, the average glass pull rate established during the performance test as specified in 40 CFR Part 63.1384 for more than 5 percent of the total operating time in a 6-month block reporting period.

4. The permittee must operate each glass-melting furnace such that the glass pull rate does not exceed, by more than 20 percent, the average glass pull rate established during the performance

test as specified in 40 CFR Part 63.1384 for more than 10 percent of the total operating time in a 6-month block reporting period.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall prepare for each glass melting furnace subject to the provisions of 40 CFR 63.1380, a written operations, maintenance, and monitoring plan. The plan shall be submitted to the Director for review and approval as part of the application for a Part 70 permit. The plan shall include the following information:

   a. Procedures for the proper operation and maintenance of process modifications and add-on control devices used to meet the emission limits in 40 CFR 63.1382;

   b. procedures for the proper operation and maintenance of monitoring devices used to determine compliance, including quarterly calibration and certification of accuracy of each monitoring device according to the manufacturers's instructions; and

   c. corrective actions to be taken when process parameters or add-on control device parameters deviate from the limit(s) established during initial performance tests.

2. The permittee shall install, calibrate, maintain, and continuously operate a bag leak detection system according to the following requirements:

   a. The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.

   b. The bag leak detection system sensor must produce output of relative PM emissions.

   c. The bag leak detection system must be equipped with an alarm system that will sound automatically when an increase in relative PM emissions over a preset level is detected and the alarm must be located such that it can be heard by the appropriate plant personnel.

   d. For positive pressure fabric filter systems, a bag leak detection system must be installed in each baghouse compartment or cell. If a negative pressure or induced air baghouse is used, the bag leak detection system must be installed downstream of the baghouse. Where multiple bag leak detection systems are required (for either type of baghouse), the system instrumentation and alarm may be shared among the monitors.

   e. A triboelectric bag leak detection system shall be installed, operated, adjusted, and maintained in a manner consistent with the U.S. Environmental Protection Agency guidance, "Fabric Filter Bag Leak Detection Guidance" (EPA–454/R–98–015, September 1997). Other bag leak detection systems shall be installed, operated, adjusted, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.

f. Initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time.

g. Following the initial adjustment, the owner or operator shall not adjust the range, averaging period, alarm set points, or alarm delay time except as detailed in the approved operations, maintenance, and monitoring plan required under paragraph (a) of this section. In no event shall the range be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless a responsible official as defined in 40 CFR 63.2 of the general provisions in subpart A of this part certifies that the baghouse has been inspected and found to be in good operating condition.

3. The operations, maintenance, and monitoring plan required by paragraph III.1. must specify corrective actions to be followed in the event of a bag leak detection system alarm. Example corrective actions that may be included in the plan include the following:

a. Inspecting the baghouse for air leaks, torn or broken bags or filter media, or any other conditions that may cause an increase in emissions.

b. Sealing off defective bags or filter media.

c. Replacing defective bags or filter media, or otherwise repairing the control device.

d. Sealing off a defective baghouse compartment.

e. Cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system.

f. Shutting down the process producing the particulate emissions.

4. The permittee must install, calibrate, and maintain a continuous glass pull rate monitor that monitors and records on an hourly basis the glass pull rate.

5. For all control device and process operating parameters measured during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new control device or process parameter levels, they comply with the applicable emission limits in 40 CFR 63.1382. The owner or operator shall conduct all additional performance tests according to the procedures in this part 63, subpart A and in 40 CFR 63.1384.

6. The permittee shall develop and implement a written plan as described in 40 CFR 63.6(e)(3) that

contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process modifications and control systems used to comply with the standard. In addition to the information required in 40 CFR 63.6(e)(3), the plan shall include:

a. Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended;

b. Corrective actions to be taken in the event of a malfunction of a control device or process modification, including procedures for recording the actions taken to correct the malfunction or minimize emissions; and

c. A maintenance schedule for each control device and process modification that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

7. The permittee shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.10(e)(3)(iv).

8. As required by 40 CFR 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart:

a. The owner or operator must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site;

b. The owner or operator may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche; and

c. The owner or operator may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

9. In addition to the general records required by 40 CFR 63.10(b)(2), the permittee shall maintain records of the following information:

a. Any bag leak detection system alarms, including the date and time of the alarm, when corrective actions were initiated, the cause of the alarm, an explanation of the corrective actions taken, and when the cause of the alarm was corrected;

b. Glass pull rate, including any period when the pull rate exceeded the average pull rate established during the performance test by more than 20 percent, the date and time of the exceedance, when corrective actions were initiated, the cause of the exceedance, an explanation of the corrective actions taken, and when the cause of

the exceedance was corrected.

IV. Reporting Requirements

1. As required by 40 CFR 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of the applicable standard or a monitored parameter deviates from the levels established during the performance test. The report shall contain the information specified in 40 CFR 63.10(c) of this part as well as the additional records required by the recordkeeping requirements of paragraph (d) of this section. When no deviations have occurred, the owner or operator shall submit a report stating that no excess emissions occurred during the reporting period.

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

   a. the emission test shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days upon startup of this emissions unit.

   b. the emission test shall be conducted to demonstrate compliance with the emission rate of : 0.5 lb of PM per ton) of glass pulled.

   c. the following test method(s) shall be employed to demonstrate compliance with the requirements specified in A.V.2.b:

      for PM, Methods 1-5 of 40 CFR, Part 60, Appendix A (as measured by the front-half catch only);

   d. the tests shall be conducted in accordance with the procedures in 40 CFR Part 63 subpart A and 40 CFR 63.1384, unless otherwise specified or approved by the Ohio EPA, Northwest District Office.

      i. All monitoring systems and equipment must be installed, operational, and calibrated prior to the performance test.

   Unless a different frequency is specified 40 CFR 63.1384, the owner or operator must monitor and record process and/or add-on control device parameters at least every 15 minutes during the performance tests. The arithmetic average for each parameter must be calculated using all of the recorded measurements for the parameter.

   During each performance test, the owner or operator must monitor and record the glass pull rate for each glass-melting furnace and, if different, the glass pull rate for each rotary spin manufacturing line and flame attenuation manufacturing line. Record the glass pull rate every 15

minutes during any performance test required by this subpart and determine the arithmetic average of the recorded measurements for each test run and calculate the average of the three test runs.

Not later than 60 calendar days before the performance test is initially scheduled to begin, the permittee shall submit an "Intent to Test" notification to the Director (the Ohio EPA, Northwest District Office). The "Intent to Test" notification shall describe in detail the propose 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 Director (the Ohio EPA, Northwest District Office's) refusal to accept the results of the emission test(s).

Personnel form the Director (the Ohio EPA, Northwest District Office) 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 Director (the Ohio EPA, Northwest District Office) before the close of business on the 60th day following the completion of the performance test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Director (the Ohio EPA, Northwest District Office).

2. Compliance with the emission limitation(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):

   a. Emission Limitations: 0.34 lb PE/hr, 1.49 tpy PE

      Applicable Compliance Method: The hourly allowable PE limitation was established by multiplying the maximum process weight rate (lb/hr) [as indicated in the permit application] by an a controlled emission factor (lb/lb of glass] derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

      Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

   b. Emission Limitations: 0.89 lb CO/hr, 3.90 tpy CO

Applicable Compliance Method: The hourly allowable CO emission limitation was established by multiplying the maximum process weight rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass] derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable CO emission limitation by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

c. Emission Limitations: 0.45 lb SO2/hr, 1.97 tons SO2/yr

Applicable Compliance Method: The hourly allowable SO2 emission limitation was established by multiplying the maximum process weight rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable SO2 emission limitation by testing in accordance with Method 1-4 and 6, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

d. Emission Limitation: 0.5 lb of PM per ton of glass pulled.

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

e. Emission Limitation: Visible PE from the stack(s) serving this emissions unit shall not exceed 5% opacity, as a six-minute average

Applicable Compliance Method: If required, compliance with the visible emission limitation for the baghouse stack shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P061 - electric melter 1		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
		OAC rule 3745-18-06(E)
P062 - electric glass melter 2 with baghouse	OAC rule 3745-31-05(A)(3)	
	40 CFR Part 63 Subpart NNN	
	OAC rule 3745-17-07(A)	
	OAC rule 3745-17-11(B)	

Applicable Emissions Limitations/Control Measures
The requirements of this rule also include compliance with the requirements of 40 CFR Part 63 Subpart NNN.
0.34 pound (lb) particulate emissions (PE)/hour (hr), 1.49 tons/year (tpy) PE (See A.I.2.b)
Visible PE from the stack(s) servicing this emissions unit shall not exceed 5% opacity as a six-minute average.
0.45 lb sulfur dioxide (SO2)/hr, 1.97 tpy SO2
0.89 lb carbon monoxide (CO)/hr, 3.90 tpy CO
See A.I.2.a
The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 0.25 kilogram (kg) of particulate matter (PM) per megagram (Mg) (0.5 lb of PM per ton) of glass pulled.
See A.I.2.c
See A.I.2.c
See A.I.2.c

2. Additional Terms and Conditions

2.a The "Best Available Technology" (BAT) control requirements for this emissions unit has been determined to be the use of a baghouse (melter dust collector) with an overall control efficiency of 99%.

2.b All PE is assume to be in the form of particulate matter less than 10 microns in size (PM10).

2.c 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. On and after the date on which the performance test required to be conducted by 40 CFR 63.7 and 63.1384 is completed, the permittee must operate all affected control equipment and processes according to the following requirements:

   a. initiate corrective action within 1 hour of an alarm from a bag leak detection system and complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan.

   b. implement a Quality Improvement Plan (QIP) consistent with the compliance assurance monitoring provisions of 40 CFR part 64, subpart D when the bag leak detection system alarm is sounded for more than 5 percent of the total operating time in a 6-month block reporting period.

2. The permittee must initiate corrective action within 1 hour when the average glass pull rate of any 4-hour block period for glass melting furnaces equipped with continuous glass pull rate monitors exceeds the average glass pull rate established during the performance test as specified in 40 CFR 63.1384, by greater than 20 percent and complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan.

3. The permittee must implement a QIP consistent with the compliance assurance monitoring provisions of 40 CFR part 64, subpart D when the glass pull rate exceeds, by more than 20 percent, the average glass pull rate established during the performance test as specified in 40 CFR Part 63.1384 for more than 5 percent of the total operating time in a 6-month block reporting period.

4. The permittee must operate each glass-melting furnace such that the glass pull rate does not exceed, by more than 20 percent, the average glass pull rate established during the performance

test as specified in 40 CFR Part 63.1384 for more than 10 percent of the total operating time in a 6-month block reporting period.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall prepare for each glass melting furnace subject to the provisions of 40 CFR 63.1380, a written operations, maintenance, and monitoring plan. The plan shall be submitted to the Director for review and approval as part of the application for a Part 70 permit. The plan shall include the following information:

   a. Procedures for the proper operation and maintenance of process modifications and add-on control devices used to meet the emission limits in 40 CFR 63.1382;

   b. procedures for the proper operation and maintenance of monitoring devices used to determine compliance, including quarterly calibration and certification of accuracy of each monitoring device according to the manufacturers's instructions; and

   c. corrective actions to be taken when process parameters or add-on control device parameters deviate from the limit(s) established during initial performance tests.

2. The permittee shall install, calibrate, maintain, and continuously operate a bag leak detection system according to the following requirements:

   a. The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.

   b. The bag leak detection system sensor must produce output of relative PM emissions.

   c. The bag leak detection system must be equipped with an alarm system that will sound automatically when an increase in relative PM emissions over a preset level is detected and the alarm must be located such that it can be heard by the appropriate plant personnel.

   d. For positive pressure fabric filter systems, a bag leak detection system must be installed in each baghouse compartment or cell. If a negative pressure or induced air baghouse is used, the bag leak detection system must be installed downstream of the baghouse. Where multiple bag leak detection systems are required (for either type of baghouse), the system instrumentation and alarm may be shared among the monitors.

   e. A triboelectric bag leak detection system shall be installed, operated, adjusted, and maintained in a manner consistent with the U.S. Environmental Protection Agency guidance, "Fabric Filter Bag Leak Detection Guidance" (EPA–454/R–98–015, September 1997). Other bag leak detection systems shall be installed, operated, adjusted, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.

   f. Initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the range and the averaging period of the device and

establishing the alarm set points and the alarm delay time.

g. Following the initial adjustment, the owner or operator shall not adjust the range, averaging period, alarm set points, or alarm delay time except as detailed in the approved operations, maintenance, and monitoring plan required under paragraph (a) of this section. In no event shall the range be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless a responsible official as defined in 40 CFR 63.2 of the general provisions in subpart A of this part certifies that the baghouse has been inspected and found to be in good operating condition.

3. The operations, maintenance, and monitoring plan required by paragraph III.1. must specify corrective actions to be followed in the event of a bag leak detection system alarm. Example corrective actions that may be included in the plan include the following:

   a. Inspecting the baghouse for air leaks, torn or broken bags or filter media, or any other conditions that may cause an increase in emissions.

   b. Sealing off defective bags or filter media.

   c. Replacing defective bags or filter media, or otherwise repairing the control device.

   d. Sealing off a defective baghouse compartment.

   e. Cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system.

   f. Shutting down the process producing the particulate emissions.

4. The permittee must install, calibrate, and maintain a continuous glass pull rate monitor that monitors and records on an hourly basis the glass pull rate.

5. For all control device and process operating parameters measured during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new control device or process parameter levels, they comply with the applicable emission limits in 40 CFR 63.1382. The owner or operator shall conduct all additional performance tests according to the procedures in this part 63, subpart A and in 40 CFR 63.1384.

6. The permittee shall develop and implement a written plan as described in 40 CFR 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for

malfunctioning process modifications and control systems used to comply with the standard. In addition to the information required in 40 CFR 63.6(e)(3), the plan shall include:

a. Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended;

b. Corrective actions to be taken in the event of a malfunction of a control device or process modification, including procedures for recording the actions taken to correct the malfunction or minimize emissions; and

c. A maintenance schedule for each control device and process modification that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

7. The permittee shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.10(e)(3)(iv).

8. As required by 40 CFR 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart:

a. The owner or operator must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site;

b. The owner or operator may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche; and

c. The owner or operator may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

9. In addition to the general records required by 40 CFR 63.10(b)(2), the permittee shall maintain records of the following information:

a. Any bag leak detection system alarms, including the date and time of the alarm, when corrective actions were initiated, the cause of the alarm, an explanation of the corrective actions taken, and when the cause of the alarm was corrected;

b. Glass pull rate, including any period when the pull rate exceeded the average pull rate established during the performance test by more than 20 percent, the date and time of the exceedance, when corrective actions were initiated, the cause of the exceedance, an explanation of the corrective actions taken, and when the cause of the exceedance was corrected.

IV. Reporting Requirements

1. As required by 40 CFR 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of the applicable standard or a monitored parameter deviates from the levels established during the performance test. The report shall contain the information specified in 40 CFR 63.10(c) of this part as well as the additional records required by the recordkeeping requirements of paragraph (d) of this section. When no deviations have occurred, the owner or operator shall submit a report stating that no excess emissions occurred during the reporting period.

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

   a. the emission test shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days upon startup of this emissions unit.

   b. the emission test shall be conducted to demonstrate compliance with the emission rate of : 0.5 lb of PM per ton) of glass pulled.

   c. the following test method(s) shall be employed to demonstrate compliance with the requirements specified in A.V.2.b:

      for PM, Methods 1-5 of 40 CFR, Part 60, Appendix A (as measured by the front-half catch only);

   d. the tests shall be conducted in accordance with the procedures in 40 CFR Part 63 subpart A and 40 CFR 63.1384, unless otherwise specified or approved by the Ohio EPA, Northwest District Office.

      i. All monitoring systems and equipment must be installed, operational, and calibrated prior to the performance test.

   Unless a different frequency is specified in 40 CFR 63.1384, the owner or operator must monitor and record process and/or add-on control device parameters at least every 15 minutes during the performance tests. The arithmetic average for each parameter must be calculated using all of the recorded measurements for the parameter.

   During each performance test, the owner or operator must monitor and record the glass pull rate

for each glass-melting furnace and, if different, the glass pull rate for each rotary spin manufacturing line and flame attenuation manufacturing line. Record the glass pull rate every 15 minutes during any performance test required by this subpart and determine the arithmetic average of the recorded measurements for each test run and calculate the average of the three test runs.

Not later than 60 calendar days before the performance test is initially scheduled to begin, the permittee shall submit an "Intent to Test" notification to the Director (the Ohio EPA, Northwest District Office). The "Intent to Test" notification shall describe in detail the propose 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 Director (the Ohio EPA, Northwest District Office's) refusal to accept the results of the emission test(s).

Personnel form the Director (the Ohio EPA, Northwest District Office) 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 Director (the Ohio EPA, Northwest District Office) before the close of business on the 60th day following the completion of the performance test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Director (the Ohio EPA, Northwest District Office).

2. Compliance with the emission limitation(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):

   a. Emission Limitations: 0.34 lb PE/hr, 1.49 tpy PE

      Applicable Compliance Method: The hourly allowable PE limitation was established by multiplying the maximum process weight rate (lb/hr) [as indicated in the permit application] by an a controlled emission factor (lb/lb of glass] derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

      Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

   b. Emission Limitations: 0.89 lb CO/hr, 3.90 tpy CO

      Applicable Compliance Method: The hourly allowable CO emission limitation was

established by multiplying the maximum process weight rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass] derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable CO emission limitation by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

c. Emission Limitations: 0.45 lb SO2/hr, 1.97 tons SO2/yr

Applicable Compliance Method: The hourly allowable SO2 emission limitation was established by multiplying the maximum process weight rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable SO2 emission limitation by testing in accordance with Method 1-4 and 6, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

d. Emission Limitation: 0.5 lb of PM per ton of glass pulled.

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

e. Emission Limitation: Visible PE from the stack(s) serving this emissions unit shall not exceed 5% opacity, as a six-minute average

Applicable Compliance Method: If required, compliance with the visible emission limitation for the baghouse stack shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P062 - electric melter 2		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
P063 - electric glass melter 3 with baghouse	OAC rule 3745-31-05(A)(3)	OAC rule 3745-17-07(A) OAC rule 3745-17-11(B) OAC rule 3745-18-06(E)
	40 CFR Part 63 Subpart NNN	

Applicable Emissions Limitations/Control Measures
The requirements of this rule also include compliance with the requirements of 40 CFR Part 63 Subpart NNN.
0.34 pound (lb) particulate emissions (PE)/hour (hr), 1.49 tons/year (tpy) PE (See A.I.2.b)
Visible PE from the stack(s) servicing this emissions unit shall not exceed 5% opacity as a six-minute average.
0.45 lb sulfur dioxide (SO2)/hr, 1.97 tpy SO2
0.89 lb carbon monoxide (CO)/hr, 3.90 tpy CO
See A.I.2.a
The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 0.25 kilogram (kg) of particulate matter (PM) per megagram (Mg) (0.5 lb of PM per ton) of glass pulled.
See A.I.2.c
See A.I.2.c
See A.I.2.c

2. Additional Terms and Conditions

2.a The "Best Available Technology" (BAT) control requirements for this emissions unit has been determined to be the use of a baghouse (melter dust collector) with an overall control efficiency of 99%.

2.b All PE is assume to be in the form of particulate matter less than 10 microns in size (PM10).

2.c 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. On and after the date on which the performance test required to be conducted by 40 CFR 63.7 and 63.1384 is completed, the permittee must operate all affected control equipment and processes according to the following requirements:

   a. initiate corrective action within 1 hour of an alarm from a bag leak detection system and complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan.

   b. implement a Quality Improvement Plan (QIP) consistent with the compliance assurance monitoring provisions of 40 CFR part 64, subpart D when the bag leak detection system alarm is sounded for more than 5 percent of the total operating time in a 6-month block reporting period.

2. The permittee must initiate corrective action within 1 hour when the average glass pull rate of any 4-hour block period for glass melting furnaces equipped with continuous glass pull rate monitors exceeds the average glass pull rate established during the performance test as specified in 40 CFR 63.1384, by greater than 20 percent and complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan.

3. The permittee must implement a QIP consistent with the compliance assurance monitoring provisions of 40 CFR part 64, subpart D when the glass pull rate exceeds, by more than 20 percent, the average glass pull rate established during the performance test as specified in 40 CFR Part 63.1384 for more than 5 percent of the total operating time in a 6-month block reporting period.

4. The permittee must operate each glass-melting furnace such that the glass pull rate does not exceed, by more than 20 percent, the average glass pull rate established during the performance test as specified in 40 CFR Part 63.1384 for more than 10 percent of the total operating time in a 6-month block reporting period.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall prepare for each glass melting furnace subject to the provisions of 40 CFR 63.1380, a written operations, maintenance, and monitoring plan. The plan shall be submitted to the Director for review and approval as part of the application for a Part 70 permit. The plan shall include the following information:

   a. Procedures for the proper operation and maintenance of process modifications and add-on control devices used to meet the emission limits in 40 CFR 63.1382;

   b. procedures for the proper operation and maintenance of monitoring devices used to determine compliance, including quarterly calibration and certification of accuracy of each monitoring device according to the manufacturers's instructions; and

   c. corrective actions to be taken when process parameters or add-on control device parameters deviate from the limit(s) established during initial performance tests.

2. The permittee shall install, calibrate, maintain, and continuously operate a bag leak detection system according to the following requirements:

   a. The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.

   b. The bag leak detection system sensor must produce output of relative PM emissions.

   c. The bag leak detection system must be equipped with an alarm system that will sound automatically when an increase in relative PM emissions over a preset level is detected and the alarm must be located such that it can be heard by the appropriate plant personnel.

   d. For positive pressure fabric filter systems, a bag leak detection system must be installed in each baghouse compartment or cell. If a negative pressure or induced air baghouse is used, the bag leak detection system must be installed downstream of the baghouse. Where multiple bag leak detection systems are required (for either type of baghouse), the system instrumentation and alarm may be shared among the monitors.

   e. A triboelectric bag leak detection system shall be installed, operated, adjusted, and maintained in a manner consistent with the U.S. Environmental Protection Agency guidance, "Fabric Filter Bag Leak Detection Guidance" (EPA–454/R–98–015, September 1997). Other bag leak detection systems shall be installed, operated, adjusted, and maintained in a manner consistent with the manufacturer's written specifications and

recommendations.

f. Initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time.

g. Following the initial adjustment, the owner or operator shall not adjust the range, averaging period, alarm set points, or alarm delay time except as detailed in the approved operations, maintenance, and monitoring plan required under paragraph (a) of this section. In no event shall the range be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless a responsible official as defined in 40 CFR 63.2 of the general provisions in subpart A of this part certifies that the baghouse has been inspected and found to be in good operating condition.

3. The operations, maintenance, and monitoring plan required by paragraph III.1. must specify corrective actions to be followed in the event of a bag leak detection system alarm. Example corrective actions that may be included in the plan include the following:

a. Inspecting the baghouse for air leaks, torn or broken bags or filter media, or any other conditions that may cause an increase in emissions.

b. Sealing off defective bags or filter media.

c. Replacing defective bags or filter media, or otherwise repairing the control device.

d. Sealing off a defective baghouse compartment.

e. Cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system.

f. Shutting down the process producing the particulate emissions.

4. The permittee must install, calibrate, and maintain a continuous glass pull rate monitor that monitors and records on an hourly basis the glass pull rate.

5. For all control device and process operating parameters measured during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new control device or process parameter levels, they comply with the applicable emission limits in 40 CFR 63.1382. The owner or operator shall conduct all additional performance tests according to the procedures in this part 63, subpart A and in 40 CFR 63.1384.

6. The permittee shall develop and implement a written plan as described in 40 CFR 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for

malfunctioning process modifications and control systems used to comply with the standard. In addition to the information required in 40 CFR 63.6(e)(3), the plan shall include:

a. Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended;

b. Corrective actions to be taken in the event of a malfunction of a control device or process modification, including procedures for recording the actions taken to correct the malfunction or minimize emissions; and

c. A maintenance schedule for each control device and process modification that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

7. The permittee shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.10(e)(3)(iv).

8. As required by 40 CFR 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart:

a. The owner or operator must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site;

b. The owner or operator may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche; and

c. The owner or operator may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

9. In addition to the general records required by 40 CFR 63.10(b)(2), the permittee shall maintain records of the following information:

a. Any bag leak detection system alarms, including the date and time of the alarm, when corrective actions were initiated, the cause of the alarm, an explanation of the corrective actions taken, and when the cause of the alarm was corrected;

b. Glass pull rate, including any period when the pull rate exceeded the average pull rate established during the performance test by more than 20 percent, the date and time

of the exceedance, when corrective actions were initiated, the cause of the exceedance, an explanation of the corrective actions taken, and when the cause of the exceedance was corrected.

IV. Reporting Requirements

1. As required by 40 CFR 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of the applicable standard or a monitored parameter deviates from the levels established during the performance test. The report shall contain the information specified in 40 CFR 63.10(c) of this part as well as the additional records required by the recordkeeping requirements of paragraph (d) of this section. When no deviations have occurred, the owner or operator shall submit a report stating that no excess emissions occurred during the reporting period.

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

   a. the emission test shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days upon startup of this emissions unit.

   b. the emission test shall be conducted to demonstrate compliance with the emission rate of : 0.5 lb of PM per ton) of glass pulled.

   c. the following test method(s) shall be employed to demonstrate compliance with the requirements specified in A.V.2.b:

      for PM, Methods 1-5 of 40 CFR, Part 60, Appendix A (as measured by the front-half catch only);

   d. the tests shall be conducted in accordance with the procedures in 40 CFR Part 63 subpart A and 40 CFR 63.1384, unless otherwise specified or approved by the Ohio EPA, Northwest District Office.

      i. All monitoring systems and equipment must be installed, operational, and calibrated prior to the performance test.

   Unless a different frequency is specified in 40 CFR 63.1384, the owner or operator must monitor and record process and/or add-on control device parameters at least every 15 minutes during the performance tests. The arithmetic average for each parameter must be calculated using all of the recorded measurements for the parameter.

During each performance test, the owner or operator must monitor and record the glass pull rate for each glass-melting furnace and, if different, the glass pull rate for each rotary spin manufacturing line and flame attenuation manufacturing line. Record the glass pull rate every 15 minutes during any performance test required by this subpart and determine the arithmetic average of the recorded measurements for each test run and calculate the average of the three test runs.

Not later than 60 calendar days before the performance test is initially scheduled to begin, the permittee shall submit an "Intent to Test" notification to the Director (the Ohio EPA, Northwest District Office). The "Intent to Test" notification shall describe in detail the propose 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 Director (the Ohio EPA, Northwest District Office's) refusal to accept the results of the emission test(s).

Personnel form the Director (the Ohio EPA, Northwest District Office) 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 Director (the Ohio EPA, Northwest District Office) before the close of business on the 60th day following the completion of the performance test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Director (the Ohio EPA, Northwest District Office).

2. Compliance with the emission limitation(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):

   a. Emission Limitations: 0.34 lb PE/hr, 1.49 tpy PE

      Applicable Compliance Method: The hourly allowable PE limitation was established by multiplying the maximum process weight rate (lb/hr) [as indicated in the permit application] by an a controlled emission factor (lb/lb of glass] derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

      Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

   b. Emission Limitations: 0.89 lb CO/hr, 3.90 tpy CO

Applicable Compliance Method: The hourly allowable CO emission limitation was established by multiplying the maximum process weight rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass] derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable CO emission limitation by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

c. Emission Limitations: 0.45 lb SO2/hr, 1.97 tons SO2/yr

Applicable Compliance Method: The hourly allowable SO2 emission limitation was established by multiplying the maximum process weight rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable SO2 emission limitation by testing in accordance with Method 1-4 and 6, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

d. Emission Limitation: 0.5 lb of PM per ton of glass pulled.

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

e. Emission Limitation: Visible PE from the stack(s) serving this emissions unit shall not exceed 5% opacity, as a six-minute average

Applicable Compliance Method: If required, compliance with the visible emission limitation for the baghouse stack shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P063 - electric melter 3		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
P064 - forming and collection unit 801 [Administrative modification of PTI 03-16294 issued June 2, 2005 to revised testing requirements]	OAC rule 3745-31-05(A)(3)	OAC rule 3745-21-07(G) OAC rule 3745-17-11(B) OAC rule 3745-23-06(B) OAC rule 3745-21-08(B) OAC rule 3745-18-06(E)
	OAC rule 3745-17-07(A)	
	40 CFR Part 63, Subpart NNN	

Applicable Emissions Limitations/Control Measures	
	See A.I.2.b
	See A.I.2.d
The requirements of this rule also include compliance with the requirements of 40 CFR Part 63 Subpart NNN, OAC rule 3745-17-07(A), and OAC rule 3745-21-07(G).	See A.I.2.c
2.69 pounds (lbs) particulate emissions (PE)/hour (hr), 11.78 tons per year (tpy)PE (See A.I.2.a)	See A.I.2.b
2.02 lbs carbon monoxide (CO)/hr, 8.85 tpy CO	
0.83 lbs organic compounds (OC)/hr, 3.64 tpy OC	
0.09 lb sulfur dioxide (SO2)/hr, 0.39 tpy SO2	
Visible PE from the stack(s) servicing this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.	
The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 3.4 kg of formaldehyde per megagram (6.8 lbs of formaldehyde per ton) of glass pulled.	
None (See A.IV.1)	

2. Additional Terms and Conditions

2.a All PE is assume to be in the form of particulate matter less than 10 microns in size (PM10).

