



Environmental
Protection Agency

Ted Strickland, Governor
Lee Fisher, Lt. Governor
Chris Korleski, Director

11/29/2010

Certified Mail

Carry Jo Perry
Johns Manville / Plant #01 - wtv1
6050 River Road
Waterville, OH 43566

No	TOXIC REVIEW
No	PSD
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
No	MODELING SUBMITTED

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0448000012
Permit Number: P0107133
Permit Type: Administrative Modification
County: Lucas

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install for the referenced facility has been issued for the emissions unit(s) listed in the Authorization section of the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the permit. A public notice will appear in the Ohio EPA Weekly Review and the local newspaper, Toledo Blade. A copy of the public notice and the draft permit are enclosed. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Issued Air Pollution Control Permits" link. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

Andrew Hall
Permit Review/Development Section
Ohio EPA, DAPC
122 South Front Street
Columbus, Ohio 43215

and Toledo Department of Environmental Services
348 South Erie Street
Toledo, OH 43604

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified in writing if a public hearing is scheduled. A decision on issuing a final permit-to-install will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Toledo Department of Environmental Services at (419)936-3015.

Sincerely,

Michael W. Ahern, Manager
Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA Region 5 - *Via E-Mail Notification*
TDES; Michigan; Indiana; Canada



Permit Strategy Write-Up

1. Check all that apply:

Synthetic Minor Determination

Netting Determination

2. Source Description:

This PTI is an administrative modification to add BAT limits for emissions less than ten tons per year as stated in the guidance memo dated 7/2/2010 for emission units P054 through P058 that were permitted as part of PTI 04-01462 issued 5/22/2007. The facility had volunteered emission limitations on the original permit (PTI 04-01462 issued 5/22/2007) for PE, PM₁₀, SO₂, and VOC. The BAT limits for PE, PM₁₀, SO₂, and VOC were set to these volunteered emission limitations and new BAT emission limitations were set for CO and NO_x. The CO and NO_x emissions are generated by dryers from the combustion of natural gas and are set equal to the potential to emit.

3. Facility Emissions and Attainment Status:

PM₁₀, SO₂ and NO_x are major emissions at this facility. All other criteria pollutants are minor.

<u>Pollutant</u>	<u>Potential</u>	<u>Facility</u>	<u>Attainment Status</u>
	<u>Emissions</u>		
PM _{2.5}	unknown		attainment
PM ₁₀	165.02		attainment
PE	97.63		attainment
SO ₂	142.91		attainment
VOC	58.24		attainment
NO _x	142.34		attainment
CO	19.42		attainment

4. Applicable Rules and Regulations:

OAC rule 3745-31-05(A)(3), as effective 11/30/2001	BAT applies to emissions less than ten tons per year (CO, NO _x , SO ₂ , VOC, PE, and PM ₁₀) until the BAT revision dated 12/1/2006 is approved for the SIP. Since these emissions were less than 10 tons per year in PTI 04-01462 issued 5/22/2007, no BAT limits were set per SB 265. When the SIP revision is approved, these BAT limits will no longer apply.
OAC rule 3745-31-05(D)	Facility had volunteered federally enforceable emission limits for PE, PM ₁₀ , SO ₂ , and VOC. The PE, PM ₁₀ , and VOC emission limits are based on maximum production, taking into account the production limit on glass dried. The SO ₂ limits are potential to emit for the maximum heat capacity of the dryers. These limits were established to limit the maximum applicable emissions to a level below SIP limits.
OAC rule 3745-17-07(A)(1)	20% opacity as a 6-minute average



OAC rule 3745-17-11(B)(1)	Since the emission limit volunteered by the facility is more stringent than the SIP amount and is federally enforceable, the voluntary limit will take precedence.
OAC rule 3745-21-07(B)	Satisfied by voluntary restrictions per OAC rule 3745-31-05(D)
OAC rule 3745-31-05(A)(3)(A)(ii), as effective 12/1/2006	Once the BAT revision of 12/1/2006 is approved for the SIP, BAT will not apply to the emissions of CO, NO _x , SO ₂ , and VOC since the uncontrolled potential to emit for these pollutants is less than 10 tons per year. Also, once the BAT revision of 12/1/2006 is approved for the SIP, BAT will not apply to the emissions of PE and PM ₁₀ since the potential emissions of these pollutants is less than 10 ton per year, taking into account the baghouse required by the operational restriction.

5. Source Emissions:

Some of the emissions are due to the combustion of natural gas in the dryer ovens (CO, NO_x, SO₂) for emission units P054, P055, and P058 and are less than ten tons per year. The emission limitation calculations are based on AP-42 emissions factors and the maximum heat capacity of the dryer ovens. The facility had previously accepted a restriction on SO₂ emissions, also based on the AP-42 emission factor and the maximum heat capacity of the dryer. This amount represents the potential to emit but is much less than the SIP amount. The BAT limit for SO₂ emissions was also set to this amount. The BAT limits for CO and NO_x were also set to potential to emit using AP-42 emission factors and maximum heat capacity of the dryer. Once the USEPA approves the BAT revision of 12/1/2006 to the SIP, these BAT emission limits will no longer apply.

The VOC emissions are due to a combination of the combustion of natural gas and the drying of the sizing mix on the glass in emission units P054, P055, and P058. The VOC emissions from the combustion of natural gas are based on the AP-42 emission factor and the maximum heat capacity of the dryer. The VOC emissions from the sizing mix are based on VOC content of the sizing mix and the overall moisture of the product. All the VOC content of the sizing mix is assumed to be released as emissions. The VOC emissions due to the combustion of natural gas are the potential to emit for that process, while the VOC emissions from the sizing mix are proportional to the amount of glass dried. The facility had requested an operational limit on maximum glass processed. The BAT limit for VOC was set to this requested emission limitation. When the BAT revision of 12/1/2006 to the SIP is approved by the USEPA, the BAT will no longer apply but the facility requested emission limitation will still remain.

