

Synthetic Minor Determination and/or Netting Determination

Permit To Install: "04-01462"

A. Source Description

Johns Manville is adding a Finishing Gypsum Dryer (P058), two Direct Dry Chop Dryers (P054,P055), two Direct Dry Classifiers (P056, P057)-(one for each Direct Dry Chop Dryer), one Dielectric Oven (P059), and modifying the existing Dielectric Oven (P033) to the Waterville Plant (Plant 1). These sources are provided glass by furnace 9211 (P001). There will not be any modifications to P001 and will not result in an increase of actual emissions. These emission units will not result in an increase in production of P001 but will be redirecting of the current production of P001 from other emission units that use the end product of P001. The Gypsum Dryer, two Direct Dry Chop Dryers and two Direct Dry Classifies will be controlled for particulate matter with baghouses. The two Dielectric Ovens will not be controlled. The nitrogen oxides (NOx), carbon monoxide (CO), sulfur dioxide (SO2), particulate emissions (PE and PM10), and volatile organic compounds (VOC) emissions will be maintained below PSD major modification thresholds.

B. Facility Emissions and Attainment Status

None of the emissions from these sources are greater than 10 tons per year and are therefore not subject to OAC 3745-31-05(A)(3) per SB 265.

Applicable Rules:

- OAC rule 3745-31-02(A) owner or operator may voluntarily limit emissions from air contaminant source
- OAC rule 3745-17-07(A)(1) 20% opacity as a 6-minute average
- OAC rule 3745-17-11(B)(1) allowable rate of PE admissions based on process weight at maximum capacity
- OAC rule 3745-18-06(E) allowable emission rate of sulfur dioxide per hour for any process equipment
- OAC rule 3745-21-07(B) best current technology
- OAC rule 3745-21-08(B) compliance with BAT for CO emissions
- OAC rule 3745-23-06(B) compliance with BAT for NOx emissions
- ORC 3704.03(T)(4) This is a new rule that became effective 8/3/2006 that exempts from BAT requirements new or modified sources that emit less than 10 tons per year of an air contaminant

C. Source Emissions

OEPA Source #	Source Description	PE	PM10	(TPY)			CO	VOC	F
P033	Dielectric Drying Oven-1							4.13	
P054	9211 Direct Dry Chop Dryer-1	0.51	0.51	0.01	1.32	1.10	5.81		
P055	9211 Direct Dry Chop Dryer-2	0.51	0.51	0.01	1.32	1.10	5.81		
P056	9211 Direct Dry Classifier-1	0.67	0.67						
P057	9211 Direct Dry Classifier-2	0.67	0.67						
P058	9211 Finishing Gypsum Dryer-1		0.0007	0.0007	0.0053	0.88	0.74	7.70	
P059	Dielectric Drying Oven-2						4.13		
Total		2.36	2.36	0.03	3.52	2.94	27.58	0	
PSD Significant Emission Rates			15	15	40	40	100	40	

P033/P059 Dielectric Drying Oven-1 & 2 (each) Proposed Production Rate = 21,000,000 lbs glass/yr = 2,397 lbs/hr
 based on 8760 hrs/yr

VOC (sizing burn-off) = EF x Proposed Production Rate = 0.94 lbs/hr = 4.13 tons/yr
 EF= 0.000393 lb VOC/lb glass (stack test 2/06)

P054/P055 9211 Direct Dry Chop Dryer-1 & 2 (each) Proposed Production Rate = 34,164,000 lbs glass/yr = 3,900 lbs/hr
 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 Proposed 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)

NOx = EF x Burner = 0.30 lb/hr = 1.32 tons/yr

EF = 100 lb NOx/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 Proposed Production Rate + EF2 x Burner = 1.33 lb/hr = 5.81 tons/yr

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

Vm = VOC content of sizing mix (0.56%)

Mp = 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) Proposed Production Rate = 34,164,000 lb glass/yr = 3,900 lbs/hr