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

2.c The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.d The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On February 14, 2005, OAC rule 3745-23-06 was rescinded; therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the U.S. EPA approves the revision to OAC rule 3745-23-06, the requirement to satisfy the "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

II. Operational Restrictions

1. The use of any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01, is prohibited.

2. The permittee must use a resin in the formulation binder such that the free-formaldehyde content of the resin used does not exceed the free-formaldehyde range contained in the specification for the resin used during the performance test as specified in 40 CFR 63.1384(a)(9).

3. The permittee must use a binder formulation that does not vary from the specification and operating range established and used during the performance test as specified in 40 CFR 63.1384(a)(9). For the purposes of this standard, adding or increasing the quantity of urea and/or lignin in the binder formulation does not constitute a change in the binder formulation.

4. The permittee must operate the process such that the monitored process parameter(s) is not outside the limit(s) established during the performance test as specified in 40 CFR 63.1384(a)(10) for more than 10 percent of the total operating time in a 6-month block reporting period.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;
   b. whether the emissions are representative of normal operations;
   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
   d. the total duration of any visible emission incident; and
   e. any corrective actions taken to minimize or eliminate the visible emissions.

   If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

2. Notwithstanding the frequency of reporting requirements specified in section A.IV, the permittee may reduce the frequency of visual observations for this emissions unit from at least 5 days per week to weekly readings if the following conditions are met:

   a. for 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

   b. the permittee continues to comply with all the record keeping and monitoring requirements specified in section A.III.1.

The permittee shall revert to 5 days per week readings if any abnormal visible emissions are observed.

3. The permittee shall maintain monthly 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.

4. The permittee must prepare a written operations, maintenance, and monitoring plan. The plan must be submitted to the Director for review and approval as part of the application for a part 70 permit. The plant must include the following information:

   a. Procedures for the proper operation and maintenance of process modifications used to meet the emission limits in 40 CFR Part 63.1382.

   b. Procedures for the proper operation and maintenance of monitoring devices used to determine compliance, including quarterly calibration and certification of accuracy of each monitoring device according to the manufacturer's instructions.

   c. Corrective actions to be taken when process parameters deviate from the limit(s) established during initial performance tests.

5. The permittee must establish a correlation between formaldehyde emissions and a process parameter(s) to be monitored.

6. The permittee must monitor the established parameter(s) according to the procedures in the operations, maintenance, and monitoring plan.

7. The permittee must include as part of their operations, maintenance, and monitoring plan the following information:

   a. Procedures for the proper operation and maintenance of the process.

   b. Process parameter(s) to be monitored to demonstrate compliance with the applicable emission limits in 40 CFR 63.1382. Examples of process parameters include loss on ignition (LOI), binder solids content, and binder application rate.

   c. Correlation(s) between process parameter(s) to be monitored and formaldehyde emissions.

   d. A schedule for monitoring the process parameter(s).

   e. Record keeping procedures, consistent with the record keeping requirements of 40 CFR

Part 63.1386, to show that the process parameter value(s) established during the performance test is not exceeded.

8. The permittee must monitor and record the free-formaldehyde content of each resin shipment received and used in the formulation binder.

9. The permittee must monitor and record the formulation of each batch of binder used.

10. The permittee must monitor and record at least once every 8 hours, the product LOI and product density of each bonded wool fiberglass product manufactured.

11. For all process operating parameters during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new control device or process parameter levels, they comply with the applicable emission limits in 40 CFR 63.1382. The owner or operator shall conduct all additional performance tests according to the procedures in 40 CFR Part 63, subpart A and in 40 CFR 63.1384.

12. The permittee shall develop and implement a written plan as described in 40 CFR 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process modifications and control systems used to comply with the standard. In addition to the information required in 40 CFR 63.6(e)(3), the plan shall include:

    a. Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended.

    b. Corrective actions to be taken in the event of a malfunction of a control device or process modification, including procedures for recording the actions taken to correct the malfunction of minimize emissions.

    c. A maintenance schedule for each control device and process modification that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

13. The permittee shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.10(e)(3)(iv).

14. As required by 40 CFR 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart:

a. The permittee must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.

b. The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche.

c. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

15. In addition to the general records required by 40 CFR 63.10(b)(2), the permittee shall maintain records of the following information:

a. The formulation of each binder batch and the LOI and density for each product manufactured on a flame attenuation manufacturing line subject to the provisions of this subpart, and the free formaldehyde content of each resin shipment received and used in the binder formulation.

b. Process parameter level(s) flame attenuation manufacturing lines that use process modifications to comply with the emission limits, including any period when the parameter level(s) deviated from the established limit(s), the date and time of the deviation, when corrective actions were initiated, the cause of the deviation, an explanation of the corrective actions taken, and when the cause of the deviation was corrected.

c. Glass pull rate, including any period when the pull rate exceeded the average pull rate established during the performance test by more than 20 percent, the date and time of the exceedance, when corrective actions were initiated, the cause of the exceedance, and explanation of the corrective actions taken, and when the cause of the exceedance was corrected.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA, Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit quarterly deviation (excursion) reports that identify each month during which a photochemically reactive material was employed. These deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

3. As required by 40 CFR 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of the applicable standard or a monitored parameter deviates from the levels established during the performance test. The report shall contain the information specified in 40 CFR 63.10(c) as well as the additional records required by the record keeping requirements of paragraph (d) of this section When no deviations have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period.

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

   a. the emission test shall be conducted within 60 days after achieving the maximum production rate at which the manufacturing line which includes this emissions unit will be operated, but not later than 180 days upon startup of the above-mentioned manufacturing line.

   b. the emission test shall be conducted to demonstrate compliance with the emission rate of : 6.8 lbs of formaldehyde per ton of glass pulled.

   c. the following test method(s) shall be employed to demonstrate compliance with the requirements specified in A.V.2.b:

      for formaldehyde, Methods 1-4 and 316 or 318 of 40 CFR, Part 60, Appendix A;

   d. the tests shall be conducted in accordance with the procedures in 40 CFR Part 63 subpart A and 40 CFR 63.1384, unless otherwise specified or approved by the Ohio EPA, Northwest District Office.

      i. All monitoring systems and equipment must be installed, operational, and calibrated prior to the performance test.
      Unless a different frequency is specified in 40 CFR 63.1384, the owner or operator must monitor and record process and/or add-on control device parameters at least every 15 minutes during the performance tests. The arithmetic average for each parameter must be calculated using all of the recorded measurements for the parameter.

      During each performance test, the owner or operator must monitor and record the glass pull rate for each glass-melting furnace and, if different, the glass pull rate for each rotary spin manufacturing line and flame attenuation manufacturing line. Record the glass pull rate every 15 minutes during any performance test required

by this subpart and determine the arithmetic average of the recorded measurements for each test run and calculate the average of the three test runs.

Not later than 60 calendar days before the performance test is initially scheduled to begin, the permittee shall submit an "Intent to Test" notification to the Director (the Ohio EPA, Northwest District Office). The "Intent to Test" notification shall describe in detail the propose 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 Director (the Ohio EPA, Northwest District Office's) refusal to accept the results of the emission test(s).

Personnel form the Director (the Ohio EPA, Northwest District Office) 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 Director (the Ohio EPA, Northwest District Office) before the close of business on the 60th day following the completion of the performance test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Director (the Ohio EPA, Northwest District Office).

2. Unless disapproved by the Director, the permittee of a flame attenuation manufacturing line regulated by this subpart may conduct short-term experimental production runs using binder formulations or other process modifications where the process parameter values would be outside those established during performance test without first conducting performance tests. Such runs must not exceed 1 week in duration unless the Director approves a longer period. The permittee must notify the Director and postmark or deliver the notification at least 15 days prior to commencement of the short-term experimental production runs. The Director must inform the permittee of a decision to disapprove or must request additional information prior to the date of the short-term experimental production runs. Notification of the intent to perform and experimental short-term production runt shall include the following information:

   a. the purpose of the experimental production run;
   b. the affected line;
   c. how the established process parameters will deviate from previously approved levels;
   d. the duration of the experimental production run;
   e. the date and time of the experimental production run; and
   f. a description of any emission testing to be performed during the experimental production run.

3. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitations: 2.69 lbs PE/hr, 11.78 tpy PE
Applicable Compliance Method: The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.
Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

b. Emission Limitations: 2.02 lbs CO/hr, 8.85 tpy CO
Applicable Compliance Method: The hourly allowable CO emission limitation was established by multiplying the maximum gas burning rate (mmcf/hr) [as indicated in the permit application] by an emission factor (lb/mmcf) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable CO emission limitation by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.
Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

c. Emission Limitations: 0.83 lbs OC/hr, 3.64 tons OC/yr
Applicable Compliance Method: The hourly allowable OC emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable OC emission limitation by testing in accordance with Method 1-4, and 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.
Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

d. Emission Limitations: 0.09 lb SO2/hr, 0.39 ton SO2/yr
Applicable Compliance Method: The hourly allowable SO2 emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable SO2 emission limitation by testing in accordance with Methods 1-4, and 6 as appropriate, of 40 CFR, Part 60, Appendix A.
Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

e. Emission Limitation: 6.8 lbs formaldehyde per ton of glass pulled

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

f. Emission Limitation: Visible PE shall not exceed 20 percent opacity, as a six-minute average, except as otherwise provided by rule.
Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P064 - forming and collection unit 801 [Administrative modification of PTI 03-16294 issued June 2, 2005 to revised testing requirements]		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	40 CFR Part 63, Subpart NNN
P065 - sear roll and curing oven 801	OAC rule 3745-31-05(A)(3)	
[Administrative modification of PTI 03-16294 issued June 2, 2005 to revised testing requirements]		AC rule 3745-21-07(G)
		OAC rule 3745-17-11(B)
		OAC rule 3745-23-06(B)
		OAC rule 3745-21-08(B)
		OAC rule 3745-18-06(E)
	OAC rule 3745-17-07(A)	

Applicable Emissions Limitations/Control Measures	
The requirements of this rule also include compliance with the requirements of 40 CFR Part 63 Subpart NNN, OAC rule 3745-17-07(A) and OAC rule 3745-21-07(G).	glass pulled. None (See A.IV.1) See A.I.2.b See A.I.2.d See A.I.2.c See A.I.2.b
0.56 pounds (lbs) particulate emissions (PE)/hour (hr), 2.45 tons per year (tpy)PE (See A.I.2.a)	
1.24 lbs carbon monoxide (CO)/hr, 5.43 tpy CO	
0.51 lbs organic compounds (OC)/hr, 2.23 tpy OC	
0.49 lb nitrogen oxide (NOx)/hr, 2.15 tpy NOx	
0.13 lb sulfur dioxide (SO2)/hr, 0.57 tpy SO2	
Visible PE from the stack(s) servicing this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.	
The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 3.4 kg of formaldehyde per megagram (6.8 lbs of formaldehyde per ton) of	

2. Additional Terms and Conditions

2.a All PE is assume to be in the form of particulate matter less than 10 microns in size (PM10)..

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

2.c The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.d The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On February 14, 2005, OAC rule 3745-23-06 was rescinded; therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the U.S. EPA approves the revision to OAC rule 3745-23-06, the requirement to satisfy the "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

II. Operational Restrictions

1. The use of any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01, is prohibited.

2. The permittee must use a resin in the formulation binder such that the free-formaldehyde content of the resin used does not exceed the free-formaldehyde range contained in the specification for the resin used during the performance test as specified in 40 CFR 63.1384(a)(9).

3. The permittee must use a binder formulation that does not vary from the specification and operating range established and used during the performance test as specified in 40 CFR 63.1384(a)(9). For the purposes of this standard, adding or increasing the quantity of urea and/or lignin in the binder formulation does not constitute a change in the binder formulation.

4. The permittee must operate the process such that the monitored process parameter(s) is not outside the limit(s) established during the performance test as specified in 40 CFR 63.1384(a)(10) for more than 10 percent of the total operating time in a 6-month block reporting period.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;

   b. whether the emissions are representative of normal operations;

   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

   d. the total duration of any visible emission incident; and

   e. any corrective actions taken to minimize or eliminate the visible emissions.

   If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

2. Notwithstanding the frequency of reporting requirements specified in section A.IV, the permittee may reduce the frequency of visual observations for this emissions unit from at least 5 days per week to weekly readings if the following conditions are met:

   a. for 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

b. the permittee continues to comply with all the record keeping and monitoring requirements specified in section A.III.1.

The permittee shall revert to 5 days per week readings if any abnormal visible emissions are observed.

3. The permittee shall maintain monthly 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.

4. The permittee must prepare a written operations, maintenance, and monitoring plan. The plan must be submitted to the Director for review and approval as part of the application for a part 70 permit. The plant must include the following information:

   a. Procedures for the proper operation and maintenance of process modifications used to meet the emission limits in 40 CFR Part 63.1382.

   b. Procedures for the proper operation and maintenance of monitoring devices used to determine compliance, including quarterly calibration and certification of accuracy of each monitoring device according to the manufacturer's instructions.

   c. Corrective actions to be taken when process parameters deviate from the limit(s) established during initial performance tests.

5. The permittee must establish a correlation between formaldehyde emissions and a process parameter(s) to be monitored.

6. The permittee must monitor the established parameter(s) according to the procedures in the operations, maintenance, and monitoring plan.

7. The permittee must include as part of their operations, maintenance, and monitoring plan the following information:

   a. Procedures for the proper operation and maintenance of the process.

   b. Process parameter(s) to be monitored to demonstrate compliance with the applicable

emission limits in 40 CFR 63.1382. Examples of process parameters include loss on ignition (LOI), binder solids content, and binder application rate.

c. Correlation(s) between process parameter(s) to be monitored and formaldehyde emissions.

d. A schedule for monitoring the process parameter(s).

e. Record keeping procedures, consistent with the record keeping requirements of 40 CFR Part 63.1386, to show that the process parameter value(s) established during the performance test is not exceeded.

8. The permittee must monitor and record the free-formaldehyde content of each resin shipment received and used in the formulation binder.

9. The permittee must monitor and record the formulation of each batch of binder used.

10. The permittee must monitor and record at least once every 8 hours, the product LOI and product density of each bonded wool fiberglass product manufactured.

11. For all process operating parameters during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new control device or process parameter levels, they comply with the applicable emission limits in 40 CFR 63.1382. The owner or operator shall conduct all additional performance tests according to the procedures in 40 CFR Part 63, subpart A and in 40 CFR 63.1384.

12. The permittee shall develop and implement a written plan as described in 40 CFR 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process modifications and control systems used to comply with the standard. In addition to the information required in 40 CFR 63.6(e)(3), the plan shall include:

a. Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended.

b. Corrective actions to be taken in the event of a malfunction of a control device or process modification, including procedures for recording the actions taken to correct the malfunction of minimize emissions.

c. A maintenance schedule for each control device and process modification that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

13. The permittee shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the

procedures in the plan as described in 40 CFR 63.10(e)(3)(iv).

14. As required by 40 CFR 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart:

    a. The permittee must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.

    b. The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche.

    c. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

15. In addition to the general records required by 40 CFR 63.10(b)(2), the permittee shall maintain records of the following information:

    a. The formulation of each binder batch and the LOI and density for each product manufactured on a flame attenuation manufacturing line subject to the provisions of this subpart, and the free formaldehyde content of each resin shipment received and used in the binder formulation.

    b. Process parameter level(s) flame attenuation manufacturing lines that use process modifications to comply with the emission limits, including any period when the parameter level(s) deviated from the established limit(s), the date and time of the deviation, when corrective actions were initiated, the cause of the deviation, an explanation of the corrective actions taken, and when the cause of the deviation was corrected.

    c. Glass pull rate, including any period when the pull rate exceeded the average pull rate established during the performance test by more than 20 percent, the date and time of the exceedance, when corrective actions were initiated, the cause of the exceedance, and explanation of the corrective actions taken, and when the cause of the exceedance was corrected.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA, Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit quarterly deviation (excursion) reports that identify each month during which a photochemically reactive material was employed. These deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

3. As required by 40 CFR 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of the applicable standard or a monitored parameter deviates from the levels established during the performance test. The report shall contain the information specified in 40 CFR 63.10(c) as well as the additional records required by the record keeping requirements of paragraph (d) of this section When no deviations have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period.

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

   a. the emission test shall be conducted within 60 days after achieving the maximum production rate at which the manufacturing line which includes this emissions unit will be operated, but not later than 180 days upon startup of the above-mentioned manufacturing line.

   b. the emission test shall be conducted to demonstrate compliance with the emission rate of 6.8 lbs of formaldehyde per ton of glass pulled.

   c. the following test method(s) shall be employed to demonstrate compliance with the requirements specified in A.V.2.b:

      for formaldehyde, Methods 1-4 and 316 or 318 of 40 CFR, Part 60, Appendix A;

   d. the tests shall be conducted in accordance with the procedures in 40 CFR Part 63 subpart A and 40 CFR 63.1384, unless otherwise specified or approved by the Ohio EPA, Northwest District Office.

      i. All monitoring systems and equipment must be installed, operational, and calibrated prior to the performance test.

Unless a different frequency is specified in 40CFR 63.1384, the owner or operator must monitor

and record process and/or add-on control device parameters at least every 15 minutes during the performance tests. The arithmetic average for each parameter must be calculated using all of the recorded measurements for the parameter.

During each performance test, the owner or operator must monitor and record the glass pull rate for each glass-melting furnace and, if different, the glass pull rate for each rotary spin manufacturing line and flame attenuation manufacturing line. Record the glass pull rate every 15 minutes during any performance test required by this subpart and determine the arithmetic average of the recorded measurements for each test run and calculate the average of the three test runs.

Not later than 60 calendar days before the performance test is initially scheduled to begin, the permittee shall submit an "Intent to Test" notification to the Director (the Ohio EPA, Northwest District Office). The "Intent to Test" notification shall describe in detail the propose 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 Director (the Ohio EPA, Northwest District Office's) refusal to accept the results of the emission test(s).
Personnel form the Director (the Ohio EPA, Northwest District Office) 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 Director (the Ohio EPA, Northwest District Office) before the close of business on the 60th day following the completion of the performance test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Director (the Ohio EPA, Northwest District Office).

2. Unless disapproved by the Director, the permittee of a flame attenuation manufacturing line regulated by this subpart may conduct short-term experimental production runs using binder formulations or other process modifications where the process parameter values would be outside those established during performance test without first conducting performance tests. Such runs must not exceed 1 week in duration unless the Director approves a longer period. The permittee must notify the Director and postmark or deliver the notification at least 15 days prior to commencement of the short-term experimental production runs. The Director must inform the permittee of a decision to disapprove or must request additional information prior to the date of the short-term experimental production runs. Notification of the intent to perform and experimental short-term production runt shall include the following information:

   a. the purpose of the experimental production run;

   b. the affected line;

c. how the established process parameters will deviate from previously approved levels;

d. the duration of the experimental production run;

e. the date and time of the experimental production run; and

f. a description of any emission testing to be performed during the experimental production run.

2. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitations: 0.56 lb PE/hr, 2.45 tpy PE

Applicable Compliance Method: The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

b. Emission Limitations: 1.24 lbs CO/hr, 5.43 tpy CO

Applicable Compliance Method: The hourly allowable CO emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable CO emission limitation by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

c. Emission Limitations: 0.51 lb OC/hr, 2.23 tons OC/yr

Applicable Compliance Method: The hourly allowable OC emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit

application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable OC emission limitation by testing in accordance with Methods 1-4 and Method 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

d. Emission Limitations: 0.49 lb NOx/hr, 2.15 tpy NOx

Applicable Compliance Method: The hourly allowable NOx emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable OC emission limitation by testing in accordance with Methods 1-4 and 7, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

e. Emission Limitations: 0.13 lb SO2/hr, 0.57 tpy SO2

Applicable Compliance Method: The hourly allowable SO2 emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass] derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable SO2 emission limitation by testing in accordance with Methods 1-4 and 6, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

f. Emission Limitation: 6.8 lbs formaldehyde per ton of glass pulled

Applicable Compliance Method: Compliance with the above limitation shall be demonstrated by the results of the stack testing conducted in accordance with A.V.1 above.

g. Emission Limitation:Visible PE shall not exceed 20 percent opacity, as a six-minute average, except as otherwise provided by rule.

Applicable Compliance Method: If required, the permittee shall demonstrate compliance

with the visible PE limitation above in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P065 - sear roll and curing oven 801 [Administrative modification of PTI 03-16294 issued June 2, 2005 to revised testing requirements]		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P066 - product finishing unit 801	OAC rule 3745-31-05(A)(3)	0.26 pound (lb) particulate emissions (PE)/hour (hr), 1.14 tons/year (tpy) PE (See A.I.2.b) See A.I.2.a Visible PE from the stack(s) servicing this emissions unit shall not exceed 5% opacity, as a six-minute average
	OAC rule 3745-17-07(A)	See A.I.2.c
	OAC rule 3745-17-11(B)	See A.I.2.c

2. Additional Terms and Conditions

2.a The "Best Available Technology" (BAT) control requirements for this emissions unit has been determined to be the use of a control system consisting of a cyclone and baghouse (finishing dust collector). The control system shall achieve a 99% removal efficiency for PE (100% capture).

2.b All PE is assumed to be in the form of particulate matter less than 10 microns in size (PM10).

2.c 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

None

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;

   b. whether the emissions are representative of normal operations;

   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

   d. the total duration of any visible emission incident; and

   e. any corrective actions taken to minimize or eliminate the visible emissions.

2. Notwithstanding the frequency of reporting requirements specified in section A.IV, the permittee may reduce the frequency of visual observations for this emissions unit from at least 5 days per week to weekly readings if the following conditions are met:

   a. for 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

   b. the permittee continues to comply with all the record keeping and monitoring requirements specified in section A.III.1.

   The permittee shall revert to 5 days per week readings if any abnormal visible emissions are observed.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the stack serving this emissions unit and (b)

describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA, Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):

   a. Emission Limitations: 0.26 lb PE/hr, 1.14 tpy PE

      Applicable Compliance Method: The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by a controlled emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

      Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

   b. Emission Limitation:Visible PE from the stack(s) servicing this emissions unit shall not exceed 5% opacity, as a six-minute average.

      Applicable Compliance Method: If required, compliance with the visible emission limitation for the baghouse stack shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P066 - product finishing unit 801		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
P067 - forming and collection unit 802 [Administrative modification of PTI 03-16294 issued June 2, 2005 to revised testing requirements]	OAC rule 3745-31-05(A)(3)	OAC rule 3745-21-07(G) OAC rule 3745-17-11(B) OAC rule 3745-23-06(B) OAC rule 3745-21-08(B) OAC rule 3745-18-06(E)
	OAC rule 3745-17-07(A)	
	40 CFR Part 63, Subpart NNN	

Applicable Emissions Limitations/Control Measures	
The requirements of this rule also include compliance with the requirements of 40 CFR Part 63 Subpart NNN, OAC rule 3745-17-07(A), OAC rule 3745-21-07(G).	See A.I.2.b See A.I.2.d See A.I.2.c See A.I.2.b
2.69 pounds (lbs) particulate emissions (PE)/hour (hr), 11.78 tons per year (tpy)PE (See A.I.2.a)	
2.02 lbs carbon monoxide (CO)/hr, 8.85 tpy CO	
0.83 lbs organic compounds (OC)/hr, 3.64 tpy OC	
0.09 lb sulfur dioxide (SO2)/hr, 0.39 tpy SO2	
Visible PE from the stack(s) servicing this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.	
The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 3.4 kg of formaldehyde per megagram (6.8 lbs of formaldehyde per ton) of glass pulled.	
None (See A.IV.1)	

2. Additional Terms and Conditions

2.a All PE is assume to be in the form of particulate matter less than 10 microns in size (PM10).

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

2.c The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.d The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On February 14, 2005, OAC rule 3745-23-06 was rescinded; therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the U.S. EPA approves the revision to OAC rule 3745-23-06, the requirement to satisfy the "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

II. Operational Restrictions

1. The use of any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01, is prohibited.

2. The permittee must use a resin in the formulation binder such that the free-formaldehyde content of the resin used does not exceed the free-formaldehyde range contained in the specification for the resin used during the performance test as specified in 40 CFR 63.1384(a)(9).

3. The permittee must use a binder formulation that does not vary from the specification and operating range established and used during the performance test as specified in 40 CFR 63.1384(a)(9). For the purposes of this standard, adding or increasing the quantity of urea and/or lignin in the binder formulation does not constitute a change in the binder formulation.

4. The permittee must operate the process such that the monitored process parameter(s) is not outside the limit(s) established during the performance test as specified in 40 CFR 63.1384(a)(10) for more than 10 percent of the total operating time in a 6-month block reporting period.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;

   b. whether the emissions are representative of normal operations;

   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

   d. the total duration of any visible emission incident; and

   e. any corrective actions taken to minimize or eliminate the visible emissions.

   If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous

during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

2. Notwithstanding the frequency of reporting requirements specified in section A.IV, the permittee may reduce the frequency of visual observations for this emissions unit from at least 5 days per week to weekly readings if the following conditions are met:

   a. for 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

   b. the permittee continues to comply with all the record keeping and monitoring requirements specified in section A.III.1.

   The permittee shall revert to 5 days per week readings if any abnormal visible emissions are observed.

3. The permittee shall maintain monthly 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.

4. The permittee must prepare a written operations, maintenance, and monitoring plan. The plan must be submitted to the Director for review and approval as part of the application for a part 70 permit. The plant must include the following information:

   a. Procedures for the proper operation and maintenance of process modifications used to meet the emission limits in 40 CFR Part 63.1382.

   b. Procedures for the proper operation and maintenance of monitoring devices used to determine compliance, including quarterly calibration and certification of accuracy of each monitoring device according to the manufacturer’s instructions.

   c. Corrective actions to be taken when process parameters deviate from the limit(s) established during initial performance tests.

5. The permittee must establish a correlation between formaldehyde emissions and a process parameter(s) to be monitored.

6. The permittee must monitor the established parameter(s) according to the procedures in the operations, maintenance, and monitoring plan.

7. The permittee must include as part of their operations, maintenance, and monitoring plan the following information:

   a. Procedures for the proper operation and maintenance of the process.

   b. Process parameter(s) to be monitored to demonstrate compliance with the applicable emission limits in 40 CFR 63.1382. Examples of process parameters include loss on ignition (LOI), binder solids content, and binder application rate.

   c. Correlation(s) between process parameter(s) to be monitored and formaldehyde emissions.

   d. A schedule for monitoring the process parameter(s).

   e. Record keeping procedures, consistent with the record keeping requirements of 40 CFR Part 63.1386, to show that the process parameter value(s) established during the performance test is not exceeded.

8. The permittee must monitor and record the free-formaldehyde content of each resin shipment received and used in the formulation binder.

9. The permittee must monitor and record the formulation of each batch of binder used.

10. The permittee must monitor and record at least once every 8 hours, the product LOI and product density of each bonded wool fiberglass product manufactured.

11. For all process operating parameters during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new control device or process parameter levels, they comply with the applicable emission limits in 40 CFR 63.1382. The owner or operator shall conduct all additional performance tests according to the procedures in 40 CFR Part 63, subpart A and in 40 CFR 63.1384.

12. The permittee shall develop and implement a written plan as described in 40 CFR 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process modifications and control systems used to comply with the standard. In addition to the information required in 40 CFR 63.6(e)(3), the plan shall include:

   a. Procedures to determine and record the cause of the malfunction and the time the

malfunction began and ended.

b. Corrective actions to be taken in the event of a malfunction of a control device or process modification, including procedures for recording the actions taken to correct the malfunction of minimize emissions.

c. A maintenance schedule for each control device and process modification that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

13. The permittee shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.10(e)(3)(iv).

14. As required by 40 CFR 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart:

a. The permittee must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.

b. The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche.

c. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

15. In addition to the general records required by 40 CFR 63.10(b)(2), the permittee shall maintain records of the following information:

a. The formulation of each binder batch and the LOI and density for each product manufactured on a flame attenuation manufacturing line subject to the provisions of this subpart, and the free formaldehyde content of each resin shipment received and used in the binder formulation.

b. Process parameter level(s) flame attenuation manufacturing lines that use process modifications to comply with the emission limits, including any period when the parameter level(s) deviated from the established limit(s), the date and time of the deviation, when corrective actions were initiated, the cause of the deviation, an explanation of the corrective actions taken, and when the cause of the deviation was corrected.

c. Glass pull rate, including any period when the pull rate exceeded the average pull rate established during the performance test by more than 20 percent, the date and time of the exceedance, when corrective actions were initiated, the cause of the exceedance, and explanation of the corrective actions taken, and when the cause of the exceedance was corrected.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA, Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit quarterly deviation (excursion) reports that identify each month during which a photochemically reactive material was employed. These deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

3. As required by 40 CFR 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of the applicable standard or a monitored parameter deviates from the levels established during the performance test. The report shall contain the information specified in 40 CFR 63.10(c) as well as the additional records required by the record keeping requirements of paragraph (d) of this section When no deviations have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period.

