



State of Ohio Environmental Protection Agency

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

CERTIFIED MAIL

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: 03-17015

Fac ID: 0320010005

DATE: 1/10/2006

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

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469.

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



**Permit To Install
Terms and Conditions**

**Issue Date: 1/10/2006
Effective Date: 1/10/2006**

FINAL PERMIT TO INSTALL 03-17015

Application Number: 03-17015
Facility ID: 0320010005
Permit Fee: **\$4000**
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):
Moving of some operations from Plant No. 2 to Plant No. 8, installation of new equipment and modification to some existing equipment.

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Part I - GENERAL TERMS AND CONDITIONS

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

1. Monitoring and Related Recordkeeping and Reporting Requirements

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - i. The date, place (as defined in the permit), and time of sampling or measurements.
 - ii. The date(s) analyses were performed.
 - iii. The company or entity that performed the analyses.
 - iv. The analytical techniques or methods used.
 - v. The results of such analyses.
 - vi. The operating conditions existing at the time of sampling or measurement.
- b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
 - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to

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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.

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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.

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

10. Permit-To-Operate Application

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).
- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this permit 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.

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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.

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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.

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The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

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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

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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

<u>Pollutant</u>	<u>Tons Per Year</u>
PM ₁₀	239.19
PE	155.49
SO ₂	4.91
NO _x	82.69
OC	178.88
CO	486.40
formaldehyde	41.70

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Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

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

1. The permittee shall shutdown the following Plant 2 emissions units according to the Defiance Consolidation Timeline schedule submitted in the application for this PTI :

P011 Line #26 forming & collection;
P012 Line #27 forming & collection;
P010 Line #25 forming & collection;
P009 Line #24 forming & collection (PTI #03-13943 issued May 22, 2003);
P008 Line #23 forming & collection (PTI #03-13943 issued May 22, 2003); and,
P016 Line #23 curing operation.

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

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the resulting net increase in maximum annual emissions for each toxic compound for the emissions units contained in this PTI (PTI#03-17015) is less than 1.0 ton. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to result in an increase above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P012 - line 82 forming and collection	40 CFR Part 63, Subpart NNN OAC rule 3745-21-07(G)(2) OAC rule 3745-17-11(B)
[Modification to PTI 03-8472 issued March 15, 1995 and administratively modified December 6, 2001]	OAC rule 3745-23-06(B) OAC rule 3745-21-08(B) OAC rule 3745-18-06(E)
Modification to allow for production rate increase.	

OAC rule 3745-17-07(A)

Applicable Emissions <u>Limitations/Control</u> <u>Measures</u>	except as provided by rule.
The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).	See A.I.2.e
11.13 pounds (lbs) particulate matter of 10 microns or less (PM ₁₀)/hour (hr), 48.75 tons per year (tpy) PM ₁₀ (See A.I.2.a)	None (See A.II.1)
14.73 lbs carbon monoxide (CO)/hr, 64.52 tpy CO	See A.I.2.b
9.38 lbs organic compounds (OC)/hr, 41.08 tpy OC (See A.I.2.f)	See A.I.2.d
2.62 lbs nitrogen oxide (NO _x)/hr, 11.48 tpy NO _x	See A.I.2.c
0.15 lb sulfur dioxide (SO ₂)/hr, 0.66 tpy SO ₂	See A.I.2.b
1.41 lbs formaldehyde/hr, 6.18 tpy formaldehyde	
Visible particulate emissions (PE) from the stack(s) serving this emissions unit shall not exceed 20% opacity as a six-minute average,	

2. Additional Terms and Conditions

- 2.a** All particulate matter emissions are 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.

- 2.e** 40 CFR Part 63 Subpart NNN is not applicable to existing flame attenuation lines producing bonded heavy-density product. For the purpose of 40 CFR 63 Subpart NNN, this modified emissions unit is still considered an existing emissions unit. (The modifications performed do not constitute reconstruction as defined in 40 CFR 63.2)
- 2.f** All OC are volatile organic compounds (VOC).

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.

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.

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.

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: 11.13 lbs PM₁₀/hr, 48.75 tpy PM₁₀

Applicable Compliance Method: The hourly allowable PM₁₀ 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 by testing in accordance with Methods 201/201A and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.

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

Emissions Unit ID: P012

by 8760 and dividing by 2000).