The PE and PM₁₀ emissions are based on stack test data. The direct dry chop dryers stack test was performed on P028 dated 7/22/1999. This is the same type of emission unit as P054 and P055. The derived emission factor calculated was 0.06 pounds of PM₁₀ per ton of glass dried. The direct dry classifier stack test was performed on 6/12/2001. The derived emission factor calculated was 0.078 pounds of PM₁₀ per ton of glass dried. The gypsum dryer stack test was performed on 8/05 for P045. This is the same type of emission unit as P058. The derived emission factor calculated was 7.11 x 10⁻⁹ pounds of PM₁₀ per pound of glass dried. Since all the emissions are PM₁₀, the PE emissions were set equal to the PM₁₀. The short term emission limitation was reported as pounds of PE or PM₁₀ emission per ton of glass dried. The annual emission limitation was calculated using the short term limit and multiplying by maximum glass dried per year as stated in the operational limitation.

Conclusion:



This administrative modification adds BAT limits for emissions less than ten tons per year. Previously, BAT was not included due to SB 265. But the guidance memo dated 7/2/2010 requires BAT for the renewal of the Title V permit. These BAT emission limits will be effective until USEPA approves the BAT revision dated 12/1/2006. The facility had requested emission limits for several pollutants (SO₂, VOC, PE, and PM₁₀) that were less than ten tons per year, to limit the allowable emissions below SIP levels. BAT for these pollutants was set equal to the requested limits. The remaining pollutants (CO and NO_x) have had BAT set equal to the potential to emit. These limits will go back to SIP levels when the USEPA approves the revision to BAT dated 12/1/2006. It is recommended that this modification be approved.

6. Please provide additional notes or comments as necessary:

P054/P055 9211 Direct Dry Chop Dryer-1 & 2 (each)

Maximum Production Rate = 3,900 lbs/hr = 34,164,000 lbs glass/yr
Burner = 3.0 MMBtu/hr = 0.003 MMCF/hr = 26.3 MMCF/yr
based on 1020 Btu/CF and 8760 hrs/yr

PE/PM₁₀ = EF x Maximum Production Rate = 0.12 lb/hr = 0.51 ton/yr
EF = 0.06 lb PM₁₀/ton glass (stack test 7/99)

SO₂ = EF x Burner = 0.002 lb/hr = 0.01 ton/yr
EF = 0.6 lb SO₂/MMCF (AP-42, Fifth Edition, Table 1.4-2 dated 7/98)

NO_x = EF x Burner = 0.30 lb/hr = 1.32 tons/yr
EF = 100 lb NO_x/MMCF (AP-42, Fifth Edition, Table 1.4-1 dated 7/98)

CO = EF x Burner = 0.25 lb/hr = 1.10 tons/yr
EF = 84 lb CO/MMCF (AP-42, Fifth Edition, Table 1.4-1 dated 7/98)

VOC (sizing burn-off + gas combustion) = EF₁ x Maximum Production Rate + EF₂ x Burner = 1.33 lb/hr = 5.81 tons/yr

EF₁ = V_m x M_p = 0.000336 lb VOC/lb glass (verified by stack test 3/06)

V_m = VOC content of sizing mix (0.56%)

M_p = overall moisture of product (6%)

EF₂ = 5.5 lb VOC/MMCF (AP-42, Fifth Edition, Table 1.4-1 dated 7/98)

P056/P057 9211 Direct Dry Classifier-1 & 2 (each)

Maximum Production Rate = 3,900 lbs/hr = 34,164,000 lb glass/yr

PE/PM₁₀ = EF x Maximum Production Rate = 0.15 lb/hr = 0.67 ton/yr
EF = 0.078 lb PM₁₀/ton glass (stack test 6/01)

P058 9211 Finishing Gypsum Dryer-1

Maximum Production Rate = 5,200 lbs/hr = 45,552,000 lb glass/yr
Burner = 2.0 MMBtu/hr = 0.002 MMCF/hr = 17.52 MMCF/yr
based on 1020 Btu/CF and 8760 hrs/yr

PE/PM₁₀ = EF x Maximum Production Rate = 0.00004 lb/hr = 0.0002 ton/yr
EF = 7.11 x 10⁻⁹ lb PM₁₀/lb glass (stack test 8/05) = 1.4 x 10⁻⁵ lb PM₁₀/ton glass

SO₂ = EF x Burner = 0.0012 lb/hr = 0.0053 ton/yr
EF = 0.6 lb SO₂/MMCF (AP-42, Fifth Edition, Table 1.4-2 dated 7/98)

NO_x = EF x Burner = 0.20 lb/hr = 0.88 tons/yr
EF = 100 lb NO_x/MMCF (AP-42, Fifth Edition, Table 1.4-1 dated 7/98)

CO = EF x Burner = 0.17 lb/hr = 0.74 tons/yr



EF = 84 lb CO/MMCF (AP-42, Fifth Edition, Table 1.4-1 dated 7/98)

VOC (sizing burn-off + gas combustion) = $EF_1 \times \text{Maximum Production Rate} + EF_2 \times \text{Burner} = 1.76 \text{ lb/hr} = 7.70 \text{ tons/yr}$

$EF_1 = V_m \times M_p = 0.000336 \text{ lb VOC/lb glass (verified by stack test 3/06)}$

$V_m = \text{VOC content of sizing mix (0.56\%)}$

$M_p = \text{overall moisture of product (6\%)}$

$EF_2 = 5.5 \text{ lb VOC/MMCF (AP-42, Fifth Edition, Table 1.4-1 dated 7/98)}$

7. Total Permit Allowable Emissions Summary (for informational purposes only):

<u>Pollutant</u>	<u>Tons Per Year</u>
PE	2.36
PM ₁₀	2.36
SO ₂	0.03
NO _x	3.52
CO	2.94
VOC	19.32

PUBLIC NOTICE
Issuance of Draft Air Pollution Permit-To-Install
Johns Manville / Plant #01 - wtv1

Issue Date: 11/29/2010

Permit Number: P0107133

Permit Type: Administrative Modification

Permit Description: Install BAT terms for emissions less than ten tons per year.