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

   a. the emission test shall be conducted within 60 days after achieving the maximum production rate at which the manufacturing line which includes this emissions unit will be operated, but not later than 180 days upon startup of the above-mentioned manufacturing line.

   b. the emission test shall be conducted to demonstrate compliance with the emission rate of : 6.8 lbs of formaldehyde per ton of glass pulled.

   c. the following test method(s) shall be employed to demonstrate compliance with the requirements specified in A.V.2.b:

      for formaldehyde, Methods 1-4 and 316 or 318 of 40 CFR, Part 60, Appendix A;

   d. the tests shall be conducted in accordance with the procedures in 40 CFR Part 63 subpart A and 40 CFR 63.1384, unless otherwise specified or approved by the Ohio EPA, Northwest District Office.

i. All monitoring systems and equipment must be installed, operational, and calibrated prior to the performance test.

Unless a different frequency is specified in 40CFR 63.1384, the owner or operator must monitor and record process and/or add-on control device parameters at least every 15 minutes during the performance tests. The arithmetic average for each parameter must be calculated using all of the recorded measurements for the parameter.

During each performance test, the owner or operator must monitor and record the glass pull rate for each glass-melting furnace and, if different, the glass pull rate for each rotary spin manufacturing line and flame attenuation manufacturing line. Record the glass pull rate every 15 minutes during any performance test required by this subpart and determine the arithmetic average of the recorded measurements for each test run and calculate the average of the three test runs.

Not later than 60 calendar days before the performance test is initially scheduled to begin, the permittee shall submit an "Intent to Test" notification to the Director (the Ohio EPA, Northwest District Office). The "Intent to Test" notification shall describe in detail the propose 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 Director (the Ohio EPA, Northwest District Office's) refusal to accept the results of the emission test(s).

Personnel form the Director (the Ohio EPA, Northwest District Office) 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 Director (the Ohio EPA, Northwest District Office) before the close of business on the 60th day following the completion of the performance test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Director (the Ohio EPA, Northwest District Office).

2. Unless disapproved by the Director, the permittee of a flame attenuation manufacturing line regulated by this subpart may conduct short-term experimental production runs using binder formulations or other process modifications where the process parameter values would be outside those established during performance test without first conducting performance tests. Such runs must not exceed 1 week in duration unless the Director approves a longer period. The permittee must notify the Director and postmark or deliver the notification at least 15 days prior to commencement of the short-term experimental production runs. The Director must inform the permittee of a decision to disapprove or must request additional information prior to the date of the short-term experimental production runs. Notification of the intent to perform and experimental short-term production runt shall include the following information:

a. the purpose of the experimental production run;

b. the affected line;

c. how the established process parameters will deviate from previously approved levels;

d. the duration of the experimental production run;

e. the date and time of the experimental production run; and

f. a description of any emission testing to be performed during the experimental production run.

3. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitations: 2.69 lbs PE/hr, 11.78 tpy PE
Applicable Compliance Method: The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.
Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

b. Emission Limitations: 2.02 lbs CO/hr, 8.85 tpy CO
Applicable Compliance Method: The hourly allowable CO emission limitation was established by multiplying the maximum gas burning rate (mmcf/hr) [as indicated in the permit application] by an emission factor (lb/mmcf) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable CO emission limitation by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.
Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

c. Emission Limitations: 0.83 lbs OC/hr, 3.64 tons OC/yr
Applicable Compliance Method: The hourly allowable OC emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable OC emission limitation by testing in accordance with Method 1-4, and 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

d. Emission Limitations: 0.09 lb SO2/hr, 0.39 ton SO2/yr
Applicable Compliance Method: The hourly allowable SO2 emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable SO2 emission limitation by testing in accordance with Methods 1-4, and 6 as appropriate, of 40 CFR, Part 60, Appendix A.
Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

e. Emission Limitation: 6.8 lbs formaldehyde per ton of glass pulled
Applicable Compliance Method: Compliance with the formaldehyde emission limitation shall be determined through the testing required in sections A.V.1 of the terms and conditions of this permit.

f. Emission Limitation:Visible PE shall not exceed 20 percent opacity, as a six-minute average, except as otherwise provided by rule.
Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P067 - forming and collection unit 802 [Administrative modification of PTI 03-16294 issued June 2, 2005 to revised testing requirements]		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	40 CFR Part 63, Subpart NNN
P068 - sear roll and curing oven 802	OAC rule 3745-31-05(A)(3)	
[Administrative modification of PTI 03-16294 issued June 2, 2005 to revised testing requirements]		OAC rule 3745-21-07(G)
		OAC rule 3745-17-11(B)
		OAC rule 3745-23-06(B)
		OAC rule 3745-21-08(B)
		OAC rule 3745-18-06(E)
	OAC rule 3745-17-07(A)	

Applicable Emissions Limitations/Control Measures	
The requirements of this rule also include compliance with the requirements of 40 CFR Part 63 Subpart NNN, OAC rule 3745-17-07(A) and OAC rule 3745-21-07(G).	glass pulled.
0.56 pounds (lbs) particulate emissions (PE)/hour (hr), 2.45 tons per year (tpy)PE (See A.I.2.a)	None (See A.IV.1)
1.24 lbs carbon monoxide (CO)/hr, 5.43 tpy CO	See A.I.2.b
0.51 lbs organic compounds (OC)/hr, 2.23 tpy OC	See A.I.2.d
0.49 lb nitrogen oxide (NOx)/hr, 2.15 tpy NOx	See A.I.2.c
0.13 lb sulfur dioxide (SO2)/hr, 0.57 tpy SO2	See A.I.2.b
Visible PE from the stack(s) servicing this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.	
The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 3.4 kg of formaldehyde per megagram (6.8 lbs of formaldehyde per ton) of	

2. Additional Terms and Conditions

2.a All PE is assume to be in the form of particulate matter less than 10 microns in size (PM10).

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

2.c The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.d The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On February 14, 2005, OAC rule 3745-23-06 was rescinded; therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the U.S. EPA approves the revision to OAC rule 3745-23-06, the requirement to satisfy the "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

II. Operational Restrictions

1. The use of any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01, is prohibited.

2. The permittee must use a resin in the formulation binder such that the free-formaldehyde content of the resin used does not exceed the free-formaldehyde range contained in the specification for the resin used during the performance test as specified in 40 CFR 63.1384(a)(9).

3. The permittee must use a binder formulation that does not vary from the specification and operating range established and used during the performance test as specified in 40 CFR 63.1384(a)(9). For the purposes of this standard, adding or increasing the quantity of urea and/or lignin in the binder formulation does not constitute a change in the binder formulation.

4. The permittee must operate the process such that the monitored process parameter(s) is not outside the limit(s) established during the performance test as specified in 40 CFR 63.1384(a)(10) for more than 10 percent of the total operating time in a 6-month block reporting period.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;

   b. whether the emissions are representative of normal operations;

   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

   d. the total duration of any visible emission incident; and

   e. any corrective actions taken to minimize or eliminate the visible emissions.

   If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

2. Notwithstanding the frequency of reporting requirements specified in section A.IV, the permittee may reduce the frequency of visual observations for this emissions unit from at least 5 days per week to weekly readings if the following conditions are met:

   a. for 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

b. the permittee continues to comply with all the record keeping and monitoring requirements specified in section A.III.1.

The permittee shall revert to 5 days per week readings if any abnormal visible emissions are observed.

3. The permittee shall maintain monthly 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.

4. The permittee must prepare a written operations, maintenance, and monitoring plan. The plan must be submitted to the Director for review and approval as part of the application for a part 70 permit. The plant must include the following information:

   a. Procedures for the proper operation and maintenance of process modifications used to meet the emission limits in 40 CFR Part 63.1382.

   b. Procedures for the proper operation and maintenance of monitoring devices used to determine compliance, including quarterly calibration and certification of accuracy of each monitoring device according to the manufacturer's instructions.

   c. Corrective actions to be taken when process parameters deviate from the limit(s) established during initial performance tests.

5. The permittee must establish a correlation between formaldehyde emissions and a process parameter(s) to be monitored.

6. The permittee must monitor the established parameter(s) according to the procedures in the operations, maintenance, and monitoring plan.

7. The permittee must include as part of their operations, maintenance, and monitoring plan the following information:

   a. Procedures for the proper operation and maintenance of the process.

   b. Process parameter(s) to be monitored to demonstrate compliance with the applicable

emission limits in 40 CFR 63.1382. Examples of process parameters include loss on ignition (LOI), binder solids content, and binder application rate.

c. Correlation(s) between process parameter(s) to be monitored and formaldehyde emissions.

d. A schedule for monitoring the process parameter(s).

e. Record keeping procedures, consistent with the record keeping requirements of 40 CFR Part 63.1386, to show that the process parameter value(s) established during the performance test is not exceeded.

8. The permittee must monitor and record the free-formaldehyde content of each resin shipment received and used in the formulation binder.

9. The permittee must monitor and record the formulation of each batch of binder used.

10. The permittee must monitor and record at least once every 8 hours, the product LOI and product density of each bonded wool fiberglass product manufactured.

11. For all process operating parameters during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new control device or process parameter levels, they comply with the applicable emission limits in 40 CFR 63.1382. The owner or operator shall conduct all additional performance tests according to the procedures in 40 CFR Part 63, subpart A and in 40 CFR 63.1384.

12. The permittee shall develop and implement a written plan as described in 40 CFR 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process modifications and control systems used to comply with the standard. In addition to the information required in 40 CFR 63.6(e)(3), the plan shall include:

    a. Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended.

    b. Corrective actions to be taken in the event of a malfunction of a control device or process modification, including procedures for recording the actions taken to correct the malfunction of minimize emissions.

    c. A maintenance schedule for each control device and process modification that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

13. The permittee shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.10(e)(3)(iv).

14. As required by 40 CFR 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart:

    a. The permittee must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.

    b. The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche.

    c. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

15. In addition to the general records required by 40 CFR 63.10(b)(2), the permittee shall maintain records of the following information:

    a. The formulation of each binder batch and the LOI and density for each product manufactured on a flame attenuation manufacturing line subject to the provisions of this subpart, and the free formaldehyde content of each resin shipment received and used in the

binder formulation.

b. Process parameter level(s) flame attenuation manufacturing lines that use process modifications to comply with the emission limits, including any period when the parameter level(s) deviated from the established limit(s), the date and time of the deviation, when corrective actions were initiated, the cause of the deviation, an explanation of the corrective actions taken, and when the cause of the deviation was corrected.

c. Glass pull rate, including any period when the pull rate exceeded the average pull rate established during the performance test by more than 20 percent, the date and time of the exceedance, when corrective actions were initiated, the cause of the exceedance, and explanation of the corrective actions taken, and when the cause of the exceedance was corrected.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA, Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit quarterly deviation (excursion) reports that identify each month during which a photochemically reactive material was employed. These deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

3. As required by 40 CFR 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of the applicable standard or a monitored parameter deviates from the levels established during the performance test. The report shall contain the information specified in 40 CFR 63.10(c) as well as the additional records required by the record keeping requirements of paragraph (d) of this section When no deviations have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period.

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

   a. the emission test shall be conducted within 60 days after achieving the maximum production rate at which the manufacturing line which includes this emissions unit will be operated, but not later than 180 days upon startup of the above-mentioned manufacturing line.

   b. the emission test shall be conducted to demonstrate compliance with the emission rate of

6.8 lbs of formaldehyde per ton of glass pulled.

c. the following test method(s) shall be employed to demonstrate compliance with the requirements specified in A.V.2.b:

for formaldehyde, Methods 1-4 and 316 or 318 of 40 CFR, Part 60, Appendix A;

d. the tests shall be conducted in accordance with the procedures in 40 CFR Part 63 subpart A and 40 CFR 63.1384, unless otherwise specified or approved by the Ohio EPA, Northwest District Office.

i. All monitoring systems and equipment must be installed, operational, and calibrated prior to the performance test.

Unless a different frequency is specified in 40CFR 63.1384, the owner or operator must monitor and record process and/or add-on control device parameters at least every 15 minutes during the performance tests. The arithmetic average for each parameter must be calculated using all of the recorded measurements for the parameter.

During each performance test, the owner or operator must monitor and record the glass pull rate for each glass-melting furnace and, if different, the glass pull rate for each rotary spin manufacturing line and flame attenuation manufacturing line. Record the glass pull rate every 15 minutes during any performance test required by this subpart and determine the arithmetic average of the recorded measurements for each test run and calculate the average of the three test runs.

Not later than 60 calendar days before the performance test is initially scheduled to begin, the permittee shall submit an "Intent to Test" notification to the Director (the Ohio EPA, Northwest District Office). The "Intent to Test" notification shall describe in detail the propose 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 Director (the Ohio EPA, Northwest District Office's) refusal to accept the results of the emission test(s).
Personnel form the Director (the Ohio EPA, Northwest District Office) 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 Director (the Ohio EPA, Northwest District Office) before the close of business on the 60th day following the completion

of the performance test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Director (the Ohio EPA, Northwest District Office).

2. Unless disapproved by the Director, the permittee of a flame attenuation manufacturing line regulated by this subpart may conduct short-term experimental production runs using binder formulations or other process modifications where the process parameter values would be outside those established during performance test without first conducting performance tests. Such runs must not exceed 1 week in duration unless the Director approves a longer period. The permittee must notify the Director and postmark or deliver the notification at least 15 days prior to commencement of the short-term experimental production runs. The Director must inform the permittee of a decision to disapprove or must request additional information prior to the date of the short-term experimental production runs. Notification of the intent to perform and experimental short-term production runt shall include the following information:

   a. the purpose of the experimental production run;
   b. the affected line;

   c. how the established process parameters will deviate from previously approved levels;

   d. the duration of the experimental production run;

   e. the date and time of the experimental production run; and

   f. a description of any emission testing to be performed during the experimental production run.

2. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

   a. <u>Emission Limitations:</u> 0.56 lb PE/hr, 2.45 tpy PE

      <u>Applicable Compliance Method:</u> The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

      Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

b. Emission Limitations: 1.24 lbs CO/hr, 5.43 tpy CO

Applicable Compliance Method: The hourly allowable CO emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable CO emission limitation by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

c. Emission Limitations: 0.51 lb OC/hr, 2.23 tons OC/yr

Applicable Compliance Method: The hourly allowable OC emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable OC emission limitation by testing in accordance with Methods 1-4 and Method 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

d. Emission Limitations: 0.49 lb NOx/hr, 2.15 tpy NOx

Applicable Compliance Method: The hourly allowable NOx emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable OC emission limitation by testing in accordance with Methods 1-4 and 7, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

e. Emission Limitations: 0.13 lb SO2/hr, 0.57 tpy SO2

Applicable Compliance Method: The hourly allowable SO2 emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass] derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable

SO2 emission limitation by testing in accordance with Methods 1-4 and 6, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

f. Emission Limitation: 6.8 lbs formaldehyde per ton of glass pulled

Applicable Compliance Method: Compliance with the above limitation shall be demonstrated by the results of the stack testing conducted in accordance with A.V.1 above.

g. Emission Limitation: Visible PE shall not exceed 20 percent opacity, as a six-minute average, except as otherwise provided by rule.

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P068 - sear roll and curing oven 802 [Administrative modification of PTI 03-16294 issued June 2, 2005 to revised testing requirements]		

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

Johns Manville International Inc. Plt08 **Facility ID: 032001000**

PTI Application: 03-16294

Modif

Emissions Unit ID: P068

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P069 - product finishing unit 802	OAC rule 3745-31-05(A)(3)	0.26 pound (lb) particulate emissions (PE)/hour (hr), 1.14 tons/year (tpy) PE (See A.I.2.b) See A.I.2.a Visible PE from the stack(s) servicing this emissions unit shall not exceed 5% opacity, as a six-minute average
	OAC rule 3745-17-07(A)	See A.I.2.c
	OAC rule 3745-17-11(B)	See A.I.2.c

2. Additional Terms and Conditions

2.a The "Best Available Technology" (BAT) control requirements for this emissions unit has been determined to be the use of a control system consisting of a cyclone and baghouse (finishing dust collector). The control system shall achieve a 99% removal efficiency for PE (100% capture).

2.b All PE is assumed to be in the form of particulate matter less than 10 microns in size (PM10).

2.c 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

None

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;

   b. whether the emissions are representative of normal operations;

   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

   d. the total duration of any visible emission incident; and

   e. any corrective actions taken to minimize or eliminate the visible emissions.

2. Notwithstanding the frequency of reporting requirements specified in section A.IV, the permittee may reduce the frequency of visual observations for this emissions unit from at least 5 days per week to weekly readings if the following conditions are met:

   a. for 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

   b. the permittee continues to comply with all the record keeping and monitoring requirements specified in section A.III.1.

   The permittee shall revert to 5 days per week readings if any abnormal visible emissions are observed.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions.

These reports shall be submitted to the Director (the Ohio EPA, Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):

   a. Emission Limitations: 0.26 lb PE/hr, 1.14 tpy PE

      Applicable Compliance Method: The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by a controlled emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

      Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

   b. Emission Limitation: Visible PE from the stack(s) servicing this emissions unit shall not exceed 5% opacity, as a six-minute average.

      Applicable Compliance Method: If required, compliance with the visible emission limitation for the baghouse stack shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P069 - product finishing unit 802		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
P070 - forming and collection unit 803 [Administrative modification of PTI 03-16294 issued June 2, 2005 to revised testing requirements]	OAC rule 3745-31-05(A)(3)	
		OAC rule 3745-21-07(G)
		OAC rule 3745-17-11(B)
		OAC rule 3745-23-06(B)
		OAC rule 3745-21-08(B)
		OAC rule 3745-18-06(E)
	OAC rule 3745-17-07(A)	
	40 CFR Part 63, Subpart NNN	

Applicable Emissions Limitations/Control Measures	
The requirements of this rule also include compliance with the requirements of 40 CFR Part 63 Subpart NNN, OAC rule 3745-17-07(A), OAC rule 3745-21-07(G).	See A.I.2.b See A.I.2.d See A.I.2.c See A.I.2.b
2.69 pounds (lbs) particulate emissions (PE)/hour (hr), 11.78 tons per year (tpy)PE (See A.I.2.a)	
2.02 lbs carbon monoxide (CO)/hr, 8.85 tpy CO	
0.83 lbs organic compounds (OC)/hr, 3.64 tpy OC	
0.09 lb sulfur dioxide (SO2)/hr, 0.39 tpy SO2	
Visible PE from the stack(s) servicing this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.	
The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 3.4 kg of formaldehyde per megagram (6.8 lbs of formaldehyde per ton) of glass pulled.	
None (See A.IV.1)	

2. Additional Terms and Conditions

2.a All PE is assume to be in the form of particulate matter less than 10 microns in size (PM10).

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

2.c The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.d The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On February 14, 2005, OAC rule 3745-23-06 was rescinded; therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the U.S. EPA approves the revision to OAC rule 3745-23-06, the requirement to satisfy the "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

II. Operational Restrictions

1. The use of any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01, is prohibited.

2. The permittee must use a resin in the formulation binder such that the free-formaldehyde content of the resin used does not exceed the free-formaldehyde range contained in the specification for the resin used during the performance test as specified in 40 CFR 63.1384(a)(9).

3. The permittee must use a binder formulation that does not vary from the specification and operating range established and used during the performance test as specified in 40 CFR 63.1384(a)(9). For the purposes of this standard, adding or increasing the quantity of urea and/or

lignin in the binder formulation does not constitute a change in the binder formulation.

4. The permittee must operate the process such that the monitored process parameter(s) is not outside the limit(s) established during the performance test as specified in 40 CFR 63.1384(a)(10) for more than 10 percent of the total operating time in a 6-month block reporting period.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;

   b. whether the emissions are representative of normal operations;

   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

   d. the total duration of any visible emission incident; and

   e. any corrective actions taken to minimize or eliminate the visible emissions.

   If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

2. Notwithstanding the frequency of reporting requirements specified in section A.IV, the permittee may reduce the frequency of visual observations for this emissions unit from at least 5 days per week to weekly readings if the following conditions are met:

   a. for 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

b. the permittee continues to comply with all the record keeping and monitoring requirements specified in section A.III.1.

The permittee shall revert to 5 days per week readings if any abnormal visible emissions are observed.

3. The permittee shall maintain monthly 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.

4. The permittee must prepare a written operations, maintenance, and monitoring plan. The plan must be submitted to the Director for review and approval as part of the application for a part 70 permit. The plant must include the following information:

   a. Procedures for the proper operation and maintenance of process modifications used to meet the emission limits in 40 CFR Part 63.1382.

   b. Procedures for the proper operation and maintenance of monitoring devices used to determine compliance, including quarterly calibration and certification of accuracy of each monitoring device according to the manufacturer's instructions.

   c. Corrective actions to be taken when process parameters deviate from the limit(s) established during initial performance tests.

5. The permittee must establish a correlation between formaldehyde emissions and a process parameter(s) to be monitored.

6. The permittee must monitor the established parameter(s) according to the procedures in the operations, maintenance, and monitoring plan.

7. The permittee must include as part of their operations, maintenance, and monitoring plan the following information:

   a. Procedures for the proper operation and maintenance of the process.

   b. Process parameter(s) to be monitored to demonstrate compliance with the applicable emission limits in 40 CFR 63.1382. Examples of process parameters include loss on ignition (LOI), binder solids content, and binder application rate.

   c. Correlation(s) between process parameter(s) to be monitored and formaldehyde emissions.

d. A schedule for monitoring the process parameter(s).

e. Record keeping procedures, consistent with the record keeping requirements of 40 CFR Part 63.1386, to show that the process parameter value(s) established during the performance test is not exceeded.

8. The permittee must monitor and record the free-formaldehyde content of each resin shipment received and used in the formulation binder.

9. The permittee must monitor and record the formulation of each batch of binder used.

10. The permittee must monitor and record at least once every 8 hours, the product LOI and product density of each bonded wool fiberglass product manufactured.

11. For all process operating parameters during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new control device or process parameter levels, they comply with the applicable emission limits in 40 CFR 63.1382. The owner or operator shall conduct all additional performance tests according to the procedures in 40 CFR Part 63, subpart A and in 40 CFR 63.1384.

12. The permittee shall develop and implement a written plan as described in 40 CFR 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process modifications and control systems used to comply with the standard. In addition to the information required in 40 CFR 63.6(e)(3), the plan shall include:

a. Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended.

b. Corrective actions to be taken in the event of a malfunction of a control device or process modification, including procedures for recording the actions taken to correct the malfunction of minimize emissions.

c. A maintenance schedule for each control device and process modification that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

13. The permittee shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the

procedures in the plan as described in 40 CFR 63.10(e)(3)(iv).

14. As required by 40 CFR 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart:

    a. The permittee must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.

    b. The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche.

    c. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

15. In addition to the general records required by 40 CFR 63.10(b)(2), the permittee shall maintain records of the following information:

    a. The formulation of each binder batch and the LOI and density for each product manufactured on a flame attenuation manufacturing line subject to the provisions of this subpart, and the free formaldehyde content of each resin shipment received and used in the binder formulation.

    b. Process parameter level(s) flame attenuation manufacturing lines that use process modifications to comply with the emission limits, including any period when the parameter level(s) deviated from the established limit(s), the date and time of the deviation, when corrective actions were initiated, the cause of the deviation, an explanation of the corrective actions taken, and when the cause of the deviation was corrected.

    c. Glass pull rate, including any period when the pull rate exceeded the average pull rate established during the performance test by more than 20 percent, the date and time of the exceedance, when corrective actions were initiated, the cause of the exceedance, and explanation of the corrective actions taken, and when the cause of the exceedance was corrected.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA, Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit quarterly deviation (excursion) reports that identify each month during

which a photochemically reactive material was employed. These deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

3. As required by 40 CFR 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of the applicable standard or a monitored parameter deviates from the levels established during the performance test. The report shall contain the information specified in 40 CFR 63.10(c) as well as the additional records required by the record keeping requirements of paragraph (d) of this section When no deviations have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period.

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

   a. the emission test shall be conducted within 60 days after achieving the maximum production rate at which the manufacturing line which includes this emissions unit will be operated, but not later than 180 days upon startup of the above-mentioned manufacturing line.

   b. the emission test shall be conducted to demonstrate compliance with the emission rate of : 6.8 lbs of formaldehyde per ton of glass pulled.

   c. the following test method(s) shall be employed to demonstrate compliance with the requirements specified in A.V.2.b:

      for formaldehyde, Methods 1-4 and 316 or 318 of 40 CFR, Part 60, Appendix A;

   d. the tests shall be conducted in accordance with the procedures in 40 CFR Part 63 subpart A and 40 CFR 63.1384, unless otherwise specified or approved by the Ohio EPA, Northwest District Office.

      i. All monitoring systems and equipment must be installed, operational, and calibrated prior to the performance test.

   Unless a different frequency is specified in 40CFR 63.1384, the owner or operator must monitor and record process and/or add-on control device parameters at least every 15 minutes during the performance tests. The arithmetic average for each parameter must be calculated using all of the recorded measurements for the parameter.

During each performance test, the owner or operator must monitor and record the glass pull rate for each glass-melting furnace and, if different, the glass pull rate for each rotary spin manufacturing line and flame attenuation manufacturing line. Record the glass pull rate every 15 minutes during any performance test required by this subpart and determine the arithmetic average of the recorded measurements for each test run and calculate the average of the three test runs.

Not later than 60 calendar days before the performance test is initially scheduled to begin, the permittee shall submit an "Intent to Test" notification to the Director (the Ohio EPA, Northwest District Office). The "Intent to Test" notification shall describe in detail the propose 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 Director (the Ohio EPA, Northwest District Office's) refusal to accept the results of the emission test(s).

Personnel form the Director (the Ohio EPA, Northwest District Office) 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 Director (the Ohio EPA, Northwest District Office) before the close of business on the 60th day following the completion of the performance test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Director (the Ohio EPA, Northwest District Office).

2. Unless disapproved by the Director, the permittee of a flame attenuation manufacturing line regulated by this subpart may conduct short-term experimental production runs using binder formulations or other process modifications where the process parameter values would be outside those established during performance test without first conducting performance tests. Such runs must not exceed 1 week in duration unless the Director approves a longer period. The permittee must notify the Director and postmark or deliver the notification at least 15 days prior to commencement of the short-term experimental production runs. The Director must inform the permittee of a decision to disapprove or must request additional information prior to the date of the short-term experimental production runs. Notification of the intent to perform and experimental short-term production runt shall include the following information:

   a. the purpose of the experimental production run;
   b. the affected line;
   c. how the established process parameters will deviate from previously approved levels;
   d. the duration of the experimental production run;
   e. the date and time of the experimental production run; and
   f. a description of any emission testing to be performed during the experimental production run.

3. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

   a. Emission Limitations: 2.69 lbs PE/hr, 11.78 tpy PE
   Applicable Compliance Method: The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.
   Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

   b. Emission Limitations: 2.02 lbs CO/hr, 8.85 tpy CO
   Applicable Compliance Method: The hourly allowable CO emission limitation was established by multiplying the maximum gas burning rate (mmcf/hr) [as indicated in the permit application] by an emission factor (lb/mmcf) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable CO emission limitation by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.
   Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

   c. Emission Limitations: 0.83 lbs OC/hr, 3.64 tons OC/yr
   Applicable Compliance Method: The hourly allowable OC emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable OC emission limitation by testing in accordance with Method 1-4, and 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.
   Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

   d. Emission Limitations: 0.09 lb SO2/hr, 0.39 ton SO2/yr
   Applicable Compliance Method: The hourly allowable SO2 emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable SO2 emission limitation by testing in accordance with Methods 1-4, and 6 as appropriate, of 40 CFR, Part 60, Appendix A.
   Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was

calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

e. Emission Limitation: 6.8 lbs formaldehyde per ton of glass pulled
Applicable Compliance Method: Compliance with the formaldehyde emission limitation shall be determined through the testing required in sections A.V.1 of the terms and conditions of this permit.

f. Emission Limitation:Visible PE shall not exceed 20 percent opacity, as a six-minute average, except as otherwise provided by rule.
Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P070 - forming and collection unit 803 [Administrative modification of PTI 03-16294 issued June 2, 2005 to revised testing requirements]		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	40 CFR Part 63, Subpart NNN
P071 - sear roll and curing oven 803	OAC rule 3745-31-05(A)(3)	
[Administrative modification of PTI 03-16294 issued June 2, 2005 to revised testing requirements]		OAC rule 3745-21-07(G)
		OAC rule 3745-17-11(B)
		OAC rule 3745-23-06(B)
		OAC rule 3745-21-08(B)
		OAC rule 3745-18-06(E)
	OAC rule 3745-17-07(A)	

Applicable Emissions Limitations/Control Measures	
The requirements of this rule also include compliance with the requirements of 40 CFR Part 63 Subpart NNN, OAC rule 3745-17-07(A) and OAC rule 3745-21-07(G).	glass pulled.
0.56 pounds (lbs) particulate emissions (PE)/hour (hr), 2.45 tons per year (tpy)PE (See A.I.2.a)	None (See A.IV.1)
1.24 lbs carbon monoxide (CO)/hr, 5.43 tpy CO	See A.I.2.b
0.51 lbs organic compounds (OC)/hr, 2.23 tpy OC	See A.I.2.d
0.49 lb nitrogen oxide (NOx)/hr, 2.15 tpy NOx	See A.I.2.c
0.13 lb sulfur dioxide (SO2)/hr, 0.57 tpy SO2	See A.I.2.b
Visible PE from the stack(s) servicing this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.	
The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 3.4 kg of formaldehyde per megagram (6.8 lbs of formaldehyde per ton) of	

2. Additional Terms and Conditions

2.a All PE is assume to be in the form of particulate matter less than 10 microns in size (PM10).

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

2.c The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.d The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On February 14, 2005, OAC rule 3745-23-06 was rescinded; therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the U.S. EPA approves the revision to OAC rule 3745-23-06, the requirement to satisfy the "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

II. Operational Restrictions

1. The use of any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01, is prohibited.

2. The permittee must use a resin in the formulation binder such that the free-formaldehyde content of the resin used does not exceed the free-formaldehyde range contained in the specification for the resin used during the performance test as specified in 40 CFR 63.1384(a)(9).

3. The permittee must use a binder formulation that does not vary from the specification and operating range established and used during the performance test as specified in 40 CFR 63.1384(a)(9). For the purposes of this standard, adding or increasing the quantity of urea and/or lignin in the binder formulation does not constitute a change in the binder formulation.

4. The permittee must operate the process such that the monitored process parameter(s) is not outside the limit(s) established during the performance test as specified in 40 CFR 63.1384(a)(10) for more than 10 percent of the total operating time in a 6-month block reporting period.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;
   b. whether the emissions are representative of normal operations;
   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
   d. the total duration of any visible emission incident; and
   e. any corrective actions taken to minimize or eliminate the visible emissions.

   If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

2. Notwithstanding the frequency of reporting requirements specified in section A.IV, the permittee may reduce the frequency of visual observations for this emissions unit from at least 5 days per week to weekly readings if the following conditions are met:

   a. for 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

   b. the permittee continues to comply with all the record keeping and monitoring requirements specified in section A.III.1.

The permittee shall revert to 5 days per week readings if any abnormal visible emissions are observed.

3. The permittee shall maintain monthly 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.

4. The permittee must prepare a written operations, maintenance, and monitoring plan. The plan must be submitted to the Director for review and approval as part of the application for a part 70 permit. The plant must include the following information:

   a. Procedures for the proper operation and maintenance of process modifications used to meet the emission limits in 40 CFR Part 63.1382.

   b. Procedures for the proper operation and maintenance of monitoring devices used to determine compliance, including quarterly calibration and certification of accuracy of each monitoring device according to the manufacturer's instructions.

   c. Corrective actions to be taken when process parameters deviate from the limit(s) established during initial performance tests.

5. The permittee must establish a correlation between formaldehyde emissions and a process parameter(s) to be monitored.

6. The permittee must monitor the established parameter(s) according to the procedures in the operations, maintenance, and monitoring plan.

7. The permittee must include as part of their operations, maintenance, and monitoring plan the following information:

   a. Procedures for the proper operation and maintenance of the process.

   b. Process parameter(s) to be monitored to demonstrate compliance with the applicable emission limits in 40 CFR 63.1382. Examples of process parameters include loss on ignition (LOI), binder solids content, and binder application rate.

   c. Correlation(s) between process parameter(s) to be monitored and formaldehyde emissions.

d. A schedule for monitoring the process parameter(s).

e. Record keeping procedures, consistent with the record keeping requirements of 40 CFR Part 63.1386, to show that the process parameter value(s) established during the performance test is not exceeded.

8. The permittee must monitor and record the free-formaldehyde content of each resin shipment received and used in the formulation binder.

9. The permittee must monitor and record the formulation of each batch of binder used.

10. The permittee must monitor and record at least once every 8 hours, the product LOI and product density of each bonded wool fiberglass product manufactured.

11. For all process operating parameters during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new control device or process parameter levels, they comply with the applicable emission limits in 40 CFR 63.1382. The owner or operator shall conduct all additional performance tests according to the procedures in 40 CFR Part 63, subpart A and in 40 CFR 63.1384.

12. The permittee shall develop and implement a written plan as described in 40 CFR 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process modifications and control systems used to comply with the standard. In addition to the information required in 40 CFR 63.6(e)(3), the plan shall include:

    a. Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended.

    b. Corrective actions to be taken in the event of a malfunction of a control device or process modification, including procedures for recording the actions taken to correct the malfunction of minimize emissions.

    c. A maintenance schedule for each control device and process modification that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

13. The permittee shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.10(e)(3)(iv).

14. As required by 40 CFR 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart:

a. The permittee must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.

b. The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche.

c. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

15. In addition to the general records required by 40 CFR 63.10(b)(2), the permittee shall maintain records of the following information:

a. The formulation of each binder batch and the LOI and density for each product manufactured on a flame attenuation manufacturing line subject to the provisions of this subpart, and the free formaldehyde content of each resin shipment received and used in the binder formulation.

b. Process parameter level(s) flame attenuation manufacturing lines that use process modifications to comply with the emission limits, including any period when the parameter level(s) deviated from the established limit(s), the date and time of the deviation, when corrective actions were initiated, the cause of the deviation, an explanation of the corrective actions taken, and when the cause of the deviation was corrected.

c. Glass pull rate, including any period when the pull rate exceeded the average pull rate established during the performance test by more than 20 percent, the date and time of the exceedance, when corrective actions were initiated, the cause of the exceedance, and explanation of the corrective actions taken, and when the cause of the exceedance was corrected.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA, Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit quarterly deviation (excursion) reports that identify each month during which a photochemically reactive material was employed. These deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

3. As required by 40 CFR 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of the applicable standard or a monitored parameter deviates from the levels established during the performance test. The report shall contain the information specified in 40 CFR 63.10(c) as well as the additional records required by the record keeping requirements of paragraph (d) of this section When no deviations have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period.

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

   a. the emission test shall be conducted within 60 days after achieving the maximum production rate at which the manufacturing line which includes this emissions unit will be operated, but not later than 180 days upon startup of the above-mentioned manufacturing line.

   b. the emission test shall be conducted to demonstrate compliance with the emission rate of 6.8 lbs of formaldehyde per ton of glass pulled.

   c. the following test method(s) shall be employed to demonstrate compliance with the requirements specified in A.V.2.b:

      for formaldehyde, Methods 1-4 and 316 or 318 of 40 CFR, Part 60, Appendix A;

   d. the tests shall be conducted in accordance with the procedures in 40 CFR Part 63 subpart A and 40 CFR 63.1384, unless otherwise specified or approved by the Ohio EPA, Northwest District Office.

i. All monitoring systems and equipment must be installed, operational, and calibrated prior to the performance test.

Unless a different frequency is specified in 40CFR 63.1384, the owner or operator must monitor and record process and/or add-on control device parameters at least every 15 minutes during the performance tests. The arithmetic average for each parameter must be calculated using all of the recorded measurements for the parameter.

During each performance test, the owner or operator must monitor and record the glass pull rate for each glass-melting furnace and, if different, the glass pull rate for each rotary spin manufacturing line and flame attenuation manufacturing line. Record the glass pull rate every 15 minutes during any performance test required by this subpart and determine the arithmetic average of the recorded measurements for each test run and calculate the average of the three test runs.

Not later than 60 calendar days before the performance test is initially scheduled to begin, the permittee shall submit an "Intent to Test" notification to the Director (the Ohio EPA, Northwest District Office). The "Intent to Test" notification shall describe in detail the propose 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 Director (the Ohio EPA, Northwest District Office's) refusal to accept the results of the emission test(s).

Personnel form the Director (the Ohio EPA, Northwest District Office) 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 Director (the Ohio EPA, Northwest District Office) before the close of business on the 60th day following the completion of the performance test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Director (the Ohio EPA, Northwest District Office).

2. Unless disapproved by the Director, the permittee of a flame attenuation manufacturing line regulated by this subpart may conduct short-term experimental production runs using binder formulations or other process modifications where the process parameter values would be outside those established during performance test without first conducting performance tests. Such runs must not exceed 1 week in duration unless the Director approves a longer period. The permittee must notify the Director and postmark or deliver the notification at least 15 days prior to commencement of the short-term experimental production runs. The Director must inform the permittee of a decision to disapprove or must request additional information prior to the date of the short-term experimental production runs. Notification of the intent to perform and experimental short-term production runt shall include the following information:

a. the purpose of the experimental production run;
b. the affected line;
c. how the established process parameters will deviate from previously approved levels;
d. the duration of the experimental production run;
e. the date and time of the experimental production run; and
f. a description of any emission testing to be performed during the experimental production run.

2. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitations: 0.56 lb PE/hr, 2.45 tpy PE

Applicable Compliance Method: The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

b. Emission Limitations: 1.24 lbs CO/hr, 5.43 tpy CO

Applicable Compliance Method: The hourly allowable CO emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable CO emission limitation by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

c. Emission Limitations: 0.51 lb OC/hr, 2.23 tons OC/yr

Applicable Compliance Method: The hourly allowable OC emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable OC emission limitation by testing in accordance with Methods 1-4 and Method 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

d. Emission Limitations: 0.49 lb NOx/hr, 2.15 tpy NOx

Applicable Compliance Method: The hourly allowable NOx emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable OC emission limitation by testing in accordance with Methods 1-4 and 7, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

e. Emission Limitations: 0.13 lb SO2/hr, 0.57 tpy SO2

Applicable Compliance Method: The hourly allowable SO2 emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass] derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable SO2 emission limitation by testing in accordance with Methods 1-4 and 6, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

f. Emission Limitation: 6.8 lbs formaldehyde per ton of glass pulled

Applicable Compliance Method: Compliance with the above limitation shall be demonstrated by the results of the stack testing conducted in accordance with A.V.1 above.

g. Emission Limitation:Visible PE shall not exceed 20 percent opacity, as a six-minute average, except as otherwise provided by rule.

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P071 - sear roll and curing oven 803 [Administrative modification of PTI 03-16294 issued June 2, 2005 to revised testing requirements]		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P072 - product finishing unit 803	OAC rule 3745-31-05(A)(3)	0.26 pound (lb) particulate emissions (PE)/hour (hr), 1.14 tons/year (tpy) PE (See A.I.2.b) See A.I.2.a Visible PE from the stack(s) servicing this emissions unit shall not exceed 5% opacity, as a six-minute average
	OAC rule 3745-17-07(A)	See A.I.2.c
	OAC rule 3745-17-11(B)	See A.I.2.c

2. Additional Terms and Conditions

2.a The "Best Available Technology" (BAT) control requirements for this emissions unit has been determined to be the use of a control system consisting of a cyclone and baghouse (finishing dust collector). The control system shall achieve a 99% removal efficiency for PE (100% capture).

2.b All PE is assumed to be in the form of particulate matter less than 10 microns in size (PM10).

2.c 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

None

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;
   b. whether the emissions are representative of normal operations;
   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
   d. the total duration of any visible emission incident; and
   e. any corrective actions taken to minimize or eliminate the visible emissions.

2. Notwithstanding the frequency of reporting requirements specified in section A.IV, the permittee may reduce the frequency of visual observations for this emissions unit from at least 5 days per week to weekly readings if the following conditions are met:

   a. for 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

   b. the permittee continues to comply with all the record keeping and monitoring requirements specified in section A.III.1.

   The permittee shall revert to 5 days per week readings if any abnormal visible emissions are observed.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA, Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):

   a. Emission Limitations: 0.26 lb PE/hr, 1.14 tpy PE

   Applicable Compliance Method: The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by a controlled emission factor (lb/lb of glass) derived from stack testing of a similar

   emissions unit. If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

   Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

   b. Emission Limitation: Visible PE from the stack(s) servicing this emissions unit shall not exceed 5% opacity, as a six-minute average.

   Applicable Compliance Method: If required, compliance with the visible emission limitation for the baghouse stack shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P072 - product finishing unit 803		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
P073 - forming and collection unit 804 [Administrative modification of PTI 03-16294 issued June 2, 2005 to revised testing requirements]	OAC rule 3745-31-05(A)(3)	OAC rule 3745-21-07(G) OAC rule 3745-17-11(B) OAC rule 3745-23-06(B) OAC rule 3745-21-08(B) OAC rule 3745-18-06(E)
	OAC rule 3745-17-07(A)	
	40 CFR Part 63, Subpart NNN	

Applicable Emissions Limitations/Control Measures	
The requirements of this rule also include compliance with the requirements of 40 CFR Part 63 Subpart NNN, OAC rule 3745-17-07(A), OAC rule 3745-21-07(G).	See A.I.2.b See A.I.2.d See A.I.2.c See A.I.2.b
2.69 pounds (lbs) particulate emissions (PE)/hour (hr), 11.78 tons per year (tpy)PE (See A.I.2.a)	
2.02 lbs carbon monoxide (CO)/hr, 8.85 tpy CO	
0.83 lbs organic compounds (OC)/hr, 3.64 tpy OC	
0.09 lb sulfur dioxide (SO2)/hr, 0.39 tpy SO2	
Visible PE from the stack(s) servicing this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.	
The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 3.4 kg of formaldehyde per megagram (6.8 lbs of formaldehyde per ton) of glass pulled.	
None (See A.IV.1)	

2. Additional Terms and Conditions

2.a All PE is assume to be in the form of particulate matter less than 10 microns in size (PM10).

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

2.c The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.d The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On February 14, 2005, OAC rule 3745-23-06 was rescinded; therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the U.S. EPA approves the revision to OAC rule 3745-23-06, the requirement to satisfy the "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

II. Operational Restrictions

1. The use of any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01, is prohibited.

2. The permittee must use a resin in the formulation binder such that the free-formaldehyde content of the resin used does not exceed the free-formaldehyde range contained in the specification for the resin used during the performance test as specified in 40 CFR 63.1384(a)(9).

3. The permittee must use a binder formulation that does not vary from the specification and operating range established and used during the performance test as specified in 40 CFR 63.1384(a)(9). For the purposes of this standard, adding or increasing the quantity of urea and/or lignin in the binder formulation does not constitute a change in the binder formulation.

4. The permittee must operate the process such that the monitored process parameter(s) is not outside the limit(s) established during the performance test as specified in 40 CFR 63.1384(a)(10) for more than 10 percent of the total operating time in a 6-month block reporting period.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;
   b. whether the emissions are representative of normal operations;
   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
   d. the total duration of any visible emission incident; and
   e. any corrective actions taken to minimize or eliminate the visible emissions.

   If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the

corrective actions that were taken to eliminate abnormal visible emissions.

2. Notwithstanding the frequency of reporting requirements specified in section A.IV, the permittee may reduce the frequency of visual observations for this emissions unit from at least 5 days per week to weekly readings if the following conditions are met:

   a. for 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

   b. the permittee continues to comply with all the record keeping and monitoring requirements specified in section A.III.1.

   The permittee shall revert to 5 days per week readings if any abnormal visible emissions are observed.

3. The permittee shall maintain monthly 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.

4. The permittee must prepare a written operations, maintenance, and monitoring plan. The plan must be submitted to the Director for review and approval as part of the application for a part 70 permit. The plant must include the following information:

   a. Procedures for the proper operation and maintenance of process modifications used to meet the emission limits in 40 CFR Part 63.1382.

   b. Procedures for the proper operation and maintenance of monitoring devices used to determine compliance, including quarterly calibration and certification of accuracy of each monitoring device according to the manufacturer's instructions.

   c. Corrective actions to be taken when process parameters deviate from the limit(s) established during initial performance tests.

5. The permittee must establish a correlation between formaldehyde emissions and a process parameter(s) to be monitored.

6. The permittee must monitor the established parameter(s) according to the procedures in the

operations, maintenance, and monitoring plan.

7. The permittee must include as part of their operations, maintenance, and monitoring plan the following information:

   a. Procedures for the proper operation and maintenance of the process.

   b. Process parameter(s) to be monitored to demonstrate compliance with the applicable emission limits in 40 CFR 63.1382. Examples of process parameters include loss on ignition (LOI), binder solids content, and binder application rate.

   c. Correlation(s) between process parameter(s) to be monitored and formaldehyde emissions.

   d. A schedule for monitoring the process parameter(s).

   e. Record keeping procedures, consistent with the record keeping requirements of 40 CFR Part 63.1386, to show that the process parameter value(s) established during the performance test is not exceeded.

8. The permittee must monitor and record the free-formaldehyde content of each resin shipment received and used in the formulation binder.

9. The permittee must monitor and record the formulation of each batch of binder used.

10. The permittee must monitor and record at least once every 8 hours, the product LOI and product density of each bonded wool fiberglass product manufactured.

11. For all process operating parameters during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new control device or process parameter levels, they comply with the applicable emission limits in 40 CFR 63.1382. The owner or operator shall conduct all additional performance tests according to the procedures in 40 CFR Part 63, subpart A and in 40 CFR 63.1384.

12. The permittee shall develop and implement a written plan as described in 40 CFR 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process modifications and control systems used to comply with the standard. In addition to the information required in 40 CFR 63.6(e)(3), the plan shall include:

   a. Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended.

   b. Corrective actions to be taken in the event of a malfunction of a control device or process modification, including procedures for recording the actions taken to correct the

malfunction of minimize emissions.

c. A maintenance schedule for each control device and process modification that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

13. The permittee shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.10(e)(3)(iv).

14. As required by 40 CFR 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart:

a. The permittee must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.

b. The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche.

c. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

15. In addition to the general records required by 40 CFR 63.10(b)(2), the permittee shall maintain records of the following information:

a. The formulation of each binder batch and the LOI and density for each product manufactured on a flame attenuation manufacturing line subject to the provisions of this subpart, and the free formaldehyde content of each resin shipment received and used in the binder formulation.

b. Process parameter level(s) flame attenuation manufacturing lines that use process modifications to comply with the emission limits, including any period when the parameter level(s) deviated from the established limit(s), the date and time of the deviation, when corrective actions were initiated, the cause of the deviation, an explanation of the corrective actions taken, and when the cause of the deviation was corrected.

c. Glass pull rate, including any period when the pull rate exceeded the average pull rate established during the performance test by more than 20 percent, the date and time of the exceedance, when corrective actions were initiated, the cause of the exceedance, and explanation of the corrective actions taken, and when the cause of the exceedance was corrected.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA, Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit quarterly deviation (excursion) reports that identify each month during which a photochemically reactive material was employed. These deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

3. As required by 40 CFR 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of the applicable standard or a monitored parameter deviates from the levels established during the performance test. The report shall contain the information specified in 40 CFR 63.10(c) as well as the additional records required by the record keeping requirements of paragraph (d) of this section When no deviations have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period.

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

   a. the emission test shall be conducted within 60 days after achieving the maximum production rate at which the manufacturing line which includes this emissions unit will be operated, but not later than 180 days upon startup of the above-mentioned manufacturing line.

   b. the emission test shall be conducted to demonstrate compliance with the emission rate of : 6.8 lbs of formaldehyde per ton of glass pulled.

   c. the following test method(s) shall be employed to demonstrate compliance with the requirements specified in A.V.2.b:

      for formaldehyde, Methods 1-4 and 316 or 318 of 40 CFR, Part 60, Appendix A;

   d. the tests shall be conducted in accordance with the procedures in 40 CFR Part 63 subpart A and 40 CFR 63.1384, unless otherwise specified or approved by the Ohio EPA, Northwest District Office.

i. All monitoring systems and equipment must be installed, operational, and calibrated prior to the performance test.

Unless a different frequency is specified in 40CFR 63.1384, the owner or operator must monitor and record process and/or add-on control device parameters at least every 15 minutes during the performance tests. The arithmetic average for each parameter must be calculated using all of the recorded measurements for the parameter.

During each performance test, the owner or operator must monitor and record the glass pull rate for each glass-melting furnace and, if different, the glass pull rate for each rotary spin manufacturing line and flame attenuation manufacturing line. Record the glass pull rate every 15 minutes during any performance test required by this subpart and determine the arithmetic average of the recorded measurements for each test run and calculate the average of the three test runs.

Not later than 60 calendar days before the performance test is initially scheduled to begin, the permittee shall submit an "Intent to Test" notification to the Director (the Ohio EPA, Northwest District Office). The "Intent to Test" notification shall describe in detail the propose 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 Director (the Ohio EPA, Northwest District Office's) refusal to accept the results of the emission test(s).

Personnel form the Director (the Ohio EPA, Northwest District Office) 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 Director (the Ohio EPA, Northwest District Office) before the close of business on the 60th day following the completion of the performance test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Director (the Ohio EPA, Northwest District Office).

2. Unless disapproved by the Director, the permittee of a flame attenuation manufacturing line regulated by this subpart may conduct short-term experimental production runs using binder formulations or other process modifications where the process parameter values would be outside those established during performance test without first conducting performance tests. Such runs must not exceed 1 week in duration unless the Director approves a longer period. The permittee must notify the Director and postmark or deliver the notification at least 15 days prior to commencement of the short-term experimental production runs. The Director must inform the permittee of a decision to disapprove or must request additional information prior to the date of

the short-term experimental production runs. Notification of the intent to perform and experimental short-term production runt shall include the following information:

a. the purpose of the experimental production run;
b. the affected line;
c. how the established process parameters will deviate from previously approved levels;
d. the duration of the experimental production run;
e. the date and time of the experimental production run; and
f. a description of any emission testing to be performed during the experimental production run.

3. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitations: 2.69 lbs PE/hr, 11.78 tpy PE

Applicable Compliance Method: The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

b. Emission Limitations: 2.02 lbs CO/hr, 8.85 tpy CO

Applicable Compliance Method: The hourly allowable CO emission limitation was established by multiplying the maximum gas burning rate (mmcf/hr) [as indicated in the permit application] by an emission factor (lb/mmcf) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable CO emission limitation by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

c. Emission Limitations: 0.83 lbs OC/hr, 3.64 tons OC/yr

Applicable Compliance Method: The hourly allowable OC emission limitation was

established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable OC emission limitation by testing in accordance with Method 1-4, and 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

d. Emission Limitations: 0.09 lb SO2/hr, 0.39 ton SO2/yr

Applicable Compliance Method: The hourly allowable SO2 emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable SO2 emission limitation by testing in accordance with Methods 1-4, and 6 as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

e. Emission Limitation: 6.8 lbs formaldehyde per ton of glass pulled

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

f. Emission Limitation: Visible PE shall not exceed 20 percent opacity, as a six-minute average, except as otherwise provided by rule.

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P073 - forming and collection unit 804 [Administrative modification of PTI 03-16294 issued June 2, 2005 to revised testing requirements]		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	40 CFR Part 63, Subpart NNN
P074 - sear roll and curing oven 804	OAC rule 3745-31-05(A)(3)	
[Administrative modification of PTI 03-16294 issued June 2, 2005 to revised testing requirements]		OAC rule 3745-21-07(G)
		OAC rule 3745-17-11(B)
		OAC rule 3745-23-06(B)
		OAC rule 3745-21-08(B)
		OAC rule 3745-18-06(E)
	OAC rule 3745-17-07(A)	

Applicable Emissions Limitations/Control Measures	
	glass pulled.
	None (See A.IV.1)
The requirements of this rule also include compliance with the requirements of 40 CFR Part 63 Subpart NNN, OAC rule 3745-17-07(A) and OAC rule 3745-21-07(G).	See A.I.2.b See A.I.2.d See A.I.2.c
0.56 pounds (lbs) particulate emissions (PE)/hour (hr), 2.45 tons per year (tpy)PE (See A.I.2.a)	See A.I.2.b
1.24 lbs carbon monoxide (CO)/hr, 5.43 tpy CO	
0.51 lbs organic compounds (OC)/hr, 2.23 tpy OC	
0.49 lb nitrogen oxide (NOx)/hr, 2.15 tpy NOx	
0.13 lb sulfur dioxide (SO2)/hr, 0.57 tpy SO2	
Visible PE from the stack(s) servicing this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.	
The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 3.4 kg of formaldehyde per megagram (6.8 lbs of formaldehyde per ton) of	

2. Additional Terms and Conditions

2.a All PE is assume to be in the form of particulate matter less than 10 microns in size (PM10).

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

2.c The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.d The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On February 14, 2005, OAC rule 3745-23-06 was rescinded; therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the U.S. EPA approves the revision to OAC rule 3745-23-06, the requirement to satisfy the "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

II. Operational Restrictions

1. The use of any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01, is prohibited.

2. The permittee must use a resin in the formulation binder such that the free-formaldehyde content of the resin used does not exceed the free-formaldehyde range contained in the specification for the resin used during the performance test as specified in 40 CFR 63.1384(a)(9).

3. The permittee must use a binder formulation that does not vary from the specification and operating range established and used during the performance test as specified in 40 CFR 63.1384(a)(9). For the purposes of this standard, adding or increasing the quantity of urea and/or lignin in the binder formulation does not constitute a change in the binder formulation.

4. The permittee must operate the process such that the monitored process parameter(s) is not outside the limit(s) established during the performance test as specified in 40 CFR 63.1384(a)(10) for more than 10 percent of the total operating time in a 6-month block reporting period.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;
   b. whether the emissions are representative of normal operations;
   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
   d. the total duration of any visible emission incident; and
   e. any corrective actions taken to minimize or eliminate the visible emissions.

   If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

2. Notwithstanding the frequency of reporting requirements specified in section A.IV, the permittee may reduce the frequency of visual observations for this emissions unit from at least 5 days per week to weekly readings if the following conditions are met:

   a. for 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

   b. the permittee continues to comply with all the record keeping and monitoring requirements specified in section A.III.1.

The permittee shall revert to 5 days per week readings if any abnormal visible emissions are observed.

3. The permittee shall maintain monthly 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.

4. The permittee must prepare a written operations, maintenance, and monitoring plan. The plan must be submitted to the Director for review and approval as part of the application for a part 70 permit. The plant must include the following information:

   a. Procedures for the proper operation and maintenance of process modifications used to meet the emission limits in 40 CFR Part 63.1382.

   b. Procedures for the proper operation and maintenance of monitoring devices used to determine compliance, including quarterly calibration and certification of accuracy of each monitoring device according to the manufacturer's instructions.

   c. Corrective actions to be taken when process parameters deviate from the limit(s) established during initial performance tests.

5. The permittee must establish a correlation between formaldehyde emissions and a process parameter(s) to be monitored.

6. The permittee must monitor the established parameter(s) according to the procedures in the operations, maintenance, and monitoring plan.

7. The permittee must include as part of their operations, maintenance, and monitoring plan the following information:

   a. Procedures for the proper operation and maintenance of the process.

   b. Process parameter(s) to be monitored to demonstrate compliance with the applicable emission limits in 40 CFR 63.1382. Examples of process parameters include loss on ignition (LOI), binder solids content, and binder application rate.

   c. Correlation(s) between process parameter(s) to be monitored and formaldehyde emissions.

d. A schedule for monitoring the process parameter(s).

e. Record keeping procedures, consistent with the record keeping requirements of 40 CFR Part 63.1386, to show that the process parameter value(s) established during the performance test is not exceeded.

8. The permittee must monitor and record the free-formaldehyde content of each resin shipment received and used in the formulation binder.

9. The permittee must monitor and record the formulation of each batch of binder used.

10. The permittee must monitor and record at least once every 8 hours, the product LOI and product density of each bonded wool fiberglass product manufactured.

11. For all process operating parameters during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new control device or process parameter levels, they comply with the applicable emission limits in 40 CFR 63.1382. The owner or operator shall conduct all additional performance tests according to the procedures in 40 CFR Part 63, subpart A and in 40 CFR 63.1384.