- b. Emission Limitations: 14.73 lbs CO/hr, 64.52 tpy CO

Applicable Compliance Method: The hourly allowable CO emission 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 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: 9.38 lbs OC/hr, 41.08 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 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: 2.62 lbs NO_x/hr, 11.48 tons NO_x/yr

Applicable Compliance Method: The hourly allowable NO_x 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 by testing in accordance with Methods 1-4, and 7 of 40 CFR Part 60, Appendix A.

Compliance with the annual 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: 0.15 lb SO₂/hr, 0.66 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 by testing in accordance with Methods 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).

- f. Emission Limitations: 1.41 lbs formaldehyde/hr, 6.18 tons formaldehyde/yr

Applicable Compliance Method: The hourly allowable formaldehyde 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 by testing in accordance with Methods 1-4, and 316 or 318 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).

- g. Emission Limitation: Visible PE shall not exceed 20% 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
<p>P012 - line 82 forming and collection</p> <p>[Modification to PTI 03-8472 issued March 15, 1995 and administratively modified December 6, 2001]</p> <p>Modification to allow for production rate increase.</p>		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

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Issued: 1/10/2006

Emissions Unit ID: P012

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P013 - line 84 forming and collection	OAC rule 3745-31-05(A)(3)
[Modification to PTI 03-16145 issued June 29, 2004]	OAC rule 3745-17-07(A)
Modification to allow for production rate increase.	40 CFR Part 63, Subpart NNN
	OAC rule 3745-21-07(G)(2)
	OAC rule 3745-17-11(B)
	OAC rule 3745-23-06(B)
	OAC rule 3745-21-08(B)
	OAC rule 3745-18-06(E)

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Applicable Emissions <u>Limitations/Control</u> <u>Measures</u>	six-minute average, except as provided by rule.
The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).	See A.I.2.e
10.32 pounds (lbs) particulate matter of 10 microns or less (PM ₁₀)/hour (hr), 45.20 tons per year (tpy) PM ₁₀ (See A.I.2.a)	None (See A.II.1)
31.37 lbs carbon monoxide (CO)/hr, 137.40 tpy CO	See A.I.2.b
3.20 lbs organic compounds (OC)/hr, 14.02 tpy OC (See A.I.2.f)	See A.I.2.d
1.23 lbs nitrogen oxide (NO _x)/hr, 5.39 tpy NO _x	See A.I.2.c
0.20 lb sulfur dioxide (SO ₂)/hr, 0.88 tpy SO ₂	See A.I.2.b
0.81 lb formaldehyde/hr, 3.55 tpy formaldehyde	
Visible PE from the stack(s) serving this emissions unit shall not exceed 20% opacity as a	

2. Additional Terms and Conditions

- 2.a** All particulate matter emissions are 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.

- 2.e** 40 CFR Part 63 Subpart NNN is not applicable to existing flame attenuation lines producing bonded heavy-density product. For the purpose of 40 CFR 63 Subpart NNN, this modified emissions unit is still considered an existing emissions unit. (The modifications performed do not constitute reconstruction as defined in 40 CFR 63.2)
- 2.f** All OC are volatile organic compounds (VOC).

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.

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.

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.

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: 10.32 lbs PM₁₀/hr, 45.20 tpy PM₁₀

Applicable Compliance Method: The hourly allowable PM₁₀ 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 by testing in accordance with Methods 201/201A and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.

Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual

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

- b. Emission Limitations: 31.37 lbs CO/hr, 137.40 tpy CO

Applicable Compliance Method: The hourly allowable CO emission 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 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: 3.20 lbs OC/hr, 14.02 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 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: 1.23 lbs NO_x/hr, 5.39 tons NO_x/yr

Applicable Compliance Method: The hourly allowable NO_x 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 by testing in accordance with Methods 1-4, and 7 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 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 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 Limitations: 0.81 lb formaldehyde/hr, 3.55 tons formaldehyde/yr

Applicable Compliance Method: The hourly allowable formaldehyde 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 by testing in accordance with Methods 1-4, and 316 or 318 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).