Facility ID: 0448000012

Facility Location: Johns Manville / Plant #01 - wtv1

6050 River Road,

Waterville, OH 43566

Facility Description: Other Pressed and Blown Glass and Glassware Manufacturing

Chris Korleski, Director of the Ohio Environmental Protection Agency, 50 West Town Street, Columbus Ohio, has issued a draft action of an air pollution control permit-to-install (PTI) for an air contaminant source at the location identified above on the date indicated. Installation of the air contaminant source may proceed upon final issuance of the PTI. Comments concerning this draft action, or a request for a public meeting, must be sent in writing no later than thirty (30) days from the date this notice is published. All comments, questions, requests for permit applications or other pertinent documentation, and correspondence concerning this action must be directed to Mary Lehman-Schmidt at Toledo Department of Environmental Services, 348 South Erie Street, Toledo, OH 43604 or (419)936-3015. The permit can be downloaded from the Web page: www.epa.ohio.gov/dapc



DRAFT

**Division of Air Pollution Control
Permit-to-Install
for
Johns Manville / Plant #01 - wtv1**

Facility ID: 0448000012
Permit Number: P0107133
Permit Type: Administrative Modification
Issued: 11/29/2010
Effective: To be entered upon final issuance



Division of Air Pollution Control
Permit-to-Install
for
Johns Manville / Plant #01 - wtv1

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Authorization

Facility ID: 0448000012
Facility Description: Fiber Glass Manufacturer
Application Number(s): M0001024
Permit Number: P0107133
Permit Description: Install BAT terms for emissions less than ten tons per year.
Permit Type: Administrative Modification
Permit Fee: \$0.00 *DO NOT send payment at this time, subject to change before final issuance*
Issue Date: 11/29/2010
Effective Date: To be entered upon final issuance

This document constitutes issuance to:

Johns Manville / Plant #01 - wtv1
6050 River Road
Waterville, OH 43566

of a Permit-to-Install for the emissions unit(s) identified on the following page.

Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Toledo Department of Environmental Services
348 South Erie Street
Toledo, OH 43604
(419)936-3015

The above named entity is hereby granted a Permit-to-Install for the emissions unit(s) listed in this section 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 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

Chris Korleski
Director



Effective Date: To be entered upon final issuance

Authorization (continued)

Permit Number: P0107133
Permit Description: Install BAT terms for emissions less than ten tons per year.

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

Emissions Unit ID: P058
Company Equipment ID: P058
Superseded Permit Number: 04-01462
General Permit Category and Type: Not Applicable

Group Name: Direct Dry Chop Dryer

Emissions Unit ID:	P054
Company Equipment ID:	P054
Superseded Permit Number:	04-01462
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P055
Company Equipment ID:	P055
Superseded Permit Number:	04-01462
General Permit Category and Type:	Not Applicable

Group Name: Direct Dry Classifier

Emissions Unit ID:	P056
Company Equipment ID:	P056
Superseded Permit Number:	04-01462
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P057
Company Equipment ID:	P057
Superseded Permit Number:	04-01462
General Permit Category and Type:	Not Applicable

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:
 - (1) Standard Term and Condition A.2.a), Severability Clause
 - (2) Standard Term and Condition A.3.c) through A. 3.e) General Requirements
 - (3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements
 - (4) Standard Term and Condition A.9., Reporting Requirements
 - (5) Standard Term and Condition A.10., Applicability
 - (6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install
 - (7) Standard Term and Condition A.14., Public Disclosure
 - (8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
 - (9) Standard Term and Condition A.16., Fees
 - (10) Standard Term and Condition A.17., Permit Transfers

2. Severability Clause

- a) 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.
- b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

3. 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.

Effective Date: To be entered upon final issuance

- 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.

4. Monitoring and Related Record Keeping 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:
 - (1) The date, place (as defined in the permit), and time of sampling or measurements.
 - (2) The date(s) analyses were performed.
 - (3) The company or entity that performed the analyses.
 - (4) The analytical techniques or methods used.
 - (5) The results of such analyses.
 - (6) 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:
 - (1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Toledo Department of Environmental Services.

- (2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Toledo Department of Environmental Services. 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 A.15. below if no deviations occurred during the quarter.
 - (3) 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 Toledo Department of Environmental Services 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.
 - (4) This permit is for an emissions unit located at a Title V facility. 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.

5. 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 Toledo Department of Environmental Services 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).

6. Compliance Requirements

- a) 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.
- b) 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.
- c) 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:

Effective Date: To be entered upon final issuance

- (1) 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.
 - (2) 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.
 - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - (4) 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.
- d) The permittee shall submit progress reports to the Toledo Department of Environmental Services 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:
- (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - (2) 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.

7. Best Available Technology

As specified in OAC Rule 3745-31-05, new sources that must employ Best Available Technology (BAT) shall comply with the Applicable Emission Limitations/Control Measures identified as BAT for each subject emissions unit.

8. 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.

9. 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 Toledo Department of Environmental Services.

- 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 Toledo Department of Environmental Services. 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.)

10. 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).

11. Construction of New Sources(s) and Authorization to Install

- a) 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.
- b) If applicable, authorization to install any new 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 has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. 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.

- c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as "permanently shut down" in Ohio EPA's "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).
- d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

No emissions unit certified by the authorized official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

- e) The permittee shall comply with any residual requirements related to this permit, such as the requirement to submit a deviation report, air fee emission report, or other any reporting required by this permit for the period the operating provisions of this permit were enforceable, or as required by regulation or law. All reports shall be submitted in a form and manner prescribed by the Director. All records relating to this permit must be maintained in accordance with law.

12. Permit-To-Operate Application

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).

13. Construction Compliance Certification

The applicant shall identify the following dates in the online facility profile for each new emissions unit identified in this permit.

- a) Completion of initial installation date shall be entered upon completion of construction and prior to start-up.

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- b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

14. 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.

15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

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.

16. 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.

17. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The new owner must update and submit the ownership information via the "Owner/Contact Change" functionality in Air Services once the transfer is legally completed. The change must be submitted through Air Services within thirty days of the ownership transfer date.

18. 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.

19. 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.

B. Facility-Wide Terms and Conditions

Draft Permit-to-Install

Johns Manville / Plant #01 - wtv1

Permit Number: P0107133

Facility ID: 0448000012

Effective Date: To be entered upon final issuance

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
 - a) None.

C. Emissions Unit Terms and Conditions

Effective Date: To be entered upon final issuance

1. Emissions Unit Group - Direct Dry Chop Dryer: P054, P055.

EU ID	Operations, Property and/or Equipment Description
P054	3.0 mmbtu/hr Direct Dry Chop Dryer-1 w/baghouse control
P055	3.0 mmbtu/hr Direct Dry Chop Dryer-2 w/baghouse control

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001	Nitrogen oxides (NO _x) shall not exceed 0.30 pound per hour and 1.32 tons per year. Carbon monoxide (CO) shall not exceed 0.25 pound per hour and 1.10 tons per year. See b)(2)a., b)(2)b. and b)(2)g.
b.	OAC rule 3745-31-05(D) (PTI 04-01462 issued 5/22/2007)	Particulate emissions (PE) shall not exceed 0.06 pound per ton of glass dried and 0.51 ton per year. Particulate matter emission of less than or equal to 10 microns in diameter (PM ₁₀) shall not exceed 0.06 pound per ton of glass and 0.51 ton per year. Volatile organic compound (VOC) emissions shall not exceed 1.33 pounds per hour and 5.81 tons per year. Sulfur dioxide (SO ₂) emissions shall not exceed 0.6 pound per million standard cubic feet natural gas and 0.01 ton per year. See b)(2)a. See b)(2)c.
	OAC rule 3745-17-07(A)(1)	Visible PE from this emissions unit shall not exceed 20% opacity as a six minute average unless otherwise specified by the rule.
c.	OAC rule 3745-17-11(B)(1)	See b)(2)d.
d.	OAC rule 3745-21-07(B)	See b)(2)d. and b)(2)h.

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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
e.	OAC rule 3745-31-05(A)(3)(b), as effective 12/1/2006	See b)(2)e. and b)(2)f.

(2) Additional Terms and Conditions

- a. These emission limitations were established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limitations.
- b. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1) and OAC rule 3745-31-05(D).
- c. The permittee shall install, calibrate, maintain, and continuously operate a bag leak detection system.
 - i. A triboelectric bag leak detection system shall be installed, operated, adjusted, and maintained in a manner consistent with the U.S. Environmental Protection Agency guidance, "Fabric Filter Bag Leak Detection Guidance" (EPA-454/R-98-015, September 1997). Other bag leak detection systems including, but not limited to, devices using light scattering and other effects, shall be installed, operated, adjusted, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.
 - ii. The bag leak detection system shall be certified by the manufacturer to be capable of detecting PE emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.
 - iii. The bag leak detection system sensor shall produce an output relative particulate emissions.
 - iv. The bag leak detection system shall be equipped with an alarm system that will sound automatically when an increase in relative PE emissions over a preset level is detected and the alarm shall be located such that it can be heard by the appropriate plant personnel.
 - v. The bag leak detection system shall be installed downstream of the baghouse. Where multiple bag leak detection systems are required, the system instrumentation and alarm may be shared among the monitors.
 - vi. Initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time.
 - vii. Following the initial adjustment, the permittee shall not adjust the range, averaging period, alarm setpoints, or alarm delay time except as detailed

in the operations, maintenance and monitoring plan. In no event shall the range be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless a responsible official certifies, by written report, that the baghouse has been inspected and found to be in good operating condition.

- d. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D).
- e. This rule paragraph applies once the U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan (SIP).

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the NO_x, VOC, SO₂ and CO emissions from this air contaminant source since the uncontrolled potential to emit for NO_x, VOC, SO₂ and CO is each less than 10 tons per year.

- f. This rule paragraph applies once the U.S. EPA approves the December 1, 2006 version of the OAC rule 3745-31-05 as part of the SIP.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PE and PM₁₀ emissions from this air contaminant source since the calculated annual emission rate for PE and PM₁₀ is each less than 10 tons per year, taking into account the baghouse required by the operational restriction.

- g. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutant less than ten tons per year. However, that rule revision has not yet been approved by 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 December 1, 2006 version of 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then these emission limits/control measures no longer apply.
- h. On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio.

c) Operational Restrictions

- (1) The permittee shall burn only natural gas in this emissions unit.

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- (2) The permittee shall operate the baghouse whenever this emissions unit is in operation.
 - (3) The permittee shall initiate corrective action within one hour of an alarm from the bag leak detection system and complete corrective actions in a timely manner. Example corrective actions may include:
 - a. inspecting the baghouse for air leaks, torn or broken bags or filter media, or an other conditions that may cause an increase in emission,
 - b. sealing off defective bags or filter media,
 - c. replacing defective bags or filter media, or otherwise repairing the control device,
 - d. sealing off a defective baghouse compartment,
 - e. cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system, and
 - f. shutting down the process producing the particulate emissions.
 - (4) The amount of glass dried in this emissions unit shall not exceed 34,164,000 pounds per year.
- d) **Monitoring and/or Recordkeeping Requirements**
- (1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
 - (2) The permittee shall maintain daily records that document any time periods when the baghouse was not in service when the emissions unit was in operation.
 - (3) The permittee shall maintain records, on a monthly basis, of the throughput of glass dried, in tons, for this emissions unit as a rolling, 12-month summation.
 - (4) The permittee shall maintain records of any bag leak detection system alarms, including the date and time of the alarm, when corrective actions were initiated, the cause of the alarm, an explanation of the corrective action taken, and when the cause of the alarm was corrected.
- e) **Reporting Requirements**
- (1) The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit.
 - (2) The permittee shall notify the Toledo Division of Environmental Services in writing of any daily record showing that the baghouse was not in service when the emission unit was in operation. The notification shall include a copy of such record and shall be sent to the Toledo Division of Environmental Services within 30 days after the event occurs.
 - (3) The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which any bag leak detection system alarms were sounded. The reports

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shall include a summary of the date and time of the alarm(s), when corrective actions were initiated, the cause of the alarm(s), the explanation of the corrective actions taken, and when the cause of the alarm(s) was corrected.