12. The permittee shall develop and implement a written plan as described in 40 CFR 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process modifications and control systems used to comply with the standard. In addition to the information required in 40 CFR 63.6(e)(3), the plan shall include:

    a. Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended.

    b. Corrective actions to be taken in the event of a malfunction of a control device or process modification, including procedures for recording the actions taken to correct the malfunction of minimize emissions.

    c. A maintenance schedule for each control device and process modification that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

13. The permittee shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.10(e)(3)(iv).

14. As required by 40 CFR 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart:

a. The permittee must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.

b. The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche.

c. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

15. In addition to the general records required by 40 CFR 63.10(b)(2), the permittee shall maintain records of the following information:

a. The formulation of each binder batch and the LOI and density for each product manufactured on a flame attenuation manufacturing line subject to the provisions of this subpart, and the free formaldehyde content of each resin shipment received and used in the binder formulation.

b. Process parameter level(s) flame attenuation manufacturing lines that use process modifications to comply with the emission limits, including any period when the parameter level(s) deviated from the established limit(s), the date and time of the deviation, when corrective actions were initiated, the cause of the deviation, an explanation of the corrective actions taken, and when the cause of the deviation was corrected.

c. Glass pull rate, including any period when the pull rate exceeded the average pull rate established during the performance test by more than 20 percent, the date and time of the exceedance, when corrective actions were initiated, the cause of the exceedance, and explanation of the corrective actions taken, and when the cause of the exceedance was corrected.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA, Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit quarterly deviation (excursion) reports that identify each month during which a photochemically reactive material was employed. These deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

3. As required by 40 CFR 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of the applicable standard or a monitored parameter deviates from the levels established during the performance test. The report shall contain the information specified in 40 CFR 63.10(c) as well as the additional records required by the record keeping requirements of paragraph (d) of this section When no deviations have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period.

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

   a. the emission test shall be conducted within 60 days after achieving the maximum production rate at which the manufacturing line which includes this emissions unit will be operated, but not later than 180 days upon startup of the above-mentioned manufacturing line.

   b. the emission test shall be conducted to demonstrate compliance with the emission rate of 6.8 lbs of formaldehyde per ton of glass pulled.

   c. the following test method(s) shall be employed to demonstrate compliance with the requirements specified in A.V.2.b:

      for formaldehyde, Methods 1-4 and 316 or 318 of 40 CFR, Part 60, Appendix A;

   d. the tests shall be conducted in accordance with the procedures in 40 CFR Part 63 subpart A and 40 CFR 63.1384, unless otherwise specified or approved by the Ohio EPA, Northwest District Office.

      i. All monitoring systems and equipment must be installed, operational, and calibrated prior to the performance test.

   Unless a different frequency is specified in 40CFR 63.1384, the owner or operator must monitor and record process and/or add-on control device parameters at least every 15 minutes during the performance tests. The arithmetic average for each parameter must be calculated using all of the recorded measurements for the parameter.

   During each performance test, the owner or operator must monitor and record the glass pull rate for each glass-melting furnace and, if different, the glass pull rate for each rotary spin manufacturing line and flame attenuation manufacturing line. Record the glass pull rate every 15 minutes during any performance test required by this subpart and determine the arithmetic average

of the recorded measurements for each test run and calculate the average of the three test runs.

Not later than 60 calendar days before the performance test is initially scheduled to begin, the permittee shall submit an "Intent to Test" notification to the Director (the Ohio EPA, Northwest District Office). The "Intent to Test" notification shall describe in detail the propose 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 Director (the Ohio EPA, Northwest District Office's) refusal to accept the results of the emission test(s).

Personnel form the Director (the Ohio EPA, Northwest District Office) 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 Director (the Ohio EPA, Northwest District Office) before the close of business on the 60th day following the completion of the performance test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Director (the Ohio EPA, Northwest District Office).

2. Unless disapproved by the Director, the permittee of a flame attenuation manufacturing line regulated by this subpart may conduct short-term experimental production runs using binder formulations or other process modifications where the process parameter values would be outside those established during performance test without first conducting performance tests. Such runs must not exceed 1 week in duration unless the Director approves a longer period. The permittee must notify the Director and postmark or deliver the notification at least 15 days prior to commencement of the short-term experimental production runs. The Director must inform the permittee of a decision to disapprove or must request additional information prior to the date of the short-term experimental production runs. Notification of the intent to perform and experimental short-term production runt shall include the following information:

   a. the purpose of the experimental production run;
   b. the affected line;
   c. how the established process parameters will deviate from previously approved levels;
   d. the duration of the experimental production run;
   e. the date and time of the experimental production run; and
   f. a description of any emission testing to be performed during the experimental production run.

2. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitations: 0.56 lb PE/hr, 2.45 tpy PE

Applicable Compliance Method: The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

b. Emission Limitations: 1.24 lbs CO/hr, 5.43 tpy CO

Applicable Compliance Method: The hourly allowable CO emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable CO emission limitation by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

c. Emission Limitations: 0.51 lb OC/hr, 2.23 tons OC/yr

Applicable Compliance Method: The hourly allowable OC emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable OC emission limitation by testing in accordance with Methods 1-4 and Method 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

d. Emission Limitations: 0.49 lb NOx/hr, 2.15 tpy NOx

Applicable Compliance Method: The hourly allowable NOx emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable OC emission limitation by testing in accordance with Methods 1-4 and 7, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

e. Emission Limitations: 0.13 lb SO2/hr, 0.57 tpy SO2

Applicable Compliance Method: The hourly allowable SO2 emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass] derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable SO2 emission limitation by testing in accordance with Methods 1-4 and 6, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

f. Emission Limitation: 6.8 lbs formaldehyde per ton of glass pulled

Applicable Compliance Method: Compliance with the above limitation shall be demonstrated by the results of the stack testing conducted in accordance with A.V.1 above.

g. Emission Limitation: Visible PE shall not exceed 20 percent opacity, as a six-minute average, except as otherwise provided by rule.

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P074 - sear roll and curing oven 804 [Administrative modification of PTI 03-16294 issued June 2, 2005 to revised testing requirements]		

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

Johns Manville International Inc. Plt08 **Facility ID: 032001000**
PTI Application: 03-16294
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Emissions Unit ID: P074

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P075 - product finishing unit 804	OAC rule 3745-31-05(A)(3)	0.26 pound (lb) particulate emissions (PE)/hour (hr), 1.14 tons/year (tpy) PE (See A.I.2.b) See A.I.2.a Visible PE from the stack(s) servicing this emissions unit shall not exceed 5% opacity, as a six-minute average
	OAC rule 3745-17-07(A)	See A.I.2.c
	OAC rule 3745-17-11(B)	See A.I.2.c

2. Additional Terms and Conditions

2.a The "Best Available Technology" (BAT) control requirements for this emissions unit has been determined to be the use of a control system consisting of a cyclone and baghouse (finishing dust collector). The control system shall achieve a 99% removal efficiency for PE (100% capture).

2.b All PE is assumed to be in the form of particulate matter less than 10 microns in size (PM10).

2.c 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

None

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;
   b. whether the emissions are representative of normal operations;
   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
   d. the total duration of any visible emission incident; and
   e. any corrective actions taken to minimize or eliminate the visible emissions.

2. Notwithstanding the frequency of reporting requirements specified in section A.IV, the permittee may reduce the frequency of visual observations for this emissions unit from at least 5 days per week to weekly readings if the following conditions are met:

   a. for 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

   b. the permittee continues to comply with all the record keeping and monitoring requirements specified in section A.III.1.

   The permittee shall revert to 5 days per week readings if any abnormal visible emissions are observed.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA, Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):

   a. Emission Limitations: 0.26 lb PE/hr, 1.14 tpy PE

      Applicable Compliance Method: The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by a controlled emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

      Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

   b. Emission Limitation: Visible PE from the stack(s) servicing this emissions unit shall not exceed 5% opacity, as a six-minute average.

      Applicable Compliance Method: If required, compliance with the visible emission limitation for the baghouse stack shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P075 - product finishing unit 804		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
P076 - forming and collection unit 805 [Administrative modification of PTI 03-16294 issued June 2, 2005 to revised testing requirements]	OAC rule 3745-31-05(A)(3)	
		OAC rule 3745-21-07(G)
		OAC rule 3745-17-11(B)
		OAC rule 3745-23-06(B)
		OAC rule 3745-21-08(B)
		OAC rule 3745-18-06(E)
	OAC rule 3745-17-07(A)	
	40 CFR Part 63, Subpart NNN	

Applicable Emissions Limitations/Control Measures	
The requirements of this rule also include compliance with the requirements of 40 CFR Part 63 Subpart NNN, OAC rule 3745-17-07(A), OAC rule 3745-21-07(G).	See A.I.2.b See A.I.2.d See A.I.2.c See A.I.2.b
4.03 pounds (lbs) particulate emissions (PE)/hour (hr), 17.65 tons per year (tpy)PE (See A.I.2.a)	
2.02 lbs carbon monoxide (CO)/hr, 8.85 tpy CO	
1.25 lbs organic compounds (OC)/hr, 5.48 tpy OC	
0.14 lb sulfur dioxide (SO2)/hr, 0.61 tpy SO2	
Visible PE from the stack(s) servicing this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.	
The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 3.4 kg of formaldehyde per megagram (6.8 lbs of formaldehyde per ton) of glass pulled.	
None (See A.IV.1)	

2. Additional Terms and Conditions

2.a All PE is assume to be in the form of particulate matter less than 10 microns in size (PM10).

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

2.c The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.d The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On February 14, 2005, OAC rule 3745-23-06 was rescinded; therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the U.S. EPA approves the revision to OAC rule 3745-23-06, the requirement to satisfy the "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

II. Operational Restrictions

1. The use of any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01, is prohibited.

2. The permittee must use a resin in the formulation binder such that the free-formaldehyde content of the resin used does not exceed the free-formaldehyde range contained in the specification for the resin used during the performance test as specified in 40 CFR 63.1384(a)(9).

3. The permittee must use a binder formulation that does not vary from the specification and operating range established and used during the performance test as specified in 40 CFR 63.1384(a)(9). For the purposes of this standard, adding or increasing the quantity of urea and/or

lignin in the binder formulation does not constitute a change in the binder formulation.

4. The permittee must operate the process such that the monitored process parameter(s) is not outside the limit(s) established during the performance test as specified in 40 CFR 63.1384(a)(10) for more than 10 percent of the total operating time in a 6-month block reporting period.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;
   b. whether the emissions are representative of normal operations;
   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
   d. the total duration of any visible emission incident; and
   e. any corrective actions taken to minimize or eliminate the visible emissions.

   If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

2. Notwithstanding the frequency of reporting requirements specified in section A.IV, the permittee may reduce the frequency of visual observations for this emissions unit from at least 5 days per week to weekly readings if the following conditions are met:

   a. for 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

   b. the permittee continues to comply with all the record keeping and monitoring requirements specified in section A.III.1.

The permittee shall revert to 5 days per week readings if any abnormal visible emissions are observed.

3. The permittee shall maintain monthly 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.

4. The permittee must prepare a written operations, maintenance, and monitoring plan. The plan must be submitted to the Director for review and approval as part of the application for a part 70 permit. The plant must include the following information:

   a. Procedures for the proper operation and maintenance of process modifications used to meet the emission limits in 40 CFR Part 63.1382.

   b. Procedures for the proper operation and maintenance of monitoring devices used to determine compliance, including quarterly calibration and certification of accuracy of each monitoring device according to the manufacturer's instructions.

   c. Corrective actions to be taken when process parameters deviate from the limit(s) established during initial performance tests.

5. The permittee must establish a correlation between formaldehyde emissions and a process parameter(s) to be monitored.

6. The permittee must monitor the established parameter(s) according to the procedures in the operations, maintenance, and monitoring plan.

7. The permittee must include as part of their operations, maintenance, and monitoring plan the following information:

   a. Procedures for the proper operation and maintenance of the process.

   b. Process parameter(s) to be monitored to demonstrate compliance with the applicable emission limits in 40 CFR 63.1382. Examples of process parameters include loss on ignition (LOI), binder solids content, and binder application rate.

   c. Correlation(s) between process parameter(s) to be monitored and formaldehyde emissions.

   d. A schedule for monitoring the process parameter(s).

   e. Record keeping procedures, consistent with the record keeping requirements of 40 CFR

Part 63.1386, to show that the process parameter value(s) established during the performance test is not exceeded.

8. The permittee must monitor and record the free-formaldehyde content of each resin shipment received and used in the formulation binder.

9. The permittee must monitor and record the formulation of each batch of binder used.

10. The permittee must monitor and record at least once every 8 hours, the product LOI and product density of each bonded wool fiberglass product manufactured.

11. For all process operating parameters during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new control device or process parameter levels, they comply with the applicable emission limits in 40 CFR 63.1382. The owner or operator shall conduct all additional performance tests according to the procedures in 40 CFR Part 63, subpart A and in 40 CFR 63.1384.

12. The permittee shall develop and implement a written plan as described in 40 CFR 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process modifications and control systems used to comply with the standard. In addition to the information required in 40 CFR 63.6(e)(3), the plan shall include:

    a. Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended.

    b. Corrective actions to be taken in the event of a malfunction of a control device or process modification, including procedures for recording the actions taken to correct the malfunction of minimize emissions.

    c. A maintenance schedule for each control device and process modification that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

13. The permittee shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.10(e)(3)(iv).

14. As required by 40 CFR 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart:

a. The permittee must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.

b. The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche.

c. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

15. In addition to the general records required by 40 CFR 63.10(b)(2), the permittee shall maintain records of the following information:

a. The formulation of each binder batch and the LOI and density for each product manufactured on a flame attenuation manufacturing line subject to the provisions of this subpart, and the free formaldehyde content of each resin shipment received and used in the binder formulation.

b. Process parameter level(s) flame attenuation manufacturing lines that use process modifications to comply with the emission limits, including any period when the parameter level(s) deviated from the established limit(s), the date and time of the deviation, when corrective actions were initiated, the cause of the deviation, an explanation of the corrective actions taken, and when the cause of the deviation was corrected.

c. Glass pull rate, including any period when the pull rate exceeded the average pull rate established during the performance test by more than 20 percent, the date and time of the exceedance, when corrective actions were initiated, the cause of the exceedance, and explanation of the corrective actions taken, and when the cause of the exceedance was corrected.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA, Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit quarterly deviation (excursion) reports that identify each month during which a photochemically reactive material was employed. These deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

3. As required by 40 CFR 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of the applicable standard or a monitored parameter deviates from the levels established during the performance test. The report shall contain the information specified in 40 CFR 63.10(c) as well as the additional records required by the record keeping requirements of paragraph (d) of this section When no deviations have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period.

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

   a. the emission test shall be conducted within 60 days after achieving the maximum production rate at which the manufacturing line which includes this emissions unit will be operated, but not later than 180 days upon startup of the above-mentioned manufacturing line.

   b. the emission test shall be conducted to demonstrate compliance with the emission rate of 6.8 lbs of formaldehyde per ton of glass pulled.

   c. the following test method(s) shall be employed to demonstrate compliance with the requirements specified in A.V.2.b:

      for formaldehyde, Methods 1-4 and 316 or 318 of 40 CFR, Part 60, Appendix A;

   d. the tests shall be conducted in accordance with the procedures in 40 CFR Part 63 subpart A and 40 CFR 63.1384, unless otherwise specified or approved by the Ohio EPA, Northwest District Office.

      i. All monitoring systems and equipment must be installed, operational, and calibrated prior to the performance test.

   Unless a different frequency is specified in 40CFR 63.1384, the owner or operator must monitor and record process and/or add-on control device parameters at least every 15 minutes during the performance tests. The arithmetic average for each parameter must be calculated using all of the recorded measurements for the parameter.

   During each performance test, the owner or operator must monitor and record the glass pull rate for each glass-melting furnace and, if different, the glass pull rate for each rotary spin manufacturing line and flame attenuation manufacturing line. Record the glass pull rate every 15 minutes during any performance test required by this subpart and determine the arithmetic average

of the recorded measurements for each test run and calculate the average of the three test runs.

Not later than 60 calendar days before the performance test is initially scheduled to begin, the permittee shall submit an "Intent to Test" notification to the Director (the Ohio EPA, Northwest District Office). The "Intent to Test" notification shall describe in detail the propose 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 Director (the Ohio EPA, Northwest District Office's) refusal to accept the results of the emission test(s).

Personnel form the Director (the Ohio EPA, Northwest District Office) 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 Director (the Ohio EPA, Northwest District Office) before the close of business on the 60th day following the completion of the performance test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Director (the Ohio EPA, Northwest District Office).

2. Unless disapproved by the Director, the permittee of a flame attenuation manufacturing line regulated by this subpart may conduct short-term experimental production runs using binder formulations or other process modifications where the process parameter values would be outside those established during performance test without first conducting performance tests. Such runs must not exceed 1 week in duration unless the Director approves a longer period. The permittee must notify the Director and postmark or deliver the notification at least 15 days prior to commencement of the short-term experimental production runs. The Director must inform the permittee of a decision to disapprove or must request additional information prior to the date of the short-term experimental production runs. Notification of the intent to perform and experimental short-term production runt shall include the following information:

   a. the purpose of the experimental production run;
   b. the affected line;
   c. how the established process parameters will deviate from previously approved levels;
   d. the duration of the experimental production run;
   e. the date and time of the experimental production run; and
   f. a description of any emission testing to be performed during the experimental production run.

3. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitations: 4.03 lbs PE/hr, 17.65 tpy PE

Applicable Compliance Method: The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

b. Emission Limitations: 2.02 lbs CO/hr, 8.85 tpy CO

Applicable Compliance Method: The hourly allowable CO emission limitation was established by multiplying the maximum gas burning rate (mmcf/hr) [as indicated in the permit application] by an emission factor (lb/mmcf) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable CO emission limitation by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.
Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

c. Emission Limitations: 1.25 lbs OC/hr, 5.48 tons OC/yr

Applicable Compliance Method: The hourly allowable OC emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable OC emission limitation by testing in accordance with Method 1-4, and 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

d. Emission Limitations: 0.14 lb SO2/hr, 0.61 ton SO2/yr

Applicable Compliance Method: The hourly allowable SO2 emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable SO2 emission limitation by testing in accordance with Methods 1-4, and 6 as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

e. Emission Limitation: 6.8 lbs formaldehyde per ton of glass pulled

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

f. Emission Limitation:Visible PE shall not exceed 20 percent opacity, as a six-minute average, except as otherwise provided by rule.

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P076 - forming and collection unit 805 [Administrative modification of PTI 03-16294 issued June 2, 2005 to revised testing requirements]		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	40 CFR Part 63, Subpart NNN
P077 - sear roll and curing oven 805	OAC rule 3745-31-05(A)(3)	
[Administrative modification of PTI 03-16294 issued June 2, 2005 to revised testing requirements]		OAC rule 3745-21-07(G)
		OAC rule 3745-17-11(B)
		OAC rule 3745-23-06(B)
		OAC rule 3745-21-08(B)
		OAC rule 3745-18-06(E)
	OAC rule 3745-17-07(A)	

Applicable Emissions Limitations/Control Measures	
The requirements of this rule also include compliance with the requirements of 40 CFR Part 63 Subpart NNN, OAC rule 3745-17-07(A) and OAC rule 3745-21-07(G).	glass pulled.
0.83 pounds (lbs) particulate emissions (PE)/hour (hr), 3.64 tons per year (tpy)PE (See A.I.2.a)	None (See A.IV.1)
1.86 lbs carbon monoxide (CO)/hr, 8.15 tpy CO	See A.I.2.b
0.76 lbs organic compounds (OC)/hr, 3.33 tpy OC	See A.I.2.d
0.73 lb nitrogen oxide (NOx)/hr, 3.20 tpy NOx	See A.I.2.c
0.20 lb sulfur dioxide (SO2)/hr, 0.88 tpy SO2	See A.I.2.b
Visible PE from the stack(s) servicing this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.	
The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 3.4 kg of formaldehyde per megagram (6.8 lbs of formaldehyde per ton) of	

2. Additional Terms and Conditions

2.a All PE is assume to be in the form of particulate matter less than 10 microns in size (PM10).

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

2.c The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.d The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On February 14, 2005, OAC rule 3745-23-06 was rescinded; therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the U.S. EPA approves the revision to OAC rule 3745-23-06, the requirement to satisfy the "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

II. Operational Restrictions

1. The use of any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01, is prohibited.

2. The permittee must use a resin in the formulation binder such that the free-formaldehyde content of the resin used does not exceed the free-formaldehyde range contained in the specification for the resin used during the performance test as specified in 40 CFR 63.1384(a)(9).

3. The permittee must use a binder formulation that does not vary from the specification and operating range established and used during the performance test as specified in 40 CFR 63.1384(a)(9). For the purposes of this standard, adding or increasing the quantity of urea and/or lignin in the binder formulation does not constitute a change in the binder formulation.

4. The permittee must operate the process such that the monitored process parameter(s) is not outside the limit(s) established during the performance test as specified in 40 CFR 63.1384(a)(10) for more than 10 percent of the total operating time in a 6-month block reporting period.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;
   b. whether the emissions are representative of normal operations;
   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
   d. the total duration of any visible emission incident; and
   e. any corrective actions taken to minimize or eliminate the visible emissions.

   If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

2. Notwithstanding the frequency of reporting requirements specified in section A.IV, the permittee may reduce the frequency of visual observations for this emissions unit from at least 5 days per week to weekly readings if the following conditions are met:

   a. for 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

   b. the permittee continues to comply with all the record keeping and monitoring requirements specified in section A.III.1.

The permittee shall revert to 5 days per week readings if any abnormal visible emissions are observed.

3. The permittee shall maintain monthly 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.

4. The permittee must prepare a written operations, maintenance, and monitoring plan. The plan must be submitted to the Director for review and approval as part of the application for a part 70 permit. The plant must include the following information:

   a. Procedures for the proper operation and maintenance of process modifications used to meet the emission limits in 40 CFR Part 63.1382.

   b. Procedures for the proper operation and maintenance of monitoring devices used to determine compliance, including quarterly calibration and certification of accuracy of each monitoring device according to the manufacturer's instructions.

   c. Corrective actions to be taken when process parameters deviate from the limit(s) established during initial performance tests.

5. The permittee must establish a correlation between formaldehyde emissions and a process parameter(s) to be monitored.

6. The permittee must monitor the established parameter(s) according to the procedures in the operations, maintenance, and monitoring plan.

7. The permittee must include as part of their operations, maintenance, and monitoring plan the following information:

   a. Procedures for the proper operation and maintenance of the process.

   b. Process parameter(s) to be monitored to demonstrate compliance with the applicable emission limits in 40 CFR 63.1382. Examples of process parameters include loss on ignition (LOI), binder solids content, and binder application rate.

   c. Correlation(s) between process parameter(s) to be monitored and formaldehyde emissions.

d. A schedule for monitoring the process parameter(s).

e. Record keeping procedures, consistent with the record keeping requirements of 40 CFR Part 63.1386, to show that the process parameter value(s) established during the performance test is not exceeded.

8. The permittee must monitor and record the free-formaldehyde content of each resin shipment received and used in the formulation binder.

9. The permittee must monitor and record the formulation of each batch of binder used.

10. The permittee must monitor and record at least once every 8 hours, the product LOI and product density of each bonded wool fiberglass product manufactured.

11. For all process operating parameters during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new control device or process parameter levels, they comply with the applicable emission limits in 40 CFR 63.1382. The owner or operator shall conduct all additional performance tests according to the procedures in 40 CFR Part 63, subpart A and in 40 CFR 63.1384.

12. The permittee shall develop and implement a written plan as described in 40 CFR 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process modifications and control systems used to comply with the standard. In addition to the information required in 40 CFR 63.6(e)(3), the plan shall include:

    a. Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended.

    b. Corrective actions to be taken in the event of a malfunction of a control device or process modification, including procedures for recording the actions taken to correct the malfunction of minimize emissions.

    c. A maintenance schedule for each control device and process modification that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

13. The permittee shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.10(e)(3)(iv).

14. As required by 40 CFR 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart:

a. The permittee must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.

b. The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche.

c. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

15. In addition to the general records required by 40 CFR 63.10(b)(2), the permittee shall maintain records of the following information:

a. The formulation of each binder batch and the LOI and density for each product manufactured on a flame attenuation manufacturing line subject to the provisions of this subpart, and the free formaldehyde content of each resin shipment received and used in the binder formulation.

b. Process parameter level(s) flame attenuation manufacturing lines that use process modifications to comply with the emission limits, including any period when the parameter level(s) deviated from the established limit(s), the date and time of the deviation, when corrective actions were initiated, the cause of the deviation, an explanation of the corrective actions taken, and when the cause of the deviation was corrected.

c. Glass pull rate, including any period when the pull rate exceeded the average pull rate established during the performance test by more than 20 percent, the date and time of the exceedance, when corrective actions were initiated, the cause of the exceedance, and explanation of the corrective actions taken, and when the cause of the exceedance was corrected.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA, Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit quarterly deviation (excursion) reports that identify each month during which a photochemically reactive material was employed. These deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

3. As required by 40 CFR 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of the applicable standard or a monitored parameter deviates from the levels established during the performance test. The report shall contain the information specified in 40 CFR 63.10(c) as well as the additional records required by the record keeping requirements of paragraph (d) of this section When no deviations have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period.

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

   a. the emission test shall be conducted within 60 days after achieving the maximum production rate at which the manufacturing line which includes this emissions unit will be operated, but not later than 180 days upon startup of the above-mentioned manufacturing line.

   b. the emission test shall be conducted to demonstrate compliance with the emission rate of 6.8 lbs of formaldehyde per ton of glass pulled.

   c. the following test method(s) shall be employed to demonstrate compliance with the requirements specified in A.V.2.b:

      for formaldehyde, Methods 1-4 and 316 or 318 of 40 CFR, Part 60, Appendix A;

   d. the tests shall be conducted in accordance with the procedures in 40 CFR Part 63 subpart A and 40 CFR 63.1384, unless otherwise specified or approved by the Ohio EPA, Northwest District Office.

      i. All monitoring systems and equipment must be installed, operational, and calibrated prior to the performance test.

   Unless a different frequency is specified in 40CFR 63.1384, the owner or operator must monitor and record process and/or add-on control device parameters at least every 15 minutes during the performance tests. The arithmetic average for each parameter must be calculated using all of the recorded measurements for the parameter.

   During each performance test, the owner or operator must monitor and record the glass pull rate for each glass-melting furnace and, if different, the glass pull rate for each rotary spin manufacturing line and flame attenuation manufacturing line. Record the glass pull rate every 15 minutes during any performance test required by this subpart and determine the arithmetic average

of the recorded measurements for each test run and calculate the average of the three test runs.

Not later than 60 calendar days before the performance test is initially scheduled to begin, the permittee shall submit an "Intent to Test" notification to the Director (the Ohio EPA, Northwest District Office). The "Intent to Test" notification shall describe in detail the propose 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 Director (the Ohio EPA, Northwest District Office's) refusal to accept the results of the emission test(s).

Personnel form the Director (the Ohio EPA, Northwest District Office) 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 Director (the Ohio EPA, Northwest District Office) before the close of business on the 60th day following the completion of the performance test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Director (the Ohio EPA, Northwest District Office).

2. Unless disapproved by the Director, the permittee of a flame attenuation manufacturing line regulated by this subpart may conduct short-term experimental production runs using binder formulations or other process modifications where the process parameter values would be outside those established during performance test without first conducting performance tests. Such runs must not exceed 1 week in duration unless the Director approves a longer period. The permittee must notify the Director and postmark or deliver the notification at least 15 days prior to commencement of the short-term experimental production runs. The Director must inform the permittee of a decision to disapprove or must request additional information prior to the date of the short-term experimental production runs. Notification of the intent to perform and experimental short-term production runt shall include the following information:

   a. the purpose of the experimental production run;
   b. the affected line;
   c. how the established process parameters will deviate from previously approved levels;
   d. the duration of the experimental production run;
   e. the date and time of the experimental production run; and
   f. a description of any emission testing to be performed during the experimental production run.

3. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

   a. <u>Emission Limitations:</u> 0.83 lb PE/hr, 3.64 tpy PE

Applicable Compliance Method: The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

b. Emission Limitations: 1.86 lbs CO/hr, 8.15 tpy CO

Applicable Compliance Method: The hourly allowable CO emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable CO emission limitation by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

c. Emission Limitations: 0.76 lb OC/hr, 3.33 tons OC/yr

Applicable Compliance Method: The hourly allowable OC emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable OC emission limitation by testing in accordance with Methods 1-4 and Method 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

d. Emission Limitations: 0.73 lb NOx/hr, 3.20 tpy NOx

Applicable Compliance Method: The hourly allowable NOx emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable NOx emission limitation by testing in accordance with Methods 1-4 and 7, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

e. Emission Limitations: 0.20 lb SO2/hr, 0.88 tpy SO2

Applicable Compliance Method: The hourly allowable SO2 emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass] derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable SO2 emission limitation by testing in accordance with Methods 1-4 and 6, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

f. Emission Limitation: 6.8 lbs formaldehyde per ton of glass pulled

Applicable Compliance Method: Compliance with the above limitation shall be demonstrated by the results of the stack testing conducted in accordance with A.V.1 above.

g. Emission Limitation: Visible PE shall not exceed 20 percent opacity, as a six-minute average, except as otherwise provided by rule.