- g. Emission Limitation: Visible PE shall not exceed 20% 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P013 - line 84 forming and collection [Modification to PTI 03-16145 issued June 29, 2004] Modification to allow for production rate increase.		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P015 - line 86 forming and collection	OAC rule 3745-31-05(A)(3)
Modification of existing emissions unit to allow for production rate increase.	40 CFR Part 63, Subpart NNN OAC rule 3745-21-07(G)(2) 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)

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Applicable Emissions Limitations/Control Measures	rule.
The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).	See A.I.2.e
9.28 pounds (lbs) particulate matter of 10 microns or less (PM ₁₀)/hour (hr), 40.65 tons per year (tpy) PM ₁₀ (See A.I.2.a)	None (See A.II.1)
9.64 lbs carbon monoxide (CO)/hr, 42.22 tpy CO	See A.I.2.b
5.63 lbs organic compounds (OC)/hr, 24.66 tpy OC (See A.I.2.f)	See A.I.2.d
1.57 lbs nitrogen oxide (NO _x)/hr, 6.88 tpy NO _x	See A.I.2.c
0.09 lb sulfur dioxide (SO ₂)/hr, 0.39 tpy SO ₂	See A.I.2.b
1.42 lbs formaldehyde/hr, 6.22 tpy formaldehyde	
Visible particulate emissions (PE) from the stack(s) serving this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by	

2. Additional Terms and Conditions

- 2.a** All particulate matter emissions are 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.

- 2.e** 40 CFR Part 63 Subpart NNN is not applicable to existing flame attenuation lines producing bonded heavy-density product. For the purpose of 40 CFR 63 Subpart NNN, this modified emissions unit is still considered an existing emissions unit. (The modifications performed do not constitute reconstruction as defined in 40 CFR 63.2)
- 2.f** All OC are volatile organic compounds (VOC).

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.

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

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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.

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.

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: 9.28 lbs PM₁₀/hr, 40.65 tpy PM₁₀

Applicable Compliance Method: The hourly allowable PM₁₀ 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 by testing in accordance with Methods 201/201A and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.

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: 9.64 lbs CO/hr, 42.22 tpy CO

Applicable Compliance Method: The hourly allowable CO emission 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 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: 5.63 lbs OC/hr, 24.66 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 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: 1.57 lbs NO_x/hr, 6.88 tons NO_x/yr

Applicable Compliance Method: The hourly allowable NO_x 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 by testing in accordance with Methods 1-4, and 7 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).

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- e. 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 by testing in accordance with Methods 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).

- f. Emission Limitations: 1.42 lbs formaldehyde/hr, 6.22 tons formaldehyde/yr

Applicable Compliance Method: The hourly allowable formaldehyde 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 by testing in accordance with Methods 1-4, and 316 or 318 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).

- g. Emission Limitation: Visible PE shall not exceed 20% 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P015 - line 86 forming and collection		
Modification of existing emissions unit to allow for production rate increase.		

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

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VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P029 - line 86 curing operations (Modification to PTI #03-06479 issued January 20, 1994 and administratively modified on February 19, 2002) Modification to allow production rate increase.	OAC rule 3745-31-05(A)(3) 40 CFR Part 63, Subpart NNN OAC rule 3745-21-07(G)(1) 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 <u>Limitations/Control</u> <u>Measures</u>	
The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).	See A.1.2.b See A.1.2.d See A.1.2.c See A.1.2.b
1.07 pounds (lbs) particulate matter of 10 microns or less (PM ₁₀)/hour (hr), 4.69 tons per year (tpy) PM ₁₀ (See A.1.2.a)	
3.27 lbs carbon monoxide (CO)/hr, 14.32 tpy CO	
2.47 lbs organic compounds (OC)/hr, 10.82 tpy OC (See A.1.2.g)	
0.57 lbs nitrogen oxide (NO _x)/hr, 2.50 tpy NO _x	
0.07 lb sulfur dioxide (SO ₂)/hr, 0.31 tpy SO ₂	
0.62 lbs formaldehyde/hr, 2.72 tpy formaldehyde	
Visible particulate emissions (PE) from the stack(s) serving this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.	
See A.1.2.e	
None (See A.1.2.f)	

2. Additional Terms and Conditions

- 2.a** All particulate matter emissions are 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.

- 2.e** 40 CFR Part 63 Subpart NNN is not applicable to existing flame attenuation lines producing bonded heavy-density product. For the purpose of 40 CFR 63 Subpart NNN, this modified emissions unit is still considered an existing emissions unit. (The modifications performed do not constitute reconstruction as defined in 40 CFR 63.2)
- 2.f** This emissions unit is not subject to the requirements of OAC rule

3745-21-07(G)(1) because it uses a liquid organic material that is exempted from the requirements under OAC rule 3745-21-07(G)(9)(c).