- (4) The permittee shall submit quarterly written reports that identify any exceedances of the rolling, 12-month summation of the glass dried.
- (5) If no exceedances occurred during the quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that period.
- (6) The deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.
- (7) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

f) **Testing Requirements**

- (1) Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:

a. **Emission Limitation:**

Visible Emissions shall not exceed 20% opacity, as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A and the procedures specified in OAC rule 3745-17-03(B)(1).

b. **Emission Limitation:**

1.33 pounds of VOC per hour

Applicable Compliance Method:

This emission limitation was established to reflect the maximum allowable emissions for this emission unit. This limit results from two different processes. This limitation is a combination of the combustion of natural gas and the burn off of the sizing material on the drying glass.

The VOC emissions resulting from the combustion of natural gas was based on emissions factors developed from US EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 5.5 pound of VOC emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 3.0 MMBtu per hour.

The VOC resulting from the burn off of the sizing material is based on multiplying the percentage of VOC content in the sizing mix (0.56%) by the overall moisture

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content of the drying glass which is defined by the sizing material (6.00%) and multiplying this number by the amount of glass dried per hour.

The combination of these two results is the uncontrolled allowable emissions of VOC in this emission unit.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 25 or 25A of 40 CFR Part 60 Appendix A, using the methods and procedures specified in OAC rule 3745-21-10; or other U.S. EPA approved test method, with prior approval of the Ohio EPA.

c. Emission Limitation:

5.81 tons of VOC per year

Applicable Compliance Method:

This emission limitation was established to reflect the maximum allowable emissions for this emission unit. This limit results from two different processes. This limitation is a combination of the combustion of natural gas and the burn off of the sizing material on the drying glass.

The VOC emissions resulting from the combustion of natural gas was based on emissions factors developed from US EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 5.5 pound of VOC emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 3.0 MMBtu per hour and 8,760 hours per year, then divide by 2000 pounds per ton.

The VOC resulting from the burn off of the sizing material is based on multiplying the percentage of VOC content in the sizing mix (0.56%) by the overall moisture content of the drying glass which is defined by the sizing material (6.00%) and multiplying this number by the amount of glass dried per year (34,164,000 pounds per year or 17,082 tons per year).

The combination of these two results is the uncontrolled allowable emissions of VOC in this emission unit.

d. Emission Limitation:

0.6 pound of SO₂ per million standard cubic feet of natural gas.

Applicable Compliance Method:

Compliance may be determined through the emission factor specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1

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through 4 and 6 of 40 CFR Part 60 Appendix A, using the methods and procedures specified in OAC rule 3745-18-04; or other U.S. EPA approved test method, with prior approval from the Ohio EPA.

e. Emission Limitation:

0.01 ton of SO₂ per year.

Applicable Compliance Method:

This emission limitation was developed by a one-time calculation of the potential to emit. The calculation was based on emissions factors developed from US EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 0.6 pound of SO₂ emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 3.0 MMBtu per hour and then multiply by 8,760 hours per year and divide by 2000 pounds per ton.

f. Emission Limitation:

0.06 pound of PE per ton of glass dried

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60 Appendix A, using the methods and procedures specified in OAC rule 3745-17-03(B)(10); or other U.S. EPA approved test method, with prior approval from the Ohio EPA.

g. Emission Limitation:

0.51 ton of PE per year

Applicable Compliance Method:

This emission limitation was established to reflect the maximum allowable emissions for this emissions unit. Compliance may be demonstrated by multiplying the short term emissions rate of 0.06 pound of PE per ton of glass dried by maximum amount of glass dried per year (34,164,000 pounds per year or 17,082 tons per year) and divide by 2,000 pounds per ton.

h. Emission Limitation:

0.06 pound of PM₁₀ per ton of dried glass.

Applicable Compliance Method:

The permittee demonstrated compliance with this limitation with a stack test derived emission factor (0.06 pound PM₁₀ per ton of glass dried (7/99)).

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If required, the permittee shall demonstrate compliance through emission testing performed in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M; or other U.S. EPA approved test method, with prior approval from the Ohio EPA.

i. Emission Limitation:

0.51 ton of PM₁₀ per year

Applicable Compliance Method:

This emission limitation was established to reflect the maximum allowable emissions for this emissions unit. Compliance may be demonstrated by multiplying the short term emissions rate of 0.06 pound of PM₁₀ per ton of glass dried by maximum amount of glass dried per year (34,164,000 pounds per year or 17,082 tons per year) and divide by 2,000 pounds per ton.

j. Emission Limitation:

0.25 pound of CO per hour

Applicable Compliance Method:

This emission limitation was developed by a one-time calculation of the potential to emit. The calculation was based on emissions factors developed by US EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1 dated 7/98, as follows: divide the emission factor of 84 pounds of CO emissions per million standard cubic feet (MMscf) by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 3.0 MMBtu per hour.

k. Emission Limitation:

1.10 tons of CO per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated by multiplying the short term emissions rate of 0.25 pound of CO per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

l. Emission Limitation:

0.30 pound of NO_x per hour

Applicable Compliance Method:

This emission limitation was developed by a one-time calculation of the potential to emit. The calculation was based on emissions factors developed by US EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1 dated 7/98, as follows: divide the emission factor of 100

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pounds of NO_x emissions per million standard cubic feet (MMscf) by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 3.0 MMBtu per hour.

m. Emission Limitation:

1.32 tons of NO_x per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated by multiplying the short term emissions rate of 0.30 pound of NO_x per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

g) Miscellaneous Requirements

(1) None.