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P077 - sear roll and curing oven 805 [Administrative modification of PTI 03-16294 issued June 2, 2005 to revised testing requirements]		

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

Johns Manville International Inc. Plt08 **Facility ID: 032001000**

PTI Application: 03-16294

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Emissions Unit ID: P077

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P078 - product finishing unit 805	OAC rule 3745-31-05(A)(3)	0.39pound (lb) particulate emissions (PE)/hour (hr), 1.71tons/year (tpy) PE (See A.I.2.b) See A.I.2.a Visible PE from the stack(s) servicing this emissions unit shall not exceed 5% opacity, as a six-minute average
	OAC rule 3745-17-07(A)	See A.I.2.c
	OAC rule 3745-17-11(B)	See A.I.2.c

2. Additional Terms and Conditions

2.a The "Best Available Technology" (BAT) control requirements for this emissions unit has been determined to be the use of a control system consisting of a cyclone and baghouse (finishing dust collector). The control system shall achieve a 99% removal efficiency for PE (100% capture).

2.b All PE is assumed to be in the form of particulate matter less than 10 microns in size (PM10).

2.c 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

None

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;
   b. whether the emissions are representative of normal operations;
   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
   d. the total duration of any visible emission incident; and
   e. any corrective actions taken to minimize or eliminate the visible emissions.

2. Notwithstanding the frequency of reporting requirements specified in section A.IV, the permittee may reduce the frequency of visual observations for this emissions unit from at least 5 days per week to weekly readings if the following conditions are met:

   a. for 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

   b. the permittee continues to comply with all the record keeping and monitoring requirements specified in section A.III.1.

   The permittee shall revert to 5 days per week readings if any abnormal visible emissions are observed.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA, Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):

   a. Emission Limitations: 0.39lb PE/hr, 1.71tpy PE

      Applicable Compliance Method: The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by a controlled emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

      Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

   b. Emission Limitation:Visible PE from the stack(s) servicing this emissions unit shall not exceed 5% opacity, as a six-minute average.

      Applicable Compliance Method: If required, compliance with the visible emission limitation for the baghouse stack shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P078 - product finishing unit 805		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
P079 - forming and collection unit 806 [Administrative modification of PTI 03-16294 issued June 2, 2005 to revised testing requirements]	OAC rule 3745-31-05(A)(3)	
		OAC rule 3745-21-07(G)
		OAC rule 3745-17-11(B)
		OAC rule 3745-23-06(B)
		OAC rule 3745-21-08(B)
		OAC rule 3745-18-06(E)
	OAC rule 3745-17-07(A)	
	40 CFR Part 63, Subpart NNN	

Applicable Emissions Limitations/Control Measures	
The requirements of this rule also include compliance with the requirements of 40 CFR Part 63 Subpart NNN, OAC rule 3745-17-07(A), OAC rule 3745-21-07(G).	See A.I.2.b See A.I.2.d See A.I.2.c See A.I.2.b
4.03 pounds (lbs) particulate emissions (PE)/hour (hr), 17.65 tons per year (tpy)PE (See A.I.2.a)	
2.02 lbs carbon monoxide (CO)/hr, 8.85 tpy CO	
1.25 lbs organic compounds (OC)/hr, 5.48 tpy OC	
0.14 lb sulfur dioxide (SO2)/hr, 0.61 tpy SO2	
Visible PE from the stack(s) servicing this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.	
The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 3.4 kg of formaldehyde per megagram (6.8 lbs of formaldehyde per ton) of glass pulled.	
None (See A.IV.1)	

2. Additional Terms and Conditions

2.a All PE is assume to be in the form of particulate matter less than 10 microns in size (PM10).

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

2.c The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.d The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On February 14, 2005, OAC rule 3745-23-06 was rescinded; therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the U.S. EPA approves the revision to OAC rule 3745-23-06, the requirement to satisfy the "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

II. Operational Restrictions

1. The use of any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01, is prohibited.

2. The permittee must use a resin in the formulation binder such that the free-formaldehyde content of the resin used does not exceed the free-formaldehyde range contained in the specification for the resin used during the performance test as specified in 40 CFR 63.1384(a)(9).

3. The permittee must use a binder formulation that does not vary from the specification and operating range established and used during the performance test as specified in 40 CFR 63.1384(a)(9). For the purposes of this standard, adding or increasing the quantity of urea and/or

lignin in the binder formulation does not constitute a change in the binder formulation.

4. The permittee must operate the process such that the monitored process parameter(s) is not outside the limit(s) established during the performance test as specified in 40 CFR 63.1384(a)(10) for more than 10 percent of the total operating time in a 6-month block reporting period.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;
   b. whether the emissions are representative of normal operations;
   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
   d. the total duration of any visible emission incident; and
   e. any corrective actions taken to minimize or eliminate the visible emissions.

   If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

2. Notwithstanding the frequency of reporting requirements specified in section A.IV, the permittee may reduce the frequency of visual observations for this emissions unit from at least 5 days per week to weekly readings if the following conditions are met:

   a. for 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

   b. the permittee continues to comply with all the record keeping and monitoring requirements specified in section A.III.1.

The permittee shall revert to 5 days per week readings if any abnormal visible emissions are observed.

3. The permittee shall maintain monthly 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.

4. The permittee must prepare a written operations, maintenance, and monitoring plan. The plan must be submitted to the Director for review and approval as part of the application for a part 70 permit. The plant must include the following information:

   a. Procedures for the proper operation and maintenance of process modifications used to meet the emission limits in 40 CFR Part 63.1382.

   b. Procedures for the proper operation and maintenance of monitoring devices used to determine compliance, including quarterly calibration and certification of accuracy of each monitoring device according to the manufacturer's instructions.

   c. Corrective actions to be taken when process parameters deviate from the limit(s) established during initial performance tests.

5. The permittee must establish a correlation between formaldehyde emissions and a process parameter(s) to be monitored.

6. The permittee must monitor the established parameter(s) according to the procedures in the operations, maintenance, and monitoring plan.

7. The permittee must include as part of their operations, maintenance, and monitoring plan the following information:

   a. Procedures for the proper operation and maintenance of the process.

   b. Process parameter(s) to be monitored to demonstrate compliance with the applicable emission limits in 40 CFR 63.1382. Examples of process parameters include loss on ignition (LOI), binder solids content, and binder application rate.

   c. Correlation(s) between process parameter(s) to be monitored and formaldehyde emissions.

   d. A schedule for monitoring the process parameter(s).

   e. Record keeping procedures, consistent with the record keeping requirements of 40 CFR

Part 63.1386, to show that the process parameter value(s) established during the performance test is not exceeded.

8. The permittee must monitor and record the free-formaldehyde content of each resin shipment received and used in the formulation binder.

9. The permittee must monitor and record the formulation of each batch of binder used.

10. The permittee must monitor and record at least once every 8 hours, the product LOI and product density of each bonded wool fiberglass product manufactured.

11. For all process operating parameters during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new control device or process parameter levels, they comply with the applicable emission limits in 40 CFR 63.1382. The owner or operator shall conduct all additional performance tests according to the procedures in 40 CFR Part 63, subpart A and in 40 CFR 63.1384.

12. The permittee shall develop and implement a written plan as described in 40 CFR 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process modifications and control systems used to comply with the standard. In addition to the information required in 40 CFR 63.6(e)(3), the plan shall include:

    a. Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended.

    b. Corrective actions to be taken in the event of a malfunction of a control device or process modification, including procedures for recording the actions taken to correct the malfunction of minimize emissions.

    c. A maintenance schedule for each control device and process modification that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

13. The permittee shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.10(e)(3)(iv).

14. As required by 40 CFR 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart:

a. The permittee must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.

b. The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche.

c. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

15. In addition to the general records required by 40 CFR 63.10(b)(2), the permittee shall maintain records of the following information:

a. The formulation of each binder batch and the LOI and density for each product manufactured on a flame attenuation manufacturing line subject to the provisions of this subpart, and the free formaldehyde content of each resin shipment received and used in the binder formulation.

b. Process parameter level(s) flame attenuation manufacturing lines that use process modifications to comply with the emission limits, including any period when the parameter level(s) deviated from the established limit(s), the date and time of the deviation, when corrective actions were initiated, the cause of the deviation, an explanation of the corrective actions taken, and when the cause of the deviation was corrected.

c. Glass pull rate, including any period when the pull rate exceeded the average pull rate established during the performance test by more than 20 percent, the date and time of the exceedance, when corrective actions were initiated, the cause of the exceedance, and explanation of the corrective actions taken, and when the cause of the exceedance was corrected.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA, Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit quarterly deviation (excursion) reports that identify each month during which a photochemically reactive material was employed. These deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

3. As required by 40 CFR 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of the applicable standard or a monitored parameter deviates from the levels established during the performance test. The report shall contain the information specified in 40 CFR 63.10(c) as well as the additional records required by the record keeping requirements of paragraph (d) of this section When no deviations have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period.

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

   a. the emission test shall be conducted within 60 days after achieving the maximum production rate at which the manufacturing line which includes this emissions unit will be operated, but not later than 180 days upon startup of the above-mentioned manufacturing line.

   b. the emission test shall be conducted to demonstrate compliance with the emission rate of 6.8 lbs of formaldehyde per ton of glass pulled.

   c. the following test method(s) shall be employed to demonstrate compliance with the requirements specified in A.V.2.b:

      for formaldehyde, Methods 1-4 and 316 or 318 of 40 CFR, Part 60, Appendix A;

   d. the tests shall be conducted in accordance with the procedures in 40 CFR Part 63 subpart A and 40 CFR 63.1384, unless otherwise specified or approved by the Ohio EPA, Northwest District Office.

      i. All monitoring systems and equipment must be installed, operational, and calibrated prior to the performance test.

   Unless a different frequency is specified in 40CFR 63.1384, the owner or operator must monitor and record process and/or add-on control device parameters at least every 15 minutes during the performance tests. The arithmetic average for each parameter must be calculated using all of the recorded measurements for the parameter.

   During each performance test, the owner or operator must monitor and record the glass pull rate for each glass-melting furnace and, if different, the glass pull rate for each rotary spin manufacturing line and flame attenuation manufacturing line. Record the glass pull rate every 15 minutes during any performance test required by this subpart and determine the arithmetic average

of the recorded measurements for each test run and calculate the average of the three test runs.

Not later than 60 calendar days before the performance test is initially scheduled to begin, the permittee shall submit an "Intent to Test" notification to the Director (the Ohio EPA, Northwest District Office). The "Intent to Test" notification shall describe in detail the propose 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 Director (the Ohio EPA, Northwest District Office's) refusal to accept the results of the emission test(s).

Personnel form the Director (the Ohio EPA, Northwest District Office) 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 Director (the Ohio EPA, Northwest District Office) before the close of business on the 60th day following the completion of the performance test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Director (the Ohio EPA, Northwest District Office).

2. Unless disapproved by the Director, the permittee of a flame attenuation manufacturing line regulated by this subpart may conduct short-term experimental production runs using binder formulations or other process modifications where the process parameter values would be outside those established during performance test without first conducting performance tests. Such runs must not exceed 1 week in duration unless the Director approves a longer period. The permittee must notify the Director and postmark or deliver the notification at least 15 days prior to commencement of the short-term experimental production runs. The Director must inform the permittee of a decision to disapprove or must request additional information prior to the date of the short-term experimental production runs. Notification of the intent to perform and experimental short-term production runt shall include the following information:

   a. the purpose of the experimental production run;
   b. the affected line;
   c. how the established process parameters will deviate from previously approved levels;
   d. the duration of the experimental production run;
   e. the date and time of the experimental production run; and
   f. a description of any emission testing to be performed during the experimental production run.

3. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitations: 4.03 lbs PE/hr, 17.65 tpy PE

Applicable Compliance Method: The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

b. Emission Limitations: 2.02 lbs CO/hr, 8.85 tpy CO

Applicable Compliance Method: The hourly allowable CO emission limitation was established by multiplying the maximum gas burning rate (mmcf/hr) [as indicated in the permit application] by an emission factor (lb/mmcf) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable CO emission limitation by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.
Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

c. Emission Limitations: 1.25 lbs OC/hr, 5.48 tons OC/yr

Applicable Compliance Method: The hourly allowable OC emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable OC emission limitation by testing in accordance with Method 1-4, and 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

d. Emission Limitations: 0.14 lb SO2/hr, 0.61 ton SO2/yr

Applicable Compliance Method: The hourly allowable SO2 emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable SO2 emission limitation by testing in accordance with Methods 1-4, and 6 as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

e. Emission Limitation: 6.8 lbs formaldehyde per ton of glass pulled

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

f. Emission Limitation:Visible PE shall not exceed 20 percent opacity, as a six-minute average, except as otherwise provided by rule.

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P079 - forming and collection unit 806 [Administrative modification of PTI 03-16294 issued June 2, 2005 to revised testing requirements]		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Regulations	40 CFR Part 63, Subpart NNN
P080 - sear roll and curing oven 806	OAC rule 3745-31-05(A)(3)	
[Administrative modification of PTI 03-16294 issued June 2, 2005 to revised testing requirements]		OAC rule 3745-21-07(G)
		OAC rule 3745-17-11(B)
		OAC rule 3745-23-06(B)
		OAC rule 3745-21-08(B)
		OAC rule 3745-18-06(E)
	OAC rule 3745-17-07(A)	

Applicable Emissions Limitations/Control Measures	
	glass pulled.
	None (See A.IV.1)
The requirements of this rule also include compliance with the requirements of 40 CFR Part 63 Subpart NNN, OAC rule 3745-17-07(A) and OAC rule 3745-21-07(G).	See A.I.2.b See A.I.2.d See A.I.2.c
0.83 pounds (lbs) particulate emissions (PE)/hour (hr), 3.64 tons per year (tpy)PE (See A.I.2.a)	See A.I.2.b
1.86 lbs carbon monoxide (CO)/hr, 8.15 tpy CO	
0.76 lbs organic compounds (OC)/hr, 3.33 tpy OC	
0.73 lb nitrogen oxide (NOx)/hr, 3.20 tpy NOx	
0.20 lb sulfur dioxide (SO2)/hr, 0.88 tpy SO2	
Visible PE from the stack(s) servicing this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.	
The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 3.4 kg of formaldehyde per megagram (6.8 lbs of formaldehyde per ton) of	

2. Additional Terms and Conditions

2.a All PE is assume to be in the form of particulate matter less than 10 microns in size (PM10).

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

2.c The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.d The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On February 14, 2005, OAC rule 3745-23-06 was rescinded; therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the U.S. EPA approves the revision to OAC rule 3745-23-06, the requirement to satisfy the "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

II. Operational Restrictions

1. The use of any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01, is prohibited.

2. The permittee must use a resin in the formulation binder such that the free-formaldehyde content of the resin used does not exceed the free-formaldehyde range contained in the specification for the resin used during the performance test as specified in 40 CFR 63.1384(a)(9).

3. The permittee must use a binder formulation that does not vary from the specification and operating range established and used during the performance test as specified in 40 CFR 63.1384(a)(9). For the purposes of this standard, adding or increasing the quantity of urea and/or lignin in the binder formulation does not constitute a change in the binder formulation.

4. The permittee must operate the process such that the monitored process parameter(s) is not outside the limit(s) established during the performance test as specified in 40 CFR 63.1384(a)(10) for more than 10 percent of the total operating time in a 6-month block reporting period.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;
   b. whether the emissions are representative of normal operations;
   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
   d. the total duration of any visible emission incident; and
   e. any corrective actions taken to minimize or eliminate the visible emissions.

   If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

2. Notwithstanding the frequency of reporting requirements specified in section A.IV, the permittee may reduce the frequency of visual observations for this emissions unit from at least 5 days per week to weekly readings if the following conditions are met:

   a. for 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

   b. the permittee continues to comply with all the record keeping and monitoring requirements specified in section A.III.1.

The permittee shall revert to 5 days per week readings if any abnormal visible emissions are observed.

3. The permittee shall maintain monthly 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.

4. The permittee must prepare a written operations, maintenance, and monitoring plan. The plan must be submitted to the Director for review and approval as part of the application for a part 70 permit. The plant must include the following information:

   a. Procedures for the proper operation and maintenance of process modifications used to meet the emission limits in 40 CFR Part 63.1382.

   b. Procedures for the proper operation and maintenance of monitoring devices used to determine compliance, including quarterly calibration and certification of accuracy of each monitoring device according to the manufacturer's instructions.

   c. Corrective actions to be taken when process parameters deviate from the limit(s) established during initial performance tests.

5. The permittee must establish a correlation between formaldehyde emissions and a process parameter(s) to be monitored.

6. The permittee must monitor the established parameter(s) according to the procedures in the operations, maintenance, and monitoring plan.

7. The permittee must include as part of their operations, maintenance, and monitoring plan the following information:

   a. Procedures for the proper operation and maintenance of the process.

   b. Process parameter(s) to be monitored to demonstrate compliance with the applicable emission limits in 40 CFR 63.1382. Examples of process parameters include loss on ignition (LOI), binder solids content, and binder application rate.

   c. Correlation(s) between process parameter(s) to be monitored and formaldehyde emissions.

d. A schedule for monitoring the process parameter(s).

e. Record keeping procedures, consistent with the record keeping requirements of 40 CFR Part 63.1386, to show that the process parameter value(s) established during the performance test is not exceeded.

8. The permittee must monitor and record the free-formaldehyde content of each resin shipment received and used in the formulation binder.

9. The permittee must monitor and record the formulation of each batch of binder used.

10. The permittee must monitor and record at least once every 8 hours, the product LOI and product density of each bonded wool fiberglass product manufactured.

11. For all process operating parameters during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new control device or process parameter levels, they comply with the applicable emission limits in 40 CFR 63.1382. The owner or operator shall conduct all additional performance tests according to the procedures in 40 CFR Part 63, subpart A and in 40 CFR 63.1384.

12. The permittee shall develop and implement a written plan as described in 40 CFR 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process modifications and control systems used to comply with the standard. In addition to the information required in 40 CFR 63.6(e)(3), the plan shall include:

    a. Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended.

    b. Corrective actions to be taken in the event of a malfunction of a control device or process modification, including procedures for recording the actions taken to correct the malfunction of minimize emissions.

    c. A maintenance schedule for each control device and process modification that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

13. The permittee shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.10(e)(3)(iv).

14. As required by 40 CFR 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart:

a. The permittee must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.

b. The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche.

c. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

15. In addition to the general records required by 40 CFR 63.10(b)(2), the permittee shall maintain records of the following information:

a. The formulation of each binder batch and the LOI and density for each product manufactured on a flame attenuation manufacturing line subject to the provisions of this subpart, and the free formaldehyde content of each resin shipment received and used in the binder formulation.

b. Process parameter level(s) flame attenuation manufacturing lines that use process modifications to comply with the emission limits, including any period when the parameter level(s) deviated from the established limit(s), the date and time of the deviation, when corrective actions were initiated, the cause of the deviation, an explanation of the corrective actions taken, and when the cause of the deviation was corrected.

c. Glass pull rate, including any period when the pull rate exceeded the average pull rate established during the performance test by more than 20 percent, the date and time of the exceedance, when corrective actions were initiated, the cause of the exceedance, and explanation of the corrective actions taken, and when the cause of the exceedance was corrected.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA, Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit quarterly deviation (excursion) reports that identify each month during which a photochemically reactive material was employed. These deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

3. As required by 40 CFR 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of the applicable standard or a monitored parameter deviates from the levels established during the performance test. The report shall contain the information specified in 40 CFR 63.10(c) as well as the additional records required by the record keeping requirements of paragraph (d) of this section When no deviations have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period.

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

   a. the emission test shall be conducted within 60 days after achieving the maximum production rate at which the manufacturing line which includes this emissions unit will be operated, but not later than 180 days upon startup of the above-mentioned manufacturing line.

   b. the emission test shall be conducted to demonstrate compliance with the emission rate of 6.8 lbs of formaldehyde per ton of glass pulled.

   c. the following test method(s) shall be employed to demonstrate compliance with the requirements specified in A.V.2.b:

      for formaldehyde, Methods 1-4 and 316 or 318 of 40 CFR, Part 60, Appendix A;

   d. the tests shall be conducted in accordance with the procedures in 40 CFR Part 63 subpart A and 40 CFR 63.1384, unless otherwise specified or approved by the Ohio EPA, Northwest District Office.

      i. All monitoring systems and equipment must be installed, operational, and calibrated prior to the performance test.

   Unless a different frequency is specified in 40CFR 63.1384, the owner or operator must monitor and record process and/or add-on control device parameters at least every 15 minutes during the performance tests. The arithmetic average for each parameter must be calculated using all of the recorded measurements for the parameter.

   During each performance test, the owner or operator must monitor and record the glass pull rate for each glass-melting furnace and, if different, the glass pull rate for each rotary spin manufacturing line and flame attenuation manufacturing line. Record the glass pull rate every 15 minutes during any performance test required by this subpart and determine the arithmetic average

of the recorded measurements for each test run and calculate the average of the three test runs.

Not later than 60 calendar days before the performance test is initially scheduled to begin, the permittee shall submit an "Intent to Test" notification to the Director (the Ohio EPA, Northwest District Office). The "Intent to Test" notification shall describe in detail the propose 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 Director (the Ohio EPA, Northwest District Office's) refusal to accept the results of the emission test(s).

Personnel form the Director (the Ohio EPA, Northwest District Office) 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 Director (the Ohio EPA, Northwest District Office) before the close of business on the 60th day following the completion of the performance test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Director (the Ohio EPA, Northwest District Office).

2. Unless disapproved by the Director, the permittee of a flame attenuation manufacturing line regulated by this subpart may conduct short-term experimental production runs using binder formulations or other process modifications where the process parameter values would be outside those established during performance test without first conducting performance tests. Such runs must not exceed 1 week in duration unless the Director approves a longer period. The permittee must notify the Director and postmark or deliver the notification at least 15 days prior to commencement of the short-term experimental production runs. The Director must inform the permittee of a decision to disapprove or must request additional information prior to the date of the short-term experimental production runs. Notification of the intent to perform and experimental short-term production runt shall include the following information:

   a. the purpose of the experimental production run;
   b. the affected line;
   c. how the established process parameters will deviate from previously approved levels;
   d. the duration of the experimental production run;
   e. the date and time of the experimental production run; and
   f. a description of any emission testing to be performed during the experimental production run.

3. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

   a. <u>Emission Limitations:</u> 0.83 lb PE/hr, 3.64 tpy PE

Applicable Compliance Method: The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

b. Emission Limitations: 1.86 lbs CO/hr, 8.15 tpy CO

Applicable Compliance Method: The hourly allowable CO emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable CO emission limitation by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

c. Emission Limitations: 0.76 lb OC/hr, 3.33 tons OC/yr

Applicable Compliance Method: The hourly allowable OC emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable OC emission limitation by testing in accordance with Methods 1-4 and Method 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

d. Emission Limitations: 0.73 lb NOx/hr, 3.20 tpy NOx

Applicable Compliance Method: The hourly allowable NOx emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable NOx emission limitation by testing in accordance with Methods 1-4 and 7, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

e. Emission Limitations: 0.20 lb SO2/hr, 0.88 tpy SO2

Applicable Compliance Method: The hourly allowable SO2 emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass] derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable SO2 emission limitation by testing in accordance with Methods 1-4 and 6, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

f. Emission Limitation: 6.8 lbs formaldehyde per ton of glass pulled

Applicable Compliance Method: Compliance with the above limitation shall be demonstrated by the results of the stack testing conducted in accordance with A.V.1 above.

g. Emission Limitation: Visible PE shall not exceed 20 percent opacity, as a six-minute average, except as otherwise provided by rule.

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P080 - sear roll and curing oven 806 [Administrative modification of PTI 03-16294 issued June 2, 2005 to revised testing requirements]		

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

Johns Manville International Inc. Plt08 **Facility ID: 032001000**

PTI Application: 03-16294

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Emissions Unit ID: P080

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P081 - product finishing unit 806	OAC rule 3745-31-05(A)(3)	0.39pound (lb) particulate emissions (PE)/hour (hr), 1.71tons/year (tpy) PE (See A.I.2.b) See A.I.2.a Visible PE from the stack(s) servicing this emissions unit shall not exceed 5% opacity, as a six-minute average
	OAC rule 3745-17-07(A)	See A.I.2.c
	OAC rule 3745-17-11(B)	See A.I.2.c

2. Additional Terms and Conditions

2.a The "Best Available Technology" (BAT) control requirements for this emissions unit has been determined to be the use of a control system consisting of a cyclone and baghouse (finishing dust collector). The control system shall achieve a 99% removal efficiency for PE (100% capture).

2.b All PE is assumed to be in the form of particulate matter less than 10 microns in size (PM10).

2.c 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

None

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;
   b. whether the emissions are representative of normal operations;
   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
   d. the total duration of any visible emission incident; and
   e. any corrective actions taken to minimize or eliminate the visible emissions.

2. Notwithstanding the frequency of reporting requirements specified in section A.IV, the permittee may reduce the frequency of visual observations for this emissions unit from at least 5 days per week to weekly readings if the following conditions are met:

   a. for 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

   b. the permittee continues to comply with all the record keeping and monitoring requirements specified in section A.III.1.

   The permittee shall revert to 5 days per week readings if any abnormal visible emissions are observed.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA, Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):

   a. Emission Limitations: 0.39lb PE/hr, 1.71tpy PE

      Applicable Compliance Method: The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by a controlled emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

      Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

   b. Emission Limitation:Visible PE from the stack(s) servicing this emissions unit shall not exceed 5% opacity, as a six-minute average.

      Applicable Compliance Method: If required, compliance with the visible emission limitation for the baghouse stack shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P081 - product finishing unit 806		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
P082 - forming and collection unit 807 [Administrative modification of PTI 03-16294 issued June 2, 2005 to revised testing requirements]	OAC rule 3745-31-05(A)(3)	
		OAC rule 3745-21-07(G)
		OAC rule 3745-17-11(B)
		OAC rule 3745-23-06(B)
		OAC rule 3745-21-08(B)
		OAC rule 3745-18-06(E)
	OAC rule 3745-17-07(A)	
	40 CFR Part 63, Subpart NNN	

Applicable Emissions Limitations/Control Measures	
The requirements of this rule also include compliance with the requirements of 40 CFR Part 63 Subpart NNN, OAC rule 3745-17-07(A), OAC rule 3745-21-07(G).	See A.I.2.b See A.I.2.d See A.I.2.c See A.I.2.b
6.05 pounds (lbs) particulate emissions (PE)/hour (hr), 26.50 tons per year (tpy)PE (See A.I.2.a)	
2.02 lbs carbon monoxide (CO)/hr, 8.85 tpy CO	
1.87 lbs organic compounds (OC)/hr, 8.19 tpy OC	
0.21 lb sulfur dioxide (SO2)/hr, 0.92 tpy SO2	
Visible PE from the stack(s) servicing this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.	
The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 3.4 kg of formaldehyde per megagram (6.8 lbs of formaldehyde per ton) of glass pulled.	
None (See A.IV.1)	

2. Additional Terms and Conditions

2.a All PE is assume to be in the form of particulate matter less than 10 microns in size (PM10).

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

2.c The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.d The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On February 14, 2005, OAC rule 3745-23-06 was rescinded; therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the U.S. EPA approves the revision to OAC rule 3745-23-06, the requirement to satisfy the "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

II. Operational Restrictions

1. The use of any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01, is prohibited.

2. The permittee must use a resin in the formulation binder such that the free-formaldehyde content of the resin used does not exceed the free-formaldehyde range contained in the specification for the resin used during the performance test as specified in 40 CFR 63.1384(a)(9).

3. The permittee must use a binder formulation that does not vary from the specification and operating range established and used during the performance test as specified in 40 CFR 63.1384(a)(9). For the purposes of this standard, adding or increasing the quantity of urea and/or

lignin in the binder formulation does not constitute a change in the binder formulation.

4. The permittee must operate the process such that the monitored process parameter(s) is not outside the limit(s) established during the performance test as specified in 40 CFR 63.1384(a)(10) for more than 10 percent of the total operating time in a 6-month block reporting period.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;
   b. whether the emissions are representative of normal operations;
   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
   d. the total duration of any visible emission incident; and
   e. any corrective actions taken to minimize or eliminate the visible emissions.

   If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

2. Notwithstanding the frequency of reporting requirements specified in section A.IV, the permittee may reduce the frequency of visual observations for this emissions unit from at least 5 days per week to weekly readings if the following conditions are met:

   a. for 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

   b. the permittee continues to comply with all the record keeping and monitoring requirements specified in section A.III.1.