2.g All OC are volatile organic compounds (VOC).

II. Operational Restrictions

1. The permittee shall not employ any material in this emissions unit that does not comply with the following:
 - a. the volatile content of each material employed shall consist of only water and liquid organic material;
 - b. the liquid organic material shall comprise no more than 20% (by volume) of the volatile content; and
 - c. the volatile content of each material shall not be a photochemically reactive material.

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

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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 collect and record the following information each month for this emissions unit:
 - a. the composition of the volatile content of each material employed;
 - b. the liquid organic portion of the volatile content, in % by volume, of each material employed; and
 - c. documentation on whether or not the volatile content of each material employed is a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).

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 noncomplying material (see section A.II.1) was employed in this emissions unit. These deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

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: 1.07 lbs PM₁₀/hr, 4.69 tpy PM₁₀

Applicable Compliance Method: The hourly allowable PM₁₀ 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 by testing in accordance with Methods 201/201A and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.

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: 3.27 lbs CO/hr, 14.32 tpy CO

Applicable Compliance Method: The hourly allowable CO emission 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 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: 2.47 lbs OC/hr, 10.82 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

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testing of a similar emissions unit. If required, the permittee shall demonstrate compliance 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: 0.57 lbs NO_x/hr, 2.50 tons NO_x/yr

Applicable Compliance Method: The hourly allowable NO_x 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 by testing in accordance with Methods 1-4, and 7 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: 0.07 lb SO₂/hr, 0.31 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 by testing in accordance with Methods 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).

- f. Emission Limitations: 0.62 lb formaldehyde/hr, 2.72 tons formaldehyde/yr

Applicable Compliance Method: The hourly allowable formaldehyde 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 by testing in accordance with Methods 1-4, and 316 or 318 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).

- g. Emission Limitation: Visible particulate shall not exceed 20% 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

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P029 - line 86 curing operations (Modification to PTI #03-06479 issued January 20, 1994 and administratively modified on February 19, 2002) Modification to allow production rate increase.		

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

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VI. Miscellaneous Requirements
None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P044 - line 82 curing operations	OAC rule 3745-31-05(A)(3)
Modification of existing emissions unit to allow for production rate increase.	40 CFR Part 63, Subpart NNN OAC rule 3745-21-07(G)(1) 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)

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Applicable Emissions <u>Limitations/Control</u> <u>Measures</u>	except as provided by rule.
The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).	See A.I.2.e
1.78 pounds (lbs) particulate matter of 10 microns or less (PM ₁₀)/hour (hr), 7.80 tons per year (tpy) PM ₁₀ (See A.I.2.a)	See A.I.2.f
5.00 lbs carbon monoxide (CO)/hr, 21.90 tpy CO	See A.I.2.b
4.11 lbs organic compounds (OC)/hr, 18.00 tpy OC (See A.I.2.g)	See A.I.2.d
4.57 lbs nitrogen oxide (NO _x)/hr, 20.02 tpy NO _x	See A.I.2.c
0.12 lb sulfur dioxide (SO ₂)/hr, 0.53 tpy SO ₂	See A.I.2.b
1.03 lbs formaldehyde/hr, 4.51 tpy formaldehyde	
Visible particulate emissions (PE) from the stack(s) serving this emissions unit shall not exceed 20% opacity as a six-minute average,	

2. Additional Terms and Conditions

- 2.a** All particulate matter emissions are 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.

- 2.e.** 40 CFR Part 63 Subpart NNN is not applicable to existing flame attenuation lines producing bonded heavy-density product. For the purpose of 40 CFR 63 Subpart NNN, this modified emissions unit is still considered an existing emissions unit. (The modifications performed do not constitute reconstruction as defined in 40 CFR 63.2)
- 2.f** This emissions unit is not subject to the requirements of OAC rule

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3745-21-07(G)(1) because it uses a liquid organic material that is exempted from the requirements under OAC rule 3745-21-07(G)(9)(c).

2.g All OC are volatile organic compounds (VOC).

II. Operational Restrictions

1. The permittee shall not employ any material in this emissions unit that does not comply with the following:
 - a. the volatile content of each material employed shall consist of only water and liquid organic material;
 - b. the liquid organic material shall comprise no more than 20% (by volume) of the volatile content; and
 - c. the volatile content of each material shall not be a photochemically reactive material.