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2. Emissions Unit Group - Direct Dry Classifier: P056, P057.

EU ID	Operations, Property and/or Equipment Description
P056	Direct Dry Classifier-1 w/baghouse control
P057	Direct Dry Classifier-2 w/baghouse control

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001	See b)(2)a. and b)(2)e.
b.	OAC rule 3745-31-05(D) (PTI 04-01462 issued 5/22/2007)	Particulate emissions (PE) shall not exceed 0.078 pound per ton of glass dried and 0.67 ton per year. Particulate matter emission of less than or equal to 10 microns in diameter (PM ₁₀) shall not exceed 0.078 pound per ton of glass and 0.67 tons per year. See b)(2)b.
c.	OAC rule 3745-17-07(A)(1)	Visible PE from this emissions unit shall not exceed 20% opacity as a six minute average unless otherwise specified by the rules.
d.	OAC rule 3745-17-11(B)(1)	See b)(2)c.
e.	OAC rule 3745-31-05(A)(3)b, as effective 12/1/2006	See b)(2)d.

(2) Additional Terms and Conditions

a. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1) and OAC rule 3745-31-05(D).

b. The permittee shall install, calibrate, maintain, and continuously operate a bag leak detection system.

i. A triboelectric bag leak detection system shall be installed, operated, adjusted, and maintained in a manner consistent with the U.S.

Environmental Protection Agency guidance, "Fabric Filter Bag Leak Detection Guidance" (EPA-454/R-98-015, September 1997). Other bag leak detection systems including, but not limited to, devices using light scattering and other effects, shall be installed, operated, adjusted, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.

- ii. The bag leak detection system shall be certified by the manufacturer to be capable of detecting PE emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.
 - iii. The bag leak detection system sensor shall produce an output relative particulate emissions.
 - iv. The bag leak detection system shall be equipped with an alarm system that will sound automatically when an increase in relative PE emissions over a preset level is detected and the alarm shall be located such that it can be heard by the appropriate plant personnel.
 - v. The bag leak detection system shall be installed downstream of the baghouse. Where multiple bag leak detection systems are required, the system instrumentation and alarm may be shared among the monitors.
 - vi. Initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time.
 - vii. Following the initial adjustment, the permittee shall not adjust the range, averaging period, alarm setpoints, or alarm delay time except as detailed in the operations, maintenance and monitoring plan. In no event shall the range be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless a responsible official certifies, by written report, that the baghouse has been inspected and found to be in good operating condition.
- c. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D).
 - d. This rule paragraph applies once the U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan (SIP).

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PE and PM₁₀ emissions from this air contaminant source since the calculated annual emission rate for PE and PM₁₀ is each less than 10 tons/year, taking into account the baghouse required by the operational restriction.

- e. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05

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was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutant less than ten tons per year. However, that rule revision has not yet been approved by 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 December 1, 2006 version of 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then these emission limits/control measures no longer apply.

c) Operational Restrictions

- (1) The permittee shall operate the baghouse whenever this emissions unit is in operation.
- (2) The permittee shall initiate corrective action within one hour of an alarm from the bag leak detection system and complete corrective actions in a timely manner. Example corrective actions may include:
 - a. inspecting the baghouse for air leaks, torn or broken bags or filter media, or an other conditions that may cause an increase in emission,
 - b. sealing off defective bags or filter media,
 - c. replacing defective bags or filter media, or otherwise repairing the control device,
 - d. sealing off a defective baghouse compartment,
 - e. cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system, and
 - f. shutting down the process producing the particulate emissions.
- (3) The amount of glass dried in this emissions unit shall not exceed 34,164,000 pounds per year.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain daily records that document any time periods when the baghouse was not in service when the emissions unit was in operation.
- (2) The permittee shall maintain records, on a monthly basis, of the throughput of glass dried, in tons, for this emissions unit as a rolling, 12-month summation.
- (3) The permittee shall maintain records of any bag leak detection system alarms, including the date and time of the alarm, when corrective actions were initiated, the cause of the alarm, an explanation of the corrective action taken, and when the cause of the alarm was corrected.

e) Reporting Requirements

- (1) The permittee shall notify the Toledo Division of Environmental Services in writing of any daily record showing that the baghouse was not in service when the emission unit was in

operation. The notification shall include a copy of such record and shall be sent to the Toledo Division of Environmental Services within 30 days after the event occurs.

- (2) The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which any bag leak detection system alarms were sounded. The reports shall include a summary of the date and time of the alarm(s), when corrective actions were initiated, the cause of the alarm(s), the explanation of the corrective actions taken, and when the cause of the alarm(s) was corrected.
- (3) The permittee shall submit quarterly written reports that identify any exceedances of the rolling, 12-month summation of the glass dried.
- (4) If no exceedances occurred during the quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that period.
- (5) The deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.
- (6) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

- (1) Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:

a. Emission Limitation:

Visible Emissions shall not exceed 20% opacity, as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A and the procedures specified in OAC rule 3745-17-03(B)(1).

b. Emission Limitation:

0.078 pound of PE per ton of glass dried

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60 Appendix A, using the methods and procedures specified in OAC rule 3745-17-03(B)(10); or other U.S. EPA approved test method, with prior approval from the Ohio EPA.

c. Emission Limitation:

0.67 ton of PE per year

Applicable Compliance Method:

This emission limitation was established to reflect the maximum allowable emissions for this emissions unit. Compliance may be demonstrated by multiplying the short term emissions rate of 0.078 pound of PE per ton of glass dried by maximum amount of glass dried per year (34,164,000 pounds per year or 17,082 tons per year) and divide by 2,000 pounds per ton.

d. Emission Limitation:

0.078 pound of PM₁₀ per ton of glass dried

Applicable Compliance Method:

The permittee demonstrated compliance with this limitation with a stack test derived emission factor (0.078 pound PM₁₀ per ton of glass dried (6/2001)).