The permittee shall revert to 5 days per week readings if any abnormal visible emissions are observed.

3. The permittee shall maintain monthly 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.

4. The permittee must prepare a written operations, maintenance, and monitoring plan. The plan must be submitted to the Director for review and approval as part of the application for a part 70 permit. The plant must include the following information:

   a. Procedures for the proper operation and maintenance of process modifications used to meet the emission limits in 40 CFR Part 63.1382.

   b. Procedures for the proper operation and maintenance of monitoring devices used to determine compliance, including quarterly calibration and certification of accuracy of each monitoring device according to the manufacturer's instructions.

   c. Corrective actions to be taken when process parameters deviate from the limit(s) established during initial performance tests.

5. The permittee must establish a correlation between formaldehyde emissions and a process parameter(s) to be monitored.

6. The permittee must monitor the established parameter(s) according to the procedures in the operations, maintenance, and monitoring plan.

7. The permittee must include as part of their operations, maintenance, and monitoring plan the following information:

   a. Procedures for the proper operation and maintenance of the process.

   b. Process parameter(s) to be monitored to demonstrate compliance with the applicable emission limits in 40 CFR 63.1382. Examples of process parameters include loss on ignition (LOI), binder solids content, and binder application rate.

   c. Correlation(s) between process parameter(s) to be monitored and formaldehyde emissions.

   d. A schedule for monitoring the process parameter(s).

   e. Record keeping procedures, consistent with the record keeping requirements of 40 CFR

Part 63.1386, to show that the process parameter value(s) established during the performance test is not exceeded.

8. The permittee must monitor and record the free-formaldehyde content of each resin shipment received and used in the formulation binder.

9. The permittee must monitor and record the formulation of each batch of binder used.

10. The permittee must monitor and record at least once every 8 hours, the product LOI and product density of each bonded wool fiberglass product manufactured.

11. For all process operating parameters during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new control device or process parameter levels, they comply with the applicable emission limits in 40 CFR 63.1382. The owner or operator shall conduct all additional performance tests according to the procedures in 40 CFR Part 63, subpart A and in 40 CFR 63.1384.

12. The permittee shall develop and implement a written plan as described in 40 CFR 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process modifications and control systems used to comply with the standard. In addition to the information required in 40 CFR 63.6(e)(3), the plan shall include:

    a. Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended.

    b. Corrective actions to be taken in the event of a malfunction of a control device or process modification, including procedures for recording the actions taken to correct the malfunction of minimize emissions.

    c. A maintenance schedule for each control device and process modification that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

13. The permittee shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.10(e)(3)(iv).

14. As required by 40 CFR 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart:

a. The permittee must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.

b. The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche.

c. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

15. In addition to the general records required by 40 CFR 63.10(b)(2), the permittee shall maintain records of the following information:

a. The formulation of each binder batch and the LOI and density for each product manufactured on a flame attenuation manufacturing line subject to the provisions of this subpart, and the free formaldehyde content of each resin shipment received and used in the binder formulation.

b. Process parameter level(s) flame attenuation manufacturing lines that use process modifications to comply with the emission limits, including any period when the parameter level(s) deviated from the established limit(s), the date and time of the deviation, when corrective actions were initiated, the cause of the deviation, an explanation of the corrective actions taken, and when the cause of the deviation was corrected.

c. Glass pull rate, including any period when the pull rate exceeded the average pull rate established during the performance test by more than 20 percent, the date and time of the exceedance, when corrective actions were initiated, the cause of the exceedance, and explanation of the corrective actions taken, and when the cause of the exceedance was corrected.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA, Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit quarterly deviation (excursion) reports that identify each month during which a photochemically reactive material was employed. These deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

3. As required by 40 CFR 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of the applicable standard or a monitored parameter deviates from the levels established during the performance test. The report shall contain the information specified in 40 CFR 63.10(c) as well as the additional records required by the record keeping requirements of paragraph (d) of this section When no deviations have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period.

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

   a. the emission test shall be conducted within 60 days after achieving the maximum production rate at which the manufacturing line which includes this emissions unit will be operated, but not later than 180 days upon startup of the above-mentioned manufacturing line.

   b. the emission test shall be conducted to demonstrate compliance with the emission rate of 6.8 lbs of formaldehyde per ton of glass pulled.

   c. the following test method(s) shall be employed to demonstrate compliance with the requirements specified in A.V.2.b:

      for formaldehyde, Methods 1-4 and 316 or 318 of 40 CFR, Part 60, Appendix A;

   d. the tests shall be conducted in accordance with the procedures in 40 CFR Part 63 subpart A and 40 CFR 63.1384, unless otherwise specified or approved by the Ohio EPA, Northwest District Office.

      i. All monitoring systems and equipment must be installed, operational, and calibrated prior to the performance test.

   Unless a different frequency is specified in 40CFR 63.1384, the owner or operator must monitor and record process and/or add-on control device parameters at least every 15 minutes during the performance tests. The arithmetic average for each parameter must be calculated using all of the recorded measurements for the parameter.

   During each performance test, the owner or operator must monitor and record the glass pull rate for each glass-melting furnace and, if different, the glass pull rate for each rotary spin manufacturing line and flame attenuation manufacturing line. Record the glass pull rate every 15 minutes during any performance test required by this subpart and determine the arithmetic average

of the recorded measurements for each test run and calculate the average of the three test runs.

Not later than 60 calendar days before the performance test is initially scheduled to begin, the permittee shall submit an "Intent to Test" notification to the Director (the Ohio EPA, Northwest District Office). The "Intent to Test" notification shall describe in detail the propose 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 Director (the Ohio EPA, Northwest District Office's) refusal to accept the results of the emission test(s).

Personnel form the Director (the Ohio EPA, Northwest District Office) 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 Director (the Ohio EPA, Northwest District Office) before the close of business on the 60th day following the completion of the performance test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Director (the Ohio EPA, Northwest District Office).

2. Unless disapproved by the Director, the permittee of a flame attenuation manufacturing line regulated by this subpart may conduct short-term experimental production runs using binder formulations or other process modifications where the process parameter values would be outside those established during performance test without first conducting performance tests. Such runs must not exceed 1 week in duration unless the Director approves a longer period. The permittee must notify the Director and postmark or deliver the notification at least 15 days prior to commencement of the short-term experimental production runs. The Director must inform the permittee of a decision to disapprove or must request additional information prior to the date of the short-term experimental production runs. Notification of the intent to perform and experimental short-term production runt shall include the following information:

   a. the purpose of the experimental production run;
   b. the affected line;
   c. how the established process parameters will deviate from previously approved levels;
   d. the duration of the experimental production run;
   e. the date and time of the experimental production run; and
   f. a description of any emission testing to be performed during the experimental production run.

3. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitations: 6.05 lbs PE/hr, 26.50 tpy PE

Applicable Compliance Method: The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

b. Emission Limitations: 2.02 lbs CO/hr, 8.85 tpy CO

Applicable Compliance Method: The hourly allowable CO emission limitation was established by multiplying the maximum gas burning rate (mmcf/hr) [as indicated in the permit application] by an emission factor (lb/mmcf) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable CO emission limitation by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.
Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

c. Emission Limitations: 1.87 lbs OC/hr, 8.19 tons OC/yr

Applicable Compliance Method: The hourly allowable OC emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable OC emission limitation by testing in accordance with Method 1-4, and 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

d. Emission Limitations: 0.21 lb SO2/hr, 0.92 ton SO2/yr

Applicable Compliance Method: The hourly allowable SO2 emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable SO2 emission limitation by testing in accordance with Methods 1-4, and 6 as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

e. Emission Limitation: 6.8 lbs formaldehyde per ton of glass pulled

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

f. Emission Limitation:Visible PE shall not exceed 20 percent opacity, as a six-minute average, except as otherwise provided by rule.

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P082 - forming and collection unit 807 [Administrative modification of PTI 03-16294 issued June 2, 2005 to revised testing requirements]		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	40 CFR Part 63, Subpart NNN
P083 - sear roll and curing oven 807	OAC rule 3745-31-05(A)(3)	
[Administrative modification of PTI 03-16294 issued June 2, 2005 to revised testing requirements]		OAC rule 3745-21-07(G)
		OAC rule 3745-17-11(B)
		OAC rule 3745-23-06(B)
		OAC rule 3745-21-08(B)
		OAC rule 3745-18-06(E)
	OAC rule 3745-17-07(A)	

Applicable Emissions Limitations/Control Measures	
The requirements of this rule also include compliance with the requirements of 40 CFR Part 63 Subpart NNN, OAC rule 3745-17-07(A) and OAC rule 3745-21-07(G).	glass pulled.
1.25 pounds (lbs) particulate emissions (PE)/hour (hr), 5.48 tons per year (tpy)PE (See A.I.2.a)	None (See A.IV.1)
2.79 lbs carbon monoxide (CO)/hr, 12.22 tpy CO	See A.I.2.b
1.14 lbs organic compounds (OC)/hr, 4.99 tpy OC	See A.I.2.d
1.09 lb nitrogen oxide (NOx)/hr, 4.77 tpy NOx	See A.I.2.c
0.30 lb sulfur dioxide (SO2)/hr, 1.31 tpy SO2	See A.I.2.b
Visible PE from the stack(s) servicing this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.	
The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 3.4 kg of formaldehyde per megagram (6.8 lbs of formaldehyde per ton) of	

2. Additional Terms and Conditions

2.a All PE is assume to be in the form of particulate matter less than 10 microns in size (PM10)..

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

2.c The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.d The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On February 14, 2005, OAC rule 3745-23-06 was rescinded; therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the U.S. EPA approves the revision to OAC rule 3745-23-06, the requirement to satisfy the "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

II. Operational Restrictions

1. The use of any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01, is prohibited.

2. The permittee must use a resin in the formulation binder such that the free-formaldehyde content of the resin used does not exceed the free-formaldehyde range contained in the specification for the resin used during the performance test as specified in 40 CFR 63.1384(a)(9).

3. The permittee must use a binder formulation that does not vary from the specification and operating range established and used during the performance test as specified in 40 CFR 63.1384(a)(9). For the purposes of this standard, adding or increasing the quantity of urea and/or lignin in the binder formulation does not constitute a change in the binder formulation.

4. The permittee must operate the process such that the monitored process parameter(s) is not outside the limit(s) established during the performance test as specified in 40 CFR 63.1384(a)(10) for more than 10 percent of the total operating time in a 6-month block reporting period.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;
   b. whether the emissions are representative of normal operations;
   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
   d. the total duration of any visible emission incident; and
   e. any corrective actions taken to minimize or eliminate the visible emissions.

   If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

2. Notwithstanding the frequency of reporting requirements specified in section A.IV, the permittee may reduce the frequency of visual observations for this emissions unit from at least 5 days per week to weekly readings if the following conditions are met:

   a. for 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

   b. the permittee continues to comply with all the record keeping and monitoring requirements specified in section A.III.1.

The permittee shall revert to 5 days per week readings if any abnormal visible emissions are observed.

3. The permittee shall maintain monthly 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.

4. The permittee must prepare a written operations, maintenance, and monitoring plan. The plan must be submitted to the Director for review and approval as part of the application for a part 70 permit. The plant must include the following information:

   a. Procedures for the proper operation and maintenance of process modifications used to meet the emission limits in 40 CFR Part 63.1382.

   b. Procedures for the proper operation and maintenance of monitoring devices used to determine compliance, including quarterly calibration and certification of accuracy of each monitoring device according to the manufacturer's instructions.

   c. Corrective actions to be taken when process parameters deviate from the limit(s) established during initial performance tests.

5. The permittee must establish a correlation between formaldehyde emissions and a process parameter(s) to be monitored.

6. The permittee must monitor the established parameter(s) according to the procedures in the operations, maintenance, and monitoring plan.

7. The permittee must include as part of their operations, maintenance, and monitoring plan the following information:

   a. Procedures for the proper operation and maintenance of the process.

   b. Process parameter(s) to be monitored to demonstrate compliance with the applicable emission limits in 40 CFR 63.1382. Examples of process parameters include loss on ignition (LOI), binder solids content, and binder application rate.

   c. Correlation(s) between process parameter(s) to be monitored and formaldehyde emissions.

d. A schedule for monitoring the process parameter(s).

e. Record keeping procedures, consistent with the record keeping requirements of 40 CFR Part 63.1386, to show that the process parameter value(s) established during the performance test is not exceeded.

8. The permittee must monitor and record the free-formaldehyde content of each resin shipment received and used in the formulation binder.

9. The permittee must monitor and record the formulation of each batch of binder used.

10. The permittee must monitor and record at least once every 8 hours, the product LOI and product density of each bonded wool fiberglass product manufactured.

11. For all process operating parameters during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new control device or process parameter levels, they comply with the applicable emission limits in 40 CFR 63.1382. The owner or operator shall conduct all additional performance tests according to the procedures in 40 CFR Part 63, subpart A and in 40 CFR 63.1384.

12. The permittee shall develop and implement a written plan as described in 40 CFR 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process modifications and control systems used to comply with the standard. In addition to the information required in 40 CFR 63.6(e)(3), the plan shall include:

    a. Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended.

    b. Corrective actions to be taken in the event of a malfunction of a control device or process modification, including procedures for recording the actions taken to correct the malfunction of minimize emissions.

    c. A maintenance schedule for each control device and process modification that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

13. The permittee shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.10(e)(3)(iv).

14. As required by 40 CFR 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart:

a. The permittee must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.

b. The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche.

c. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

15. In addition to the general records required by 40 CFR 63.10(b)(2), the permittee shall maintain records of the following information:

a. The formulation of each binder batch and the LOI and density for each product manufactured on a flame attenuation manufacturing line subject to the provisions of this subpart, and the free formaldehyde content of each resin shipment received and used in the binder formulation.

b. Process parameter level(s) flame attenuation manufacturing lines that use process modifications to comply with the emission limits, including any period when the parameter level(s) deviated from the established limit(s), the date and time of the deviation, when corrective actions were initiated, the cause of the deviation, an explanation of the corrective actions taken, and when the cause of the deviation was corrected.

c. Glass pull rate, including any period when the pull rate exceeded the average pull rate established during the performance test by more than 20 percent, the date and time of the exceedance, when corrective actions were initiated, the cause of the exceedance, and explanation of the corrective actions taken, and when the cause of the exceedance was corrected.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA, Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit quarterly deviation (excursion) reports that identify each month during which a photochemically reactive material was employed. These deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

3. As required by 40 CFR 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of the applicable standard or a monitored parameter deviates from the levels established during the performance test. The report shall contain the information specified in 40 CFR 63.10(c) as well as the additional records required by the record keeping requirements of paragraph (d) of this section When no deviations have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period.

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

   a. the emission test shall be conducted within 60 days after achieving the maximum production rate at which the manufacturing line which includes this emissions unit will be operated, but not later than 180 days upon startup of the above-mentioned manufacturing line.

   b. the emission test shall be conducted to demonstrate compliance with the emission rate of 6.8 lbs of formaldehyde per ton of glass pulled.

   c. the following test method(s) shall be employed to demonstrate compliance with the requirements specified in A.V.2.b:

      for formaldehyde, Methods 1-4 and 316 or 318 of 40 CFR, Part 60, Appendix A;

   d. the tests shall be conducted in accordance with the procedures in 40 CFR Part 63 subpart A and 40 CFR 63.1384, unless otherwise specified or approved by the Ohio EPA, Northwest District Office.

      i. All monitoring systems and equipment must be installed, operational, and calibrated prior to the performance test.

   Unless a different frequency is specified in 40CFR 63.1384, the owner or operator must monitor and record process and/or add-on control device parameters at least every 15 minutes during the performance tests. The arithmetic average for each parameter must be calculated using all of the recorded measurements for the parameter.

   During each performance test, the owner or operator must monitor and record the glass pull rate for each glass-melting furnace and, if different, the glass pull rate for each rotary spin manufacturing line and flame attenuation manufacturing line. Record the glass pull rate every 15 minutes during any performance test required by this subpart and determine the arithmetic average

of the recorded measurements for each test run and calculate the average of the three test runs.

Not later than 60 calendar days before the performance test is initially scheduled to begin, the permittee shall submit an "Intent to Test" notification to the Director (the Ohio EPA, Northwest District Office). The "Intent to Test" notification shall describe in detail the propose 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 Director (the Ohio EPA, Northwest District Office's) refusal to accept the results of the emission test(s).

Personnel form the Director (the Ohio EPA, Northwest District Office) 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 Director (the Ohio EPA, Northwest District Office) before the close of business on the 60th day following the completion of the performance test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Director (the Ohio EPA, Northwest District Office).

2. Unless disapproved by the Director, the permittee of a flame attenuation manufacturing line regulated by this subpart may conduct short-term experimental production runs using binder formulations or other process modifications where the process parameter values would be outside those established during performance test without first conducting performance tests. Such runs must not exceed 1 week in duration unless the Director approves a longer period. The permittee must notify the Director and postmark or deliver the notification at least 15 days prior to commencement of the short-term experimental production runs. The Director must inform the permittee of a decision to disapprove or must request additional information prior to the date of the short-term experimental production runs. Notification of the intent to perform and experimental short-term production runt shall include the following information:

   a. the purpose of the experimental production run;
   b. the affected line;
   c. how the established process parameters will deviate from previously approved levels;
   d. the duration of the experimental production run;
   e. the date and time of the experimental production run; and
   f. a description of any emission testing to be performed during the experimental production run.

3. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

   a. <u>Emission Limitations:</u> 1.25 lbs PE/hr, 5.48 tpy PE

Applicable Compliance Method: The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

b. Emission Limitations: 2.79 lbs CO/hr, 12.22 tpy CO

Applicable Compliance Method: The hourly allowable CO emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable CO emission limitation by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

c. Emission Limitations: 1.14 lbs OC/hr, 4.99 tons OC/yr

Applicable Compliance Method: The hourly allowable OC emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable OC emission limitation by testing in accordance with Methods 1-4 and Method 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

d. Emission Limitations: 1.09 lb NOx/hr, 4.77 tpy NOx

Applicable Compliance Method: The hourly allowable NOx emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable NOx emission limitation by testing in accordance with Methods 1-4 and 7, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

e. Emission Limitations: 0.30 lb SO2/hr, 1.31 tpy SO2

Applicable Compliance Method: The hourly allowable SO2 emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass] derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable SO2 emission limitation by testing in accordance with Methods 1-4 and 6, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

f. Emission Limitation: 6.8 lbs formaldehyde per ton of glass pulled

Applicable Compliance Method: Compliance with the above limitation shall be demonstrated by the results of the stack testing conducted in accordance with A.V.1 above.

g. Emission Limitation: Visible PE shall not exceed 20 percent opacity, as a six-minute average, except as otherwise provided by rule.

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P083 - sear roll and curing oven 807 [Administrative modification of PTI 03-16294 issued June 2, 2005 to revised testing requirements]		

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

Johns Manville International Inc. Plt08 **Facility ID: 032001000**

PTI Application: 03-16294

Modif

Emissions Unit ID: P083

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P084 - product finishing unit 807	OAC rule 3745-31-05(A)(3)	0.59 pound (lb) particulate emissions (PE)/hour (hr), 2.58 tons/year (tpy) PE (See A.I.2.b) See A.I.2.a Visible PE from the stack(s) servicing this emissions unit shall not exceed 5% opacity, as a six-minute average
	OAC rule 3745-17-07(A)	See A.I.2.c
	OAC rule 3745-17-11(B)	See A.I.2.c

2. Additional Terms and Conditions

2.a The "Best Available Technology" (BAT) control requirements for this emissions unit has been determined to be the use of a control system consisting of a cyclone and baghouse (finishing dust collector). The control system shall achieve a 99% removal efficiency for PE (100% capture).

2.b All PE is assumed to be in the form of particulate matter less than 10 microns in size (PM10).

2.c 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

None

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;
   b. whether the emissions are representative of normal operations;
   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
   d. the total duration of any visible emission incident; and
   e. any corrective actions taken to minimize or eliminate the visible emissions.

2. Notwithstanding the frequency of reporting requirements specified in section A.IV, the permittee may reduce the frequency of visual observations for this emissions unit from at least 5 days per week to weekly readings if the following conditions are met:

   a. for 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

   b. the permittee continues to comply with all the record keeping and monitoring requirements specified in section A.III.1.

   The permittee shall revert to 5 days per week readings if any abnormal visible emissions are observed.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA, Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):

   a. Emission Limitations: 0.59lb PE/hr, 2.58 tpy PE

   Applicable Compliance Method: The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by a controlled emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

   Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

   b. Emission Limitation: Visible PE from the stack(s) servicing this emissions unit shall not exceed 5% opacity, as a six-minute average.

   Applicable Compliance Method: If required, compliance with the visible emission limitation for the baghouse stack shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P084 - product finishing unit 807		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
P085 - offline sear roll and curing oven (handwrap)	OAC rule 3745-31-05(A)(3)	OAC rule 3745-21-07(G) OAC rule 3745-17-11(B) OAC rule 3745-23-06(B) OAC rule 3745-21-08(B) OAC rule 3745-18-06(E)
	OAC rule 3745-17-07(A)	
	40 CFR Part 63, Subpart NNN	

Applicable Emissions Limitations/Control Measures	See A.I.2.d
The requirements of this rule also include compliance with the requirements of 40 CFR Part 63 Subpart NNN, OAC rule 3745-17-07(A) and OAC rule 3745-21-07(G).	See A.I.2.c
0.14 pound (lb) particulate emissions (PE)/hour (hr), 0.61 tons per year (tpy)PE (See A.I.2.a)	See A.I.2.b
0.31 lb carbon monoxide (CO)/hr, 1.36 tpy CO	
0.03 lb sulfur dioxide (SO2)/hr, 0.13 tpy SO2	
Visible PE from the stack(s) servicing this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.	
The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 3.4 kg of formaldehyde per megagram (6.8 lbs of formaldehyde per ton) of glass pulled.	
None (See A.IV.1)	
See A.I.2.b	

2. Additional Terms and Conditions

2.a All PE is assume to be in the form of particulate matter less than 10 microns in size (PM10).

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

2.c The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.d The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On February 14, 2005, OAC rule 3745-23-06 was rescinded; therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the U.S. EPA approves the revision to OAC rule 3745-23-06, the requirement to satisfy the "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

II. Operational Restrictions

1. The use of any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01, is prohibited.

2. The permittee must use a resin in the formulation binder such that the free-formaldehyde content of the resin used does not exceed the free-formaldehyde range contained in the specification for the resin used during the performance test as specified in 40 CFR 63.1384(a)(9).

3. The permittee must use a binder formulation that does not vary from the specification and operating range established and used during the performance test as specified in 40 CFR 63.1384(a)(9). For the purposes of this standard, adding or increasing the quantity of urea and/or lignin in the binder formulation does not constitute a change in the binder formulation.

4. The permittee must operate the process such that the monitored process parameter(s) is not outside the limit(s) established during the performance test as specified in 40 CFR 63.1384(a)(10) for more than 10 percent of the total operating time in a 6-month block reporting period.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;
   b. whether the emissions are representative of normal operations;
   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
   d. the total duration of any visible emission incident; and
   e. any corrective actions taken to minimize or eliminate the visible emissions.

   If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the

corrective actions that were taken to eliminate abnormal visible emissions.

2. Notwithstanding the frequency of reporting requirements specified in section A.IV, the permittee may reduce the frequency of visual observations for this emissions unit from at least 5 days per week to weekly readings if the following conditions are met:

   a. for 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

   b. the permittee continues to comply with all the record keeping and monitoring requirements specified in section A.III.1.

   The permittee shall revert to 5 days per week readings if any abnormal visible emissions are observed.

3. The permittee shall maintain monthly 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.

4. The permittee must prepare a written operations, maintenance, and monitoring plan. The plan must be submitted to the Director for review and approval as part of the application for a part 70 permit. The plant must include the following information:

   a. Procedures for the proper operation and maintenance of process modifications used to meet the emission limits in 40 CFR Part 63.1382.

   b. Procedures for the proper operation and maintenance of monitoring devices used to determine compliance, including quarterly calibration and certification of accuracy of each monitoring device according to the manufacturer's instructions.

   c. Corrective actions to be taken when process parameters deviate from the limit(s) established during initial performance tests.

5. The permittee must establish a correlation between formaldehyde emissions and a process parameter(s) to be monitored.

6. The permittee must monitor the established parameter(s) according to the procedures in the

operations, maintenance, and monitoring plan.

7. The permittee must include as part of their operations, maintenance, and monitoring plan the following information:

   a. Procedures for the proper operation and maintenance of the process.

   b. Process parameter(s) to be monitored to demonstrate compliance with the applicable emission limits in 40 CFR 63.1382. Examples of process parameters include loss on ignition (LOI), binder solids content, and binder application rate.

   c. Correlation(s) between process parameter(s) to be monitored and formaldehyde emissions.

   d. A schedule for monitoring the process parameter(s).

   e. Record keeping procedures, consistent with the record keeping requirements of 40 CFR Part 63.1386, to show that the process parameter value(s) established during the performance test is not exceeded.

8. The permittee must monitor and record the free-formaldehyde content of each resin shipment received and used in the formulation binder.

9. The permittee must monitor and record the formulation of each batch of binder used.

10. The permittee must monitor and record at least once every 8 hours, the product LOI and product density of each bonded wool fiberglass product manufactured.

11. For all process operating parameters during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new control device or process parameter levels, they comply with the applicable emission limits in 40 CFR 63.1382. The owner or operator shall conduct all additional performance tests according to the procedures in 40 CFR Part 63, subpart A and in 40 CFR 63.1384.

12. The permittee shall develop and implement a written plan as described in 40 CFR 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process modifications and control systems used to comply with the standard. In addition to the information required in 40 CFR 63.6(e)(3), the plan shall include:

   a. Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended.

   b. Corrective actions to be taken in the event of a malfunction of a control device or process modification, including procedures for recording the actions taken to correct the

malfunction of minimize emissions.

c. A maintenance schedule for each control device and process modification that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

13. The permittee shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.10(e)(3)(iv).

14. As required by 40 CFR 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart:

a. The permittee must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.

b. The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche.

c. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

15. In addition to the general records required by 40 CFR 63.10(b)(2), the permittee shall maintain records of the following information:

a. The formulation of each binder batch and the LOI and density for each product manufactured on a flame attenuation manufacturing line subject to the provisions of this subpart, and the free formaldehyde content of each resin shipment received and used in the binder formulation.

b. Process parameter level(s) flame attenuation manufacturing lines that use process modifications to comply with the emission limits, including any period when the parameter level(s) deviated from the established limit(s), the date and time of the deviation, when corrective actions were initiated, the cause of the deviation, an explanation of the corrective actions taken, and when the cause of the deviation was corrected.

c. Glass pull rate, including any period when the pull rate exceeded the average pull rate established during the performance test by more than 20 percent, the date and time of the exceedance, when corrective actions were initiated, the cause of the exceedance, and explanation of the corrective actions taken, and when the cause of the exceedance was corrected.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA, Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit quarterly deviation (excursion) reports that identify each month during which a photochemically reactive material was employed. These deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

3. As required by 40 CFR 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of the applicable standard or a monitored parameter deviates from the levels established during the performance test. The report shall contain the information specified in 40 CFR 63.10(c) as well as the additional records required by the record keeping requirements of paragraph (d) of this section When no deviations have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period.

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

   a. the emission test shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days upon startup of this emissions unit.

   b. the emission test shall be conducted to demonstrate compliance with the emission rate of : 6.8 lbs of formaldehyde per ton of glass pulled.

   c. the following test method(s) shall be employed to demonstrate compliance with the requirements specified in A.V.2.b:

      for formaldehyde, Methods 1-4 and 316 or 318 of 40 CFR, Part 60, Appendix A;

   d. the tests shall be conducted in accordance with the procedures in 40 CFR Part 63 subpart A and 40 CFR 63.1384, unless otherwise specified or approved by the Ohio EPA, Northwest District Office.

i. All monitoring systems and equipment must be installed, operational, and calibrated prior to the performance test.

Unless a different frequency is specified in 40CFR 63.1384, the owner or operator must monitor and record process and/or add-on control device parameters at least every 15 minutes during the performance tests. The arithmetic average for each parameter must be calculated using all of the recorded measurements for the parameter.

During each performance test, the owner or operator must monitor and record the glass pull rate for each glass-melting furnace and, if different, the glass pull rate for each rotary spin manufacturing line and flame attenuation manufacturing line. Record the glass pull rate every 15 minutes during any performance test required by this subpart and determine the arithmetic average of the recorded measurements for each test run and calculate the average of the three test runs.

Not later than 60 calendar days before the performance test is initially scheduled to begin, the permittee shall submit an "Intent to Test" notification to the Director (the Ohio EPA, Northwest District Office). The "Intent to Test" notification shall describe in detail the propose 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 Director (the Ohio EPA, Northwest District Office's) refusal to accept the results of the emission test(s).