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 collect and record the following information each month for this emissions unit:
 - a. the composition of the volatile content of each material employed;
 - b. the liquid organic portion of the volatile content, in % by volume, of each material employed; and
 - c. documentation on whether or not the volatile content of each material employed is a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).

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 noncomplying material (see section A.II.1) was employed in this emissions unit. These deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

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: 1.78 lbs PM₁₀/hr, 7.80 tpy PM₁₀

Applicable Compliance Method: The hourly allowable PM₁₀ 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 by testing in accordance with Methods 201/201A and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.

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: 5.00 lbs CO/hr, 21.90 tpy CO

Applicable Compliance Method: The hourly allowable CO emission 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 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: 4.11 lbs OC/hr, 18.00 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 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: 4.57 lbs NOx/hr, 20.02 tons NOx/yr

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 by testing in accordance with Methods 1-4, and 7 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: 0.12 lb SO2/hr, 0.53 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 by testing in accordance with Methods 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).

- f. Emission Limitations: 1.03 lbs formaldehyde/hr, 4.51 tons formaldehyde/yr

Applicable Compliance Method: The hourly allowable formaldehyde 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 by testing in accordance with Methods 1-4, and 316 or 318 of 40 CFR Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as

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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).

- g. Emission Limitation: Visible PE shall not exceed 20% 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P044 - line 82 curing operations		
Modification of existing emissions unit to allow for production rate increase.		

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

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VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P091 - line 85 forming and collection	OAC rule 3745-17-07(A) OAC rule 3745-31-05(A)(3) 40 CFR Part 63, Subpart NNN OAC rule 3745-21-07(G)(2) OAC rule 3745-17-11(B) OAC rule 3745-23-06(B) OAC rule 3745-21-08(B) OAC rule 3745-18-06(E)

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Applicable Emissions
Limitations/Control
Measures

The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).

10.32 pounds (lbs) particulate matter of 10 microns or less (PM₁₀)/hour (hr), 45.20 tons per year (tpy) PM₁₀ (See A.I.2.a)

31.37 lbs carbon monoxide (CO)/hr, 137.40 tpy CO

3.20 lbs organic compounds (OC)/hr, 14.02 tpy OC (See A.I.2.f)

1.23 lbs nitrogen oxide (NO_x)/hr, 5.39 tpy NO_x

0.20 lb sulfur dioxide (SO₂)/hr, 0.88 tpy SO₂

0.81 lbs formaldehyde/hr, 3.55 tpy formaldehyde

Visible PE from the stack(s) serving this emissions unit shall not exceed 20% opacity as a

six-minute average, except as provided by rule.

See A.I.2.e

None (See A.II.1)

See A.I.2.b

See A.I.2.d

See A.I.2.c

See A.I.2.b

2. Additional Terms and Conditions

- 2.a** All particulate matter emissions are 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.

- 2.e** 40 CFR Part 63 Subpart NNN is not applicable to this emissions unit because this is a refurbished emissions unit that produces bonded heavy-density product and the fixed capital cost of the new components do not exceed 50% of the fixed capital cost required to construct a comparable new source; new source as defined in 40 CFR 63.2.
- 2.f** All OC are volatile organic compounds (VOC).

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.

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

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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.

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.

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: 10.32 lbs PM₁₀/hr, 45.20 tpy PM₁₀

Applicable Compliance Method: The hourly allowable PM₁₀ 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 by testing in accordance with Methods 201/201A and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.

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: 31.37 lbs CO/hr, 137.40 tpy CO

Applicable Compliance Method: The hourly allowable CO emission 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 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: 3.20 lbs OC/hr, 14.02 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 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: 1.23 lbs NOx/hr, 5.39 tons NOx/yr

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 by testing in accordance with Methods 1-4, and 7 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).

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- e. Emission Limitations: 0.20 lb SO₂/hr, 0.88 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 by testing in accordance with Methods 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).

- f. Emission Limitations: 0.81 lb formaldehyde/hr, 3.55 tons formaldehyde/yr

Applicable Compliance Method: The hourly allowable formaldehyde 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 by testing in accordance with Methods 1-4, and 316 or 318 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).