If required, the permittee shall demonstrate compliance through emission testing performed in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M; or other U.S. EPA approved test method, with prior approval from the Ohio EPA.

e. Emission Limitation:

0.67 ton of PM₁₀ per year

Applicable Compliance Method:

This emission limitation was established to reflect the maximum allowable emissions for this emissions unit. Compliance may be demonstrated by multiplying the short term emissions rate of 0.078 pound of PM₁₀ per ton of glass dried by maximum amount of glass dried per year (34,164,000 pounds per year or 17,082 tons per year) and divide by 2,000 pounds per ton.

g) Miscellaneous Requirements

(1) None.

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3. P058, Finishing Gypsum Dryer – 1 with baghouse control

Operations, Property and/or Equipment Description:

2.0 MMBtu per hour Finishing Gypsum Dryer-1 with baghouse control

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001	Nitrogen oxides (NO _x) shall not exceed 0.20 pound per hour and 0.88 ton per year.
		Carbon monoxide (CO) shall not exceed 0.17 pound per hour and 0.74 ton per year.
		See b)(2)a., b)(2)b. and b)(2)g.
b.	OAC rule 3745-31-05(D) (PTI 04-01462 issued 5/22/2007)	Particulate emissions (PE) shall not exceed 0.000014 pound per ton of glass dried and 0.0002 ton per year.
		Particulate matter emission of less than or equal to 10 microns in diameter (PM ₁₀) shall not exceed 0.000014 pound per ton of glass dried and 0.0002 ton per year.
		Volatile organic compound (VOC) emissions shall not exceed 1.76 pounds per hour and 7.70 tons per year.
		Sulfur dioxide (SO ₂) emissions shall not exceed 0.6 pound per million standard cubic feet of natural gas and 0.01 ton per year. See b)(2)a.
		See b)(2)c.
c.	OAC rule 3745-17-07(A)(1)	Visible PE from this emissions unit shall not exceed 20% opacity as a six minute average unless otherwise specified by the rules.
d.	OAC rule 3745-17-11(B)(1)	See b)(2)d.
e.	OAC rule 3745-21-07(B)	See b)(2)d. and b)(2)h.
f.	OAC rule 3745-31-05(A)(3)(b), as	See b)(2)e. and b)(2)f.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	effective 12/1/2006	

(2) Additional Terms and Conditions

- a. These emission limitations were established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limitations.
- b. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1) and OAC rule 3745-31-05(D).
- c. The permittee shall install, calibrate, maintain, and continuously operate a bag leak detection system.
 - i. A triboelectric bag leak detection system shall be installed, operated, adjusted, and maintained in a manner consistent with the U.S. Environmental Protection Agency guidance, "Fabric Filter Bag Leak Detection Guidance" (EPA-454/R-98-015, September 1997). Other bag leak detection systems including, but not limited to, devices using light scattering and other effects, shall be installed, operated, adjusted, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.
 - ii. The bag leak detection system shall be certified by the manufacturer to be capable of detecting PE emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.
 - iii. The bag leak detection system sensor shall produce an output relative particulate emissions.
 - iv. The bag leak detection system shall be equipped with an alarm system that will sound automatically when an increase in relative PE emissions over a preset level is detected and the alarm shall be located such that it can be heard by the appropriate plant personnel.
 - v. The bag leak detection system shall be installed downstream of the baghouse. Where multiple bag leak detection systems are required, the system instrumentation and alarm may be shared among the monitors.
 - vi. Initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time.
 - vii. Following the initial adjustment, the permittee shall not adjust the range, averaging period, alarm setpoints, or alarm delay time except as detailed in the operations, maintenance and monitoring plan. In no event shall the

range be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless a responsible official certifies, by written report, that the baghouse has been inspected and found to be in good operating condition.

- d. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D).
- e. This rule paragraph applies once the U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan (SIP).

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the NO_x, SO₂, VOC and CO emissions from this air contaminant source since the uncontrolled potential to emit for NO_x, SO₂, VOC and CO is each less than 10 tons/year.

- f. This rule paragraph applies once the U.S. EPA approves the December 1, 2006 version of the OAC rule 3745-31-05 as part of the SIP.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PE and PM₁₀ emissions from this air contaminant source since the calculated annual emission rate for PE and PM₁₀ is each less than 10 tons/year, taking into account the baghouse required by the operational restriction.

- g. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutant less than ten tons per year. However, that rule revision has not yet been approved by 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 December 1, 2006 version of 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then these emission limits/control measures no longer apply.
- h. On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio.

c) Operational Restrictions

- (1) The permittee shall burn only natural gas in this emissions unit.
- (2) The permittee shall operate the baghouse whenever this emissions unit is in operation.

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- (3) The permittee shall initiate corrective action within one hour of an alarm from the bag leak detection system and complete corrective actions in a timely manner. Example corrective actions may include:
 - a. inspecting the baghouse for air leaks, torn or broken bags or filter media, or an other conditions that may cause an increase in emission,
 - b. sealing off defective bags or filter media,
 - c. replacing defective bags or filter media, or otherwise repairing the control device,
 - d. sealing off a defective baghouse compartment,
 - e. cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system, and
 - f. shutting down the process producing the particulate emissions.
 - (4) The amount of glass dried in this emissions unit shall not exceed 45,552,000 pounds per year.
- d) **Monitoring and/or Recordkeeping Requirements**
- (1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
 - (2) The permittee shall maintain daily records that document any time periods when the baghouse was not in service when the emissions unit was in operation.
 - (3) The permittee shall maintain records, on a monthly basis, of the throughput of glass dried, in tons, for this emissions unit as a rolling, 12-month summation.
 - (4) The permittee shall maintain records of any bag leak detection system alarms, including the date and time of the alarm, when corrective actions were initiated, the cause of the alarm, an explanation of the corrective action taken, and when the cause of the alarm was corrected.
- e) **Reporting Requirements**
- (1) The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit.
 - (2) The permittee shall notify the Toledo Division of Environmental Services in writing of any daily record showing that the baghouse was not in service when the emission unit was in operation. The notification shall include a copy of such record and shall be sent to the Toledo Division of Environmental Services within 30 days after the event occurs.
 - (3) The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which any bag leak detection system alarms were sounded. The reports shall include a summary of the date and time of the alarm(s), when corrective actions

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were initiated, the cause of the alarm(s), the explanation of the corrective actions taken, and when the cause of the alarm(s) was corrected.