Personnel form the Director (the Ohio EPA, Northwest District Office) 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 Director (the Ohio EPA, Northwest District Office) before the close of business on the 60th day following the completion of the performance test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Director (the Ohio EPA, Northwest District Office).

2. Unless disapproved by the Director, the permittee of a flame attenuation manufacturing line regulated by this subpart may conduct short-term experimental production runs using binder formulations or other process modifications where the process parameter values would be outside those established during performance test without first conducting performance tests. Such runs must not exceed 1 week in duration unless the Director approves a longer period. The permittee must notify the Director and postmark or deliver the notification at least 15 days prior to commencement of the short-term experimental production runs. The Director must inform the permittee of a decision to disapprove or must request additional information prior to the date of the short-term experimental production runs. Notification of the intent to perform and experimental short-term production runt shall include the following information:

a. the purpose of the experimental production run;
b. the affected line;
c. how the established process parameters will deviate from previously approved levels;
d. the duration of the experimental production run;
e. the date and time of the experimental production run; and
f. a description of any emission testing to be performed during the experimental production run.

3. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitations: 0.14 lb PE/hr, 0.61 tpy PE

Applicable Compliance Method: The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

b. Emission Limitations: 0.31 lb CO/hr, 1.36 tpy CO

Applicable Compliance Method: The hourly allowable CO emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable CO emission limitation by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

c. Emission Limitations: 0.03 lb SO2/hr, 0.13 tpy SO2

Applicable Compliance Method: The hourly allowable SO2 emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass] derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable SO2 emission limitation by testing in accordance with Methods 1-4 and 6, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

f. Emission Limitation: 6.8 lbs formaldehyde per ton of glass pulled

Applicable Compliance Method: Compliance with the above limitation shall be demonstrated by the results of the stack testing conducted in accordance with A.V.1 above.

g. Emission Limitation:Visible PE shall not exceed 20 percent opacity, as a six-minute average, except as otherwise provided by rule.

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P085 - offline sear roll and curing oven (handwrap)		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P086 - offline product finishing unit (handwrap)	OAC rule 3745-31-05(A)(3)	See A.I.2.a 0.07 pound (lb) particulate emissions (PE)/hour (hr), 0.31 tons/year (tpy) PE (See A.I.2.b) Visible PE from the stack(s) servicing this emissions unit shall not exceed 5 % opacity, as a six-minute average
	OAC rule 3745-17-07(A)	See A.I.2.c
	OAC rule 3745-17-11(B)	See A.I.2.c

2. Additional Terms and Conditions

2.a The "Best Available Technology" (BAT) control requirements for this emissions unit has been determined to be the use of a control system consisting of a cyclone and baghouse (finishing dust collector). The control system shall achieve a 99% removal efficiency for PE (100% capture).

2.b All PE is assumed to be in the form of particulate matter less than 10 microns in size (PM10).

2.c 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

None

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;
   b. whether the emissions are representative of normal operations;
   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
   d. the total duration of any visible emission incident; and
   e. any corrective actions taken to minimize or eliminate the visible emissions.

2. Notwithstanding the frequency of reporting requirements specified in section A.IV, the permittee may reduce the frequency of visual observations for this emissions unit from at least 5 days per week to weekly readings if the following conditions are met:

   a. for 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

   b. the permittee continues to comply with all the record keeping and monitoring requirements specified in section A.III.1.

   The permittee shall revert to 5 days per week readings if any abnormal visible emissions are observed.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA, Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):

   a. Emission Limitations: 0.07 lb PE/hr, 0.31 tpy PE

      Applicable Compliance Method: The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by a controlled emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

      Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

   b. Emission Limitation: Visible PE from the stack(s) servicing this emissions unit shall not exceed 5% opacity, as a six-minute average.

      Applicable Compliance Method: If required, compliance with the visible emission limitation for the baghouse stack shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P086 - offline product finishing unit (handwrap)		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P087 - reclaim refeed system	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A). 0.43 pound (lb) particulate emissions (PE)/hour (hr), 1.88 tons/year (tpy) PE (See A.I.2.b) Visible PE from the stack(s) servicing this emissions unit shall not exceed 5% opacity See A.I.2.a
	OAC rule 3745-17-07(A)	See A.I.2.c
	OAC rule 3745-17-11(B)	See A.I.2.c

2. Additional Terms and Conditions

2.a The "Best Available Technology" (BAT) control requirements for this emissions unit has been determined to be the use of a control system consisting of a cyclone and baghouse(reclaim dust collector). The control system shall achieve a maximum outlet concentration of 0.01 gr PE/dscf.

2.b All PE is assumed to be in the form of particulate matter less than 10 microns in size

(PM10).

2.c 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

None

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;
   b. whether the emissions are representative of normal operations;
   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
   d. the total duration of any visible emission incident; and
   e. any corrective actions taken to minimize or eliminate the visible emissions.

2. Notwithstanding the frequency of reporting requirements specified in section A.IV, the permittee may reduce the frequency of visual observations for this emissions unit from at least 5 days per week to weekly readings if the following conditions are met:

   a. for 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

   b. the permittee continues to comply with all the record keeping and monitoring requirements specified in section A.III.1.

   The permittee shall revert to 5 days per week readings if any abnormal visible emissions are observed.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the stack serving this emissions unit and (b)

describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA, Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

   a. Emission Limitations: 0.43 lb PE/hr, 1.88 tpy PE

      Applicable Compliance Method: The hourly allowable PE limitation was established by multiplying an outlet grain loading of 0.01 gr/scf by the maximum flow rate of the dust collector (5000 acfm) and by 60, and then dividing by 7000. If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

      Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

   b. Emission Limitation: Visible PE from the stack(s) serving this emissions unit shall not exceed 5% opacity

      Applicable Compliance Method: If required, compliance with the visible emission limitation for the baghouse stack shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P087 - reclaim refeed system		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	40 CFR Part 63, Subpart NNN
P088 - GDC Oven 1	OAC rule 3745-31-05(A)(3)	
		OAC rule 3745-21-07(G)
		OAC rule 3745-17-11(B)
		OAC rule 3745-23-06(B)
		OAC rule 3745-21-08(B)
		OAC rule 3745-18-06(E)
	OAC rule 3745-17-07(A)	

Applicable Emissions Limitations/Control Measures	
The requirements of this rule also include compliance with the requirements of 40 CFR Part 63 Subpart NNN, OAC rule 3745-17-07(A) and OAC rule 3745-21-07(G).	See A.I.2.b
0.37 pound (lb) particulate emissions (PE)/hour (hr), 1.62 tons per year (tpy)PE (See A.I.2.a)	See A.I.2.d
0.79 lb carbon monoxide (CO)/hr, 3.46 tpy CO	See A.I.2.c
0.36 lb organic compounds (OC)/hr, 1.58 tpy OC	See A.I.2.b
0.31 lb nitrogen oxide (NOx)/hr, 1.36 tpy NOx	
0.09 lb sulfur dioxide (SO2)/hr, 0.39 tpy SO2	
Visible PE from the stack(s) servicing this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.	
The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 3.4 kg of formaldehyde per megagram (6.8 lbs of formaldehyde per ton) of glass pulled.	
None (See A.IV.1)	

2. Additional Terms and Conditions

2.a All PE is assume to be in the form of particulate matter less than 10 microns in size (PM10)..

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

2.c The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.d The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On February 14, 2005, OAC rule 3745-23-06 was rescinded; therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the U.S. EPA approves the revision to OAC rule 3745-23-06, the requirement to satisfy the "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

II. Operational Restrictions

1. The use of any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01, is prohibited.

2. The permittee must use a resin in the formulation binder such that the free-formaldehyde content of the resin used does not exceed the free-formaldehyde range contained in the specification for the resin used during the performance test as specified in 40 CFR 63.1384(a)(9).

3. The permittee must use a binder formulation that does not vary from the specification and operating range established and used during the performance test as specified in 40 CFR 63.1384(a)(9). For the purposes of this standard, adding or increasing the quantity of urea and/or lignin in the binder formulation does not constitute a change in the binder formulation.

4. The permittee must operate the process such that the monitored process parameter(s) is not outside the limit(s) established during the performance test as specified in 40 CFR 63.1384(a)(10) for more than 10 percent of the total operating time in a 6-month block reporting period.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;
   b. whether the emissions are representative of normal operations;
   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
   d. the total duration of any visible emission incident; and
   e. any corrective actions taken to minimize or eliminate the visible emissions.

   If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

2. Notwithstanding the frequency of reporting requirements specified in section A.IV, the permittee may reduce the frequency of visual observations for this emissions unit from at least 5 days per week to weekly readings if the following conditions are met:

   a. for 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

b. the permittee continues to comply with all the record keeping and monitoring requirements specified in section A.III.1.

The permittee shall revert to 5 days per week readings if any abnormal visible emissions are observed.

3. The permittee shall maintain monthly 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.

4. The permittee must prepare a written operations, maintenance, and monitoring plan. The plan must be submitted to the Director for review and approval as part of the application for a part 70 permit. The plant must include the following information:

   a. Procedures for the proper operation and maintenance of process modifications used to meet the emission limits in 40 CFR Part 63.1382.

   b. Procedures for the proper operation and maintenance of monitoring devices used to determine compliance, including quarterly calibration and certification of accuracy of each monitoring device according to the manufacturer's instructions.

   c. Corrective actions to be taken when process parameters deviate from the limit(s) established during initial performance tests.

5. The permittee must establish a correlation between formaldehyde emissions and a process parameter(s) to be monitored.

6. The permittee must monitor the established parameter(s) according to the procedures in the operations, maintenance, and monitoring plan.

7. The permittee must include as part of their operations, maintenance, and monitoring plan the following information:

   a. Procedures for the proper operation and maintenance of the process.

   b. Process parameter(s) to be monitored to demonstrate compliance with the applicable emission limits in 40 CFR 63.1382. Examples of process parameters include loss on ignition (LOI), binder solids content, and binder application rate.

   c. Correlation(s) between process parameter(s) to be monitored and formaldehyde emissions.

d. A schedule for monitoring the process parameter(s).

e. Record keeping procedures, consistent with the record keeping requirements of 40 CFR Part 63.1386, to show that the process parameter value(s) established during the performance test is not exceeded.

8. The permittee must monitor and record the free-formaldehyde content of each resin shipment received and used in the formulation binder.

9. The permittee must monitor and record the formulation of each batch of binder used.

10. The permittee must monitor and record at least once every 8 hours, the product LOI and product density of each bonded wool fiberglass product manufactured.

11. For all process operating parameters during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new control device or process parameter levels, they comply with the applicable emission limits in 40 CFR 63.1382. The owner or operator shall conduct all additional performance tests according to the procedures in 40 CFR Part 63, subpart A and in 40 CFR 63.1384.

12. The permittee shall develop and implement a written plan as described in 40 CFR 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process modifications and control systems used to comply with the standard. In addition to the information required in 40 CFR 63.6(e)(3), the plan shall include:

    a. Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended.

    b. Corrective actions to be taken in the event of a malfunction of a control device or process modification, including procedures for recording the actions taken to correct the malfunction of minimize emissions.

    c. A maintenance schedule for each control device and process modification that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

13. The permittee shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.10(e)(3)(iv).

14. As required by 40 CFR 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart:

a. The permittee must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.

b. The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche.

c. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

15. In addition to the general records required by 40 CFR 63.10(b)(2), the permittee shall maintain records of the following information:

a. The formulation of each binder batch and the LOI and density for each product manufactured on a flame attenuation manufacturing line subject to the provisions of this subpart, and the free formaldehyde content of each resin shipment received and used in the binder formulation.

b. Process parameter level(s) flame attenuation manufacturing lines that use process modifications to comply with the emission limits, including any period when the parameter level(s) deviated from the established limit(s), the date and time of the deviation, when corrective actions were initiated, the cause of the deviation, an explanation of the corrective actions taken, and when the cause of the deviation was corrected.

c. Glass pull rate, including any period when the pull rate exceeded the average pull rate established during the performance test by more than 20 percent, the date and time of the exceedance, when corrective actions were initiated, the cause of the exceedance, and explanation of the corrective actions taken, and when the cause of the exceedance was corrected.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA, Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit quarterly deviation (excursion) reports that identify each month during which a photochemically reactive material was employed. These deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

3. As required by 40 CFR 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of the applicable standard or a monitored parameter deviates from the levels established during the performance test. The report shall contain the information specified in 40 CFR 63.10(c) as well as the additional records required by the record keeping requirements of paragraph (d) of this section When no deviations have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period.

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

   a. the emission test shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days upon startup of this emissions unit.

   b. the emission test shall be conducted to demonstrate compliance with the emission rate of 6.8 lbs of formaldehyde per ton of glass pulled.

   c. the following test method(s) shall be employed to demonstrate compliance with the requirements specified in A.V.2.b:

      for formaldehyde, Methods 1-4 and 316 or 318 of 40 CFR, Part 60, Appendix A;

   d. the tests shall be conducted in accordance with the procedures in 40 CFR Part 63 subpart A and 40 CFR 63.1384, unless otherwise specified or approved by the Ohio EPA, Northwest District Office.

      i. All monitoring systems and equipment must be installed, operational, and calibrated prior to the performance test.

   Unless a different frequency is specified in 40CFR 63.1384, the owner or operator must monitor and record process and/or add-on control device parameters at least every 15 minutes during the performance tests. The arithmetic average for each parameter must be calculated using all of the recorded measurements for the parameter.

   During each performance test, the owner or operator must monitor and record the glass pull rate for each glass-melting furnace and, if different, the glass pull rate for each rotary spin manufacturing line and flame attenuation manufacturing line. Record the glass pull rate every 15 minutes during any performance test required by this subpart and determine the arithmetic average of the recorded measurements for each test run and calculate the average of the three test runs.

   Not later than 60 calendar days before the performance test is initially scheduled to begin, the permittee shall submit an "Intent to Test" notification to the Director (the Ohio EPA, Northwest District Office). The "Intent to Test" notification shall describe in detail the propose 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 Director (the Ohio EPA, Northwest District Office's) refusal to accept the results of the emission test(s).

Personnel form the Director (the Ohio EPA, Northwest District Office) 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 Director (the Ohio EPA, Northwest District Office) before the close of business on the 60th day following the completion of the performance test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Director (the Ohio EPA, Northwest District Office).

2. Unless disapproved by the Director, the permittee of a flame attenuation manufacturing line regulated by this subpart may conduct short-term experimental production runs using binder formulations or other process modifications where the process parameter values would be outside those established during performance test without first conducting performance tests. Such runs must not exceed 1 week in duration unless the Director approves a longer period. The permittee must notify the Director and postmark or deliver the notification at least 15 days prior to commencement of the short-term experimental production runs. The Director must inform the permittee of a decision to disapprove or must request additional information prior to the date of the short-term experimental production runs. Notification of the intent to perform and experimental short-term production runt shall include the following information:

   a. the purpose of the experimental production run;
   b. the affected line;
   c. how the established process parameters will deviate from previously approved levels;
   d. the duration of the experimental production run;
   e. the date and time of the experimental production run; and
   f. a description of any emission testing to be performed during the experimental production run.

3. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

   a. <u>Emission Limitations:</u> 0.37 lb PE/hr, 1.62 tpy PE

Applicable Compliance Method: The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

b. Emission Limitations: 0.79 lbs CO/hr, 3.46 tpy CO

Applicable Compliance Method: The hourly allowable CO emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable CO emission limitation by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

c. Emission Limitations: 0.36 lb OC/hr, 1.58 tons OC/yr

Applicable Compliance Method: The hourly allowable OC emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable OC emission limitation by testing in accordance with Methods 1-4 and Method 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

d. Emission Limitations: 0.31 lb NOx/hr, 1.36 tpy NOx

Applicable Compliance Method: The hourly allowable NOx emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable NOx emission limitation by testing in accordance with Methods 1-4 and 7, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

e. Emission Limitations: 0.09 lb SO2/hr, 0.39 tpy SO2

Applicable Compliance Method: The hourly allowable SO2 emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass] derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable SO2 emission limitation by testing in accordance with Methods 1-4 and 6, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

f. Emission Limitation: 6.8 lbs formaldehyde per ton of glass pulled

Applicable Compliance Method: Compliance with the above limitation shall be demonstrated by the results of the stack testing conducted in accordance with A.V.1 above.

g. Emission Limitation: Visible PE shall not exceed 20 percent opacity, as a six-minute average, except as otherwise provided by rule.

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P088 - GDC Oven 1		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	40 CFR Part 63, Subpart NNN
P089 - GDC Oven 2	OAC rule 3745-31-05(A)(3)	
		OAC rule 3745-21-07(G)
		OAC rule 3745-17-11(B)
		OAC rule 3745-23-06(B)
		OAC rule 21-08(B)
		OAC rule 3745-18-06(E)
	OAC rule 3745-17-07(A)	

Applicable Emissions Limitations/Control Measures	
The requirements of this rule also include compliance with the requirements of 40 CFR Part 63 Subpart NNN, OAC rule 3745-17-07(A) and OAC rule 3745-21-07(G).	glass pulled.
0.37 pound (lb) particulate emissions (PE)/hour (hr), 1.62 tons per year (tpy)PE (See A.I.2.a)	None (See A.IV.1)
0.79 lb carbon monoxide (CO)/hr, 3.46 tpy CO	See A.I.2.b
0.36 lb organic compounds (OC)/hr, 1.58 tpy OC	See A.I.2.d
0.31 lb nitrogen oxide (NOx)/hr, 1.36 tpy NOx	See A.I.2.c
0.09 lb sulfur dioxide (SO2)/hr, 0.39 tpy SO2	See A.I.2.b
Visible PE from the stack(s) servicing this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.	
The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 3.4 kg of formaldehyde per megagram (6.8 lbs of formaldehyde per ton) of	

2. Additional Terms and Conditions

2.a All PE is assume to be in the form of particulate matter less than 10 microns in size (PM10).

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

2.c The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.d The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On February 14, 2005, OAC rule 3745-23-06 was rescinded; therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the U.S. EPA approves the revision to OAC rule 3745-23-06, the requirement to satisfy the "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

II. Operational Restrictions

1. The use of any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01, is prohibited.

2. The permittee must use a resin in the formulation binder such that the free-formaldehyde content of the resin used does not exceed the free-formaldehyde range contained in the specification for the resin used during the performance test as specified in 40 CFR 63.1384(a)(9).

3. The permittee must use a binder formulation that does not vary from the specification and operating range established and used during the performance test as specified in 40 CFR 63.1384(a)(9). For the purposes of this standard, adding or increasing the quantity of urea and/or

lignin in the binder formulation does not constitute a change in the binder formulation.

4. The permittee must operate the process such that the monitored process parameter(s) is not outside the limit(s) established during the performance test as specified in 40 CFR 63.1384(a)(10) for more than 10 percent of the total operating time in a 6-month block reporting period.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;
   b. whether the emissions are representative of normal operations;
   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
   d. the total duration of any visible emission incident; and
   e. any corrective actions taken to minimize or eliminate the visible emissions.

   If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

2. Notwithstanding the frequency of reporting requirements specified in section A.IV, the permittee may reduce the frequency of visual observations for this emissions unit from at least 5 days per week to weekly readings if the following conditions are met:

   a. for 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

   b. the permittee continues to comply with all the record keeping and monitoring requirements specified in section A.III.1.

The permittee shall revert to 5 days per week readings if any abnormal visible emissions are observed.

3. The permittee shall maintain monthly 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.

4. The permittee must prepare a written operations, maintenance, and monitoring plan. The plan must be submitted to the Director for review and approval as part of the application for a part 70 permit. The plant must include the following information:

   a. Procedures for the proper operation and maintenance of process modifications used to meet the emission limits in 40 CFR Part 63.1382.

   b. Procedures for the proper operation and maintenance of monitoring devices used to determine compliance, including quarterly calibration and certification of accuracy of each monitoring device according to the manufacturer's instructions.

   c. Corrective actions to be taken when process parameters deviate from the limit(s) established during initial performance tests.

5. The permittee must establish a correlation between formaldehyde emissions and a process parameter(s) to be monitored.

6. The permittee must monitor the established parameter(s) according to the procedures in the operations, maintenance, and monitoring plan.

7. The permittee must include as part of their operations, maintenance, and monitoring plan the following information:

   a. Procedures for the proper operation and maintenance of the process.

   b. Process parameter(s) to be monitored to demonstrate compliance with the applicable emission limits in 40 CFR 63.1382. Examples of process parameters include loss on ignition (LOI), binder solids content, and binder application rate.

   c. Correlation(s) between process parameter(s) to be monitored and formaldehyde emissions.

   d. A schedule for monitoring the process parameter(s).

   e. Record keeping procedures, consistent with the record keeping requirements of 40 CFR

Part 63.1386, to show that the process parameter value(s) established during the performance test is not exceeded.

8. The permittee must monitor and record the free-formaldehyde content of each resin shipment received and used in the formulation binder.

9. The permittee must monitor and record the formulation of each batch of binder used.

10. The permittee must monitor and record at least once every 8 hours, the product LOI and product density of each bonded wool fiberglass product manufactured.

11. For all process operating parameters during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new control device or process parameter levels, they comply with the applicable emission limits in 40 CFR 63.1382. The owner or operator shall conduct all additional performance tests according to the procedures in 40 CFR Part 63, subpart A and in 40 CFR 63.1384.

12. The permittee shall develop and implement a written plan as described in 40 CFR 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process modifications and control systems used to comply with the standard. In addition to the information required in 40 CFR 63.6(e)(3), the plan shall include:

    a. Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended.

    b. Corrective actions to be taken in the event of a malfunction of a control device or process modification, including procedures for recording the actions taken to correct the malfunction of minimize emissions.

    c. A maintenance schedule for each control device and process modification that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

13. The permittee shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.10(e)(3)(iv).

14. As required by 40 CFR 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart:

a. The permittee must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.

b. The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche.

c. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

15. In addition to the general records required by 40 CFR 63.10(b)(2), the permittee shall maintain records of the following information:

a. The formulation of each binder batch and the LOI and density for each product manufactured on a flame attenuation manufacturing line subject to the provisions of this subpart, and the free formaldehyde content of each resin shipment received and used in the binder formulation.

b. Process parameter level(s) flame attenuation manufacturing lines that use process modifications to comply with the emission limits, including any period when the parameter level(s) deviated from the established limit(s), the date and time of the deviation, when corrective actions were initiated, the cause of the deviation, an explanation of the corrective actions taken, and when the cause of the deviation was corrected.

c. Glass pull rate, including any period when the pull rate exceeded the average pull rate established during the performance test by more than 20 percent, the date and time of the exceedance, when corrective actions were initiated, the cause of the exceedance, and explanation of the corrective actions taken, and when the cause of the exceedance was corrected.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA, Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit quarterly deviation (excursion) reports that identify each month during which a photochemically reactive material was employed. These deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

3. As required by 40 CFR 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of the applicable standard or a monitored parameter deviates from the levels established during the performance test. The report shall contain the information specified in 40 CFR 63.10(c) as well as the additional records required by the record keeping requirements of paragraph (d) of this section When no deviations have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period.

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

   a. the emission test shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days upon startup of this emissions unit.

   b. the emission test shall be conducted to demonstrate compliance with the emission rate of 6.8 lbs of formaldehyde per ton of glass pulled.

   c. the following test method(s) shall be employed to demonstrate compliance with the requirements specified in A.V.2.b:

      for formaldehyde, Methods 1-4 and 316 or 318 of 40 CFR, Part 60, Appendix A;

   d. the tests shall be conducted in accordance with the procedures in 40 CFR Part 63 subpart A and 40 CFR 63.1384, unless otherwise specified or approved by the Ohio EPA, Northwest District Office.

      i. All monitoring systems and equipment must be installed, operational, and calibrated prior to the performance test.

   Unless a different frequency is specified in 40CFR 63.1384, the owner or operator must monitor and record process and/or add-on control device parameters at least every 15 minutes during the performance tests. The arithmetic average for each parameter must be calculated using all of the recorded measurements for the parameter.

   During each performance test, the owner or operator must monitor and record the glass pull rate for each glass-melting furnace and, if different, the glass pull rate for each rotary spin manufacturing line and flame attenuation manufacturing line. Record the glass pull rate every 15 minutes during any performance test required by this subpart and determine the arithmetic average of the recorded measurements for each test run and calculate the average of the three test runs.

   Not later than 60 calendar days before the performance test is initially scheduled to begin, the permittee shall submit an "Intent to Test" notification to the Director (the Ohio EPA, Northwest District Office). The "Intent to Test" notification shall describe in detail the propose 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 Director (the Ohio EPA, Northwest District Office's) refusal to accept the results of the emission test(s).

Personnel form the Director (the Ohio EPA, Northwest District Office) 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 Director (the Ohio EPA, Northwest District Office) before the close of business on the 60th day following the completion of the performance test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Director (the Ohio EPA, Northwest District Office).

2. Unless disapproved by the Director, the permittee of a flame attenuation manufacturing line regulated by this subpart may conduct short-term experimental production runs using binder formulations or other process modifications where the process parameter values would be outside those established during performance test without first conducting performance tests. Such runs must not exceed 1 week in duration unless the Director approves a longer period. The permittee must notify the Director and postmark or deliver the notification at least 15 days prior to commencement of the short-term experimental production runs. The Director must inform the permittee of a decision to disapprove or must request additional information prior to the date of the short-term experimental production runs. Notification of the intent to perform and experimental short-term production runt shall include the following information:

   a. the purpose of the experimental production run;
   b. the affected line;
   c. how the established process parameters will deviate from previously approved levels;
   d. the duration of the experimental production run;
   e. the date and time of the experimental production run; and
   f. a description of any emission testing to be performed during the experimental production run.

3. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

   a. <u>Emission Limitations:</u> 0.37 lb PE/hr, 1.62 tpy PE

Applicable Compliance Method: The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

b. Emission Limitations: 0.79 lbs CO/hr, 3.46 tpy CO

Applicable Compliance Method: The hourly allowable CO emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable CO emission limitation by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

c. Emission Limitations: 0.36 lb OC/hr, 1.58 tons OC/yr

Applicable Compliance Method: The hourly allowable OC emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable OC emission limitation by testing in accordance with Methods 1-4 and Method 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

d. Emission Limitations: 0.31 lb NOx/hr, 1.36 tpy NOx

Applicable Compliance Method: The hourly allowable NOx emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable NOx emission limitation by testing in accordance with Methods 1-4 and 7, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

e. Emission Limitations: 0.09 lb SO2/hr, 0.39 tpy SO2

Applicable Compliance Method: The hourly allowable SO2 emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass] derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable SO2 emission limitation by testing in accordance with Methods 1-4 and 6, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

f. Emission Limitation: 6.8 lbs formaldehyde per ton of glass pulled

Applicable Compliance Method: Compliance with the above limitation shall be demonstrated by the results of the stack testing conducted in accordance with A.V.1 above.

g. Emission Limitation: Visible PE shall not exceed 20 percent opacity, as a six-minute average, except as otherwise provided by rule.

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P089 - GDC Oven 2		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P090 - GDC Product finishing	OAC rule 3745-31-05(A)(3)	0.28 pound (lb) particulate emissions (PE)/hour (hr), 1.23 tons/year (tpy) PE (See A.I.2.b) Visible PE from the stack(s) servicing this emissions unit shall not exceed 5% opacity, as a six-minute average See A.I.2.a
	OAC rule 3745-17-07(A)	See A.I.2.c
	OAC rule 3745-17-11(B)	See A.I.2.c

2. Additional Terms and Conditions

2.a The "Best Available Technology" (BAT) requirements for this emissions unit has been determined to be the use of a baghouse and cyclone (finishing dust collector), with an overall control efficiency of 99% for both.

2.b All PE is assumed to be in the form of particulate matter less than 10 microns in size (PM10).

2.c 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

None

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

   a. the color of the emissions;
   b. whether the emissions are representative of normal operations;
   c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
   d. the total duration of any visible emission incident; and
   e. any corrective actions taken to minimize or eliminate the visible emissions.

2. Notwithstanding the frequency of reporting requirements specified in section A.IV, the permittee may reduce the frequency of visual observations for this emissions unit from at least 5 days per week to weekly readings if the following conditions are met:

   a. for 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

   b. the permittee continues to comply with all the record keeping and monitoring requirements specified in section A.III.1.

   The permittee shall revert to 5 days per week readings if any abnormal visible emissions are observed.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA, Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

   a. Emission Limitations: 0.28 lb PE/hr, 1.23 tpy PE

      Applicable Compliance Method: The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

      Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was calculated by multiplying the hourly emission limitation by 8760 and dividing by 2000).

   b. Emission Limitation:Visible PE shall not exceed 5 percent opacity, as a six-minute average

      Applicable Compliance Method: If required, compliance with the visible emission limitation for the baghouse stack shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P090 - GDC Product finishing		

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