- g. Emission Limitation: Visible PE shall not exceed 20 % 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P091 - line 85 forming and collection		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P092 - line 87 forming and collection	OAC rule 3745-31-05(A)(3) 40 CFR Part 63, Subpart NNN OAC rule 3745-21-07(G)(2) 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 <u>Limitations/Control</u> <u>Measures</u>	See A.I.2.b
	See A.I.2.d
The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).	See A.I.2.c
	See A.I.2.b
7.41 pounds (lbs) particulate matter of 10 microns or less (PM ₁₀)/hour (hr), 32.46 tons per year (tpy) PM ₁₀ (See A.I.2.a)	
7.58 lbs carbon monoxide (CO)/hr, 33.20 tpy CO	
7.51 lbs organic compounds (OC)/hr, 32.89 tpy OC (See A.I.2.f)	
0.31 lbs nitrogen oxide (NO _x)/hr, 1.36 tpy NO _x	
0.12 lb sulfur dioxide (SO ₂)/hr, 0.53 tpy SO ₂	
1.90 lbs formaldehyde/hr, 8.32 tpy formaldehyde	
Visible particulate emissions (PE) from the stack(s) serving this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.	
See A.I.2.e	
None (See A.II.1)	

2. Additional Terms and Conditions

- 2.a** All particulate matter emissions are 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.

- 2.e** 40 CFR Part 63 Subpart NNN is not applicable to this emissions unit because this is a refurbished emissions unit that produces bonded heavy-density product and the fixed capital cost of the new components do not exceed 50% of the fixed capital cost required to construct a comparable new source; new source as defined in 40 CFR 63.2.
- 2.f** All OC are volatile organic compounds (VOC).

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.

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.

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.

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: 7.41 lbs PM₁₀/hr, 32.46 tpy PM₁₀

Applicable Compliance Method: The hourly allowable PM₁₀ 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 by testing in accordance with Methods 201/201A and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.

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: 7.58 lbs CO/hr, 33.20 tpy CO

Applicable Compliance Method: The hourly allowable CO emission 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 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: 7.51 lbs OC/hr, 32.89 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 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: 0.31 lbs NO_x/hr, 1.36 tons NO_x/yr

Applicable Compliance Method: The hourly allowable NO_x 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 by testing in accordance with Methods 1-4, and 7 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be assumed as long as

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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: 0.12 lb SO₂/hr, 0.53 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 by testing in accordance with Methods 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).

- f. Emission Limitations: 1.90 lbs formaldehyde/hr, 8.32 tons formaldehyde/yr

Applicable Compliance Method: The hourly allowable formaldehyde 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 by testing in accordance with Methods 1-4, and 316 or 318 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).

- g. Emission Limitation: Visible PE shall not exceed 20% 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P092 - line 87 forming and collection		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
P093 - line 87 curing operation	OAC rule 3745-31-05(A)(3)	OAC rule 3745-21-07(G)(1)
Modification of existing emissions unit to increase allowable emissions.		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	

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Applicable Emissions Limitations/Control Measures	except as provided by rule.
The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).	See A.I.2.e
1.78 pounds (lbs) particulate matter of 10 microns or less (PM ₁₀)/hour (hr), 7.80 tons per year (tpy) PM ₁₀ (See A.I.2.a)	None (See A.I.2.f)
4.37 lbs carbon monoxide (CO)/hr, 19.14 tpy CO	See A.I.2.b
2.88 lbs organic compounds (OC)/hr, 12.61 tpy OC (See A.I.2.g)	See A.I.2.d
3.66 lbs nitrogen oxide (NO _x)/hr, 16.03 tpy NO _x	See A.I.2.c
0.09 lb sulfur dioxide (SO ₂)/hr, 0.39 tpy SO ₂	See A.I.2.b
0.82 lb formaldehyde/hr, 3.59 tpy formaldehyde	
Visible particulate emissions (PE) from the stack(s) serving this emissions unit shall not exceed 20% opacity as a six-minute average,	

2. Additional Terms and Conditions

- 2.a** All particulate matter emissions are 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.

- 2.e** 40 CFR Part 63 Subpart NNN is not applicable to existing flame attenuation lines producing bonded heavy-density product. For the purpose of 40 CFR 63 Subpart NNN, this modified emissions unit is still considered an existing emissions unit. (The modifications performed do not constitute reconstruction as defined in 40 CFR 63.2)
- 2.f** This emissions unit is not subject to the requirements of OAC rule

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3745-21-07(G)(1) because it uses a liquid organic material that is exempted from the requirements under OAC rule 3745-21-07(G)(9)(c).

2.g All OC are volatile organic compounds (VOC).