- (4) The permittee shall submit quarterly written reports that identify any exceedances of the rolling, 12-month summation of the glass dried.
- (5) If no exceedances occurred during the quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that period.
- (6) The deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.
- (7) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

- (1) Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:

- a. Emission Limitation:

Visible Emissions shall not exceed 20% opacity, as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A and the procedures specified in OAC rule 3745-17-03(B)(1).

- b. Emission Limitation:

0.20 pound of NO_x per hour

Applicable Compliance Method:

This emission limitation was developed by a one-time calculation of the potential to emit. The calculation was based on emissions factors developed by US EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1 dated 7/98, as follows: divide the emission factor of 100 pounds of NO_x emissions per million standard cubic feet (MMscf) by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 2.0 MMBtu per hour.

- c. Emission Limitation:

0.88 ton of NO_x per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated by multiplying the short term emissions rate of 0.20 pound of NO_x per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

d. Emission Limitation:

0.17 pound of CO per hour

Applicable Compliance Method:

This emission limitation was developed by a one-time calculation of the potential to emit. The calculation was based on emissions factors developed by US EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1 dated 7/98, as follows: divide the emission factor of 84 pounds of CO emissions per million standard cubic feet (MMscf) by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 2.0 MMBtu per hour.

e. Emission Limitation:

0.74 ton of CO per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated by multiplying the short term emissions rate of 0.17 pound of CO per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

f. Emission Limitation:

0.000014 pound of PE per ton of glass dried

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60 Appendix A, using the methods and procedures specified in OAC rule 3745-17-03(B)(10); or other U.S. EPA approved test method, with prior approval from the Ohio EPA.

g. Emission Limitation:

0.0002 ton of PE per year

Applicable Compliance Method:

This emission limitation was established to reflect the maximum allowable emissions for this emissions unit. Compliance may be demonstrated by

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multiplying the short term emissions rate of 0.000014 pound of PE per ton of glass dried by maximum amount of glass dried per year (45,552,000 pounds per year or 22,776 tons per year) and divide by 2,000 pounds per ton.

h. Emission Limitation:

0.000014 pound of PM₁₀ per ton of dried glass

Applicable Compliance Method:

The permittee demonstrated compliance with this limitation with a stack test derived emission factor (7.11×10^{-9} pound PM₁₀ per pound of glass dried (8/2005)).

If required, the permittee shall demonstrate compliance through emission testing performed in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M; or other U.S. EPA approved test method, with prior approval from the Ohio EPA.

i. Emission Limitation:

0.0002 ton of PM₁₀ per year

Applicable Compliance Method:

This emission limitation was established to reflect the maximum allowable emissions for this emissions unit. Compliance may be demonstrated by multiplying the short term emissions rate of 0.000014 pound of PM₁₀ per ton of glass dried by maximum amount of glass dried per year (45,552,000 pounds per year or 22,776 tons per year) and divide by 2,000 pounds per ton.

j. Emission Limitation:

1.76 pounds of VOC per hour

Applicable Compliance Method:

This emission limitation was established to reflect the maximum allowable emissions for this emission unit. This limit results from two different processes. This limitation is a combination of the combustion of natural gas and from the burn off of the sizing material on the drying glass.

The VOC resulting from the combustion of natural gas was based on emissions factors developed from US EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 5.5 pound of VOC emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 2.0 MMBtu per hour.

The VOC resulting from the burn off of the sizing material is based on multiplying the percentage of VOC content in the sizing mix (0.56%) by the overall moisture

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content of the drying glass which is defined by the sizing material (6.00%) and multiplying this number by the amount of glass dried per hour.

The combination of these two results is the uncontrolled maximum allowable emissions of VOC in this emission unit.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 25 or 25A of 40 CFR Part 60 Appendix A, using the methods and procedures specified in OAC rule 3745-21-10; or other U.S. EPA approved test method, with prior approval of the Ohio EPA.

k. Emission Limitation:

7.70 tons of VOC per year

Applicable Compliance Method:

This emission limitation was established to reflect the maximum allowable emissions for this emission unit. This limit results from two different processes. This limitation is a combination of the combustion of natural gas and from the burn off of the sizing material on the drying glass.

The VOC resulting from the combustion of natural gas was based on emissions factors developed from US EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 5.5 pound of VOC emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 2.0 MMBtu per hour. Then multiply by 8,760 hours per year and divide by 2,000 pounds per ton.

The VOC resulting from the burn off of the sizing material is based on multiplying the percentage of VOC content in the sizing mix (0.56%) by the overall moisture content of the drying glass which is defined by the sizing material (6.00%) and multiplying this number by the amount of glass dried per year (45,552,000 pounds per year or 22,776 tons per year).

The combination of these two results is the uncontrolled maximum allowable emissions of VOC in this emission unit.

l. Emission Limitation:

0.6 pound of SO₂ per million standard cubic feet of natural gas

Applicable Compliance Method:

Compliance may be demonstrated through the emission factor specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1

Draft Permit-to-Install

Johns Manville / Plant #01 - wtv1

Permit Number: P0107133

Facility ID: 0448000012

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through 4 and 6 of 40 CFR Part 60 Appendix A, using the methods and procedures specified in OAC rule 3745-18-04; or other U.S. EPA approved test method, with prior approval from the Ohio EPA.

m. Emission Limitation:

0.01 ton of SO₂ per year

Applicable Compliance Method:

This emission limitation was developed by a one-time calculation of the potential to emit. The calculation was based on emissions factors developed from US EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 0.6 pound of SO₂ emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 2.0 MMBtu per hour and then multiply by 8,760 hours per year and divide by 2000 pounds per ton.

g) Miscellaneous Requirements

(1) None.