II. Operational Restrictions

1. The permittee shall not employ any material in this emissions unit that does not comply with the following:
 - a. the volatile content of each material employed shall consist of only water and liquid organic material;
 - b. the liquid organic material shall comprise no more than 20% (by volume) of the volatile content; and
 - c. the volatile content of each material shall not be a photochemically reactive material.

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 collect and record the following information each month for this emissions unit:
 - a. the composition of the volatile content of each material employed;
 - b. the liquid organic portion of the volatile content, in % by volume, of each material employed; and
 - c. documentation on whether or not the volatile content of each material employed is a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).

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 noncomplying material (see section A.II.1) was employed in this emissions unit. These deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

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: 1.78 lbs PM₁₀/hr, 7.80 tpy PM₁₀

Applicable Compliance Method: The hourly allowable PM₁₀ 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 by testing in accordance with Methods 201/201A and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.

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: 4.37 lbs CO/hr, 19.14 tpy CO

Applicable Compliance Method: The hourly allowable CO emission 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 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: 2.88 lbs OC/hr, 12.61 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 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: 3.66 lbs NOx/hr, 16.03 tons NOx/yr

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 by testing in accordance with Methods 1-4, and 7 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 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 by testing in accordance with Methods 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).

- f. Emission Limitations: 0.82 lb formaldehyde/hr, 3.59 tons formaldehyde/yr

Applicable Compliance Method: The hourly allowable formaldehyde 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 by testing in accordance with Methods 1-4, and 316 or 318 of 40 CFR Part 60, Appendix A.

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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).

- g. Emission Limitation: Visible PE shall not exceed 20% 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P093 - line 87 curing operation		
Modification of existing emissions unit to increase allowable emissions.		

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

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VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P094 - line 84 curing operation	OAC rule 3745-31-05(A)(3)
Modification of existing emissions unit to increase allowable emissions.	40 CFR Part 63, Subpart NNN OAC rule 3745-21-07(G)(1) 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)

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<u>Applicable Emissions Limitations/Control Measures</u>	rule.
The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).	See A.I.2.e
0.76 pounds (lbs) particulate matter of 10 microns or less (PM ₁₀)/hour (hr), 3.33 tons per year (tpy) PM ₁₀ (See A.I.2.a)	None (See A.I.2.f)
1.86 lbs carbon monoxide (CO)/hr, 8.15 tpy CO	See A.I.2.b
1.23 lbs organic compounds (OC)/hr, 5.39 tpy OC (See A.I.2.g)	See A.I.2.d
1.56 lbs nitrogen oxide (NO _x)/hr, 6.83 tpy NO _x	See A.I.2.c
0.04 lb sulfur dioxide (SO ₂)/hr, 0.18 tpy SO ₂	See A.I.2.b
0.35 lb formaldehyde/hr, 1.53 tpy formaldehyde	
Visible particulate emissions (PE) from the stack(s) serving this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by	

2. Additional Terms and Conditions

- 2.a** All particulate matter emissions are 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.

- 2.e** 40 CFR Part 63 Subpart NNN is not applicable to existing flame attenuation lines producing bonded heavy-density product. For the purpose of 40 CFR 63 Subpart NNN, this modified emissions unit is still considered an existing emissions unit. (The modifications performed do not constitute reconstruction as defined in 40 CFR 63.2)
- 2.f** This emissions unit is not subject to the requirements of OAC rule

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3745-21-07(G)(1) because it uses a liquid organic material that is exempted from the requirements under OAC rule 3745-21-07(G)(9)(c).

2.g All OC are volatile organic compounds (VOC).

II. Operational Restrictions

1. The permittee shall not employ any material in this emissions unit that does not comply with the following:
 - a. the volatile content of each material employed shall consist of only water and liquid organic material;
 - b. the liquid organic material shall comprise no more than 20% (by volume) of the volatile content; and
 - c. the volatile content of each material shall not be a photochemically reactive material.

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 collect and record the following information each month for this emissions unit:
 - a. the composition of the volatile content of each material employed;
 - b. the liquid organic portion of the volatile content, in % by volume, of each material employed; and
 - c. documentation on whether or not the volatile content of each material employed is a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).

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 noncomplying material (see section A.II.1) was employed in this emissions unit. These deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

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: 0.76 lbs PM₁₀/hr, 3.33 tpy PM₁₀

Applicable Compliance Method: The hourly allowable PM₁₀ 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 by testing in accordance with Methods 201/201A and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.

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 (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 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: 1.23 lbs OC/hr, 5.39 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 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: 1.56 lbs NOx/hr, 6.83 tons NOx/yr

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 by testing in accordance with Methods 1-4, and 7 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: 0.04 lb SO₂/hr, 0.18 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 by testing in accordance with Methods 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).

- f. Emission Limitations: 0.35 lb formaldehyde/hr, 1.53 tons formaldehyde/yr

Applicable Compliance Method: The hourly allowable formaldehyde 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 by testing in accordance with Methods 1-4, and 316 or 318 of 40 CFR Part 60, Appendix A.

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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).

- g. Emission Limitation: Visible PE shall not exceed 20 % 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P094 - line 84 curing operation Modification of existing emissions unit to increase allowable emissions.		

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

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VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P095 - line 85 curing operation	OAC rule 3745-31-05(A)(3)
Modification of existing emissions unit to increase allowable emissions.	40 CFR Part 63, Subpart NNN OAC rule 3745-21-07(G)(1) 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 <u>Limitations/Control</u> <u>Measures</u>	See A.I.2.b
	See A.I.2.d
The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).	See A.I.2.c
	See A.I.2.b
0.76 pounds (lbs) particulate matter of 10 microns or less (PM ₁₀)/hour (hr), 3.33 tons per year (tpy) PM ₁₀ (See A.I.2.a)	
1.86 lbs carbon monoxide (CO)/hr, 8.15 tpy CO	
1.23 lbs organic compounds (OC)/hr, 5.39 tpy OC (See A.I.2.g)	
1.56 lbs nitrogen oxide (NO _x)/hr, 6.83 tpy NO _x	
0.04 lb sulfur dioxide (SO ₂)/hr, 0.18 tpy SO ₂	
0.35 lb formaldehyde/hr, 1.53 tpy formaldehyde	
Visible particulate emissions (PE) from the stack(s) serving this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.	
See A.I.2.e	
None (See A.I.2.f)	

2. Additional Terms and Conditions

- 2.a** All particulate matter emissions are 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.

- 2.e** 40 CFR Part 63 Subpart NNN is not applicable to existing flame attenuation lines producing bonded heavy-density product. For the purpose of 40 CFR 63 Subpart NNN, this modified emissions unit is still considered an existing emissions unit. (The modifications performed do not constitute reconstruction as defined in 40 CFR 63.2)
- 2.f** This emissions unit is not subject to the requirements of OAC rule

3745-21-07(G)(1) because it uses a liquid organic material that is exempted from the requirements under OAC rule 3745-21-07(G)(9)(c).

2.g All OC are volatile organic compounds (VOC).

II. Operational Restrictions

1. The permittee shall not employ any material in this emissions unit that does not comply with the following:
 - a. the volatile content of each material employed shall consist of only water and liquid organic material;
 - b. the liquid organic material shall comprise no more than 20% (by volume) of the volatile content; and
 - c. the volatile content of each material shall not be a photochemically reactive material.

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

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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 collect and record the following information each month for this emissions unit:
 - a. the composition of the volatile content of each material employed;
 - b. the liquid organic portion of the volatile content, in % by volume, of each material employed; and
 - c. documentation on whether or not the volatile content of each material employed is a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).

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 noncomplying material (see section A.II.1) was employed in this emissions unit. These deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

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: 0.76 lbs PM₁₀/hr, 3.33 tpy PM₁₀

Applicable Compliance Method: The hourly allowable PM₁₀ 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 by testing in accordance with Methods 201/201A and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.

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 (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 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: 1.23 lbs OC/hr, 5.39 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

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testing of a similar emissions unit. If required, the permittee shall demonstrate compliance hourly 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: 1.56 lbs NOx/hr, 6.83 tons NOx/yr

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 by testing in accordance with Methods 1-4, and 7 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: 0.04 lb SO₂/hr, 0.18 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 by testing in accordance with Methods 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).

- f. Emission Limitations: 0.35 lb formaldehyde/hr, 1.53 tons formaldehyde/yr

Applicable Compliance Method: The hourly allowable formaldehyde 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 by testing in accordance with Methods 1-4, and 316 or 318 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).

- g. Emission Limitation: Visible PE shall not exceed 20% 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P095 - line 85 curing operation Modification of existing emissions unit to increase allowable emissions.		

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