PE/PM10 = EF x Proposed 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

lbs/hr

Proposed Production Rate = 45,552,000 lb glass/yr = 5,200

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 Burner x (1-CE) = 0.0002 lb/hr = 0.0007 ton/yr

EF = 7.6 lb PM10/MMCF (AP-42, Fifth Edition, Table 1.4-2 dated 7/98)

CE = Control Efficiency of Baghouse (99%)

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)

NOx = EF x Burner = 0.20 lb/hr = 0.88 tons/yr

EF = 100 lb NOx/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) = EF1 x Proposed Production Rate + EF2 x Burner = 1.76 lb/hr = 7.70 tons/yr

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

Vm = VOC content of sizing mix (0.56%)

Mp = overall moisture of product (6%)

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

D. Conclusion

All of the air contaminants from these sources are below the 10 tons/yr limit and are therefore not subject to OAC 3745-31-05(A)(3) (BAT) per SB 265. These sources are still subject to the State Implementation Plan (SIP) requirements. The total increase in admissions from these air contaminant sources are below the PSD significant levels for a major modification.



State of Ohio Environmental Protection Agency

**RE: DRAFT PERMIT TO INSTALL
LUCAS COUNTY**

CERTIFIED MAIL

Street Address:

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

Mailing Address:

Lazarus Gov.
Center

Application No: 04-01462

Fac ID: 0448000012

DATE: 4/12/2007

Johns Manville Plant 1
Ron Hudson
6050 River Rd
Waterville, OH 43566

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43216-1049.

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$3750** will be due. Please do not submit any payment now.

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

Sincerely,

Michael W. Ahern

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

CC: USEPA

TDES

Toledo Metro Area Coun of Govts

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LUCAS COUNTY

PUBLIC NOTICE

**ISSUANCE OF DRAFT PERMIT TO INSTALL 04-01462 FOR AN AIR CONTAMINANT SOURCE FOR
Johns Manville Plant 1**

On 4/12/2007 the Director of the Ohio Environmental Protection Agency issued a draft action of a Permit To Install an air contaminant source for **Johns Manville Plant 1**, located at **6050 River Rd, Waterville, Ohio**.

Installation of the air contaminant source identified below may proceed upon final issuance of Permit To Install 04-01462:

To add gypsum dryer, two direct dry chop dryers, two direct dry classifiers, one dielectric dryer and modify an existing dielectric dryer.

Comments concerning this draft action, or a request for a public meeting, must be sent in writing to the address identified below no later than thirty (30) days from the date this notice is published. All inquiries concerning this draft action may be directed to the contact identified below.

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



**Permit To Install
Terms and Conditions**

**Issue Date: To be entered upon final issuance
Effective Date: To be entered upon final issuance**

DRAFT PERMIT TO INSTALL 04-01462

Application Number: 04-01462
Facility ID: 0448000012
Permit Fee: **To be entered upon final issuance**
Name of Facility: Johns Manville Plant 1
Person to Contact: Ron Hudson
Address: 6050 River Rd
Waterville, OH 43566

Location of proposed air contaminant source(s) [emissions unit(s)]:

**6050 River Rd
Waterville, Ohio**

Description of proposed emissions unit(s):

To add gypsum dryer, two direct dry chop dryers, two direct dry classifiers, one dielectric dryer and modify an existing dielectric dryer.

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

Chris Korleski
Director

Johns Manville Plant 1

Facility ID: 0448000012

PTI Application: 04-01462

Issued: To be entered upon final issuance

Part I - GENERAL TERMS AND CONDITIONS

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

1. Monitoring and Related Recordkeeping and Reporting Requirements

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

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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,

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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.

Johns Manville Plant 1**Facility ID: 0448000012****PTI Application: 04-01462****Issued: To be entered upon final issuance****8. Federal and State Enforceability**

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

9. Compliance Requirements

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of

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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.

12. Air Pollution Nuisance

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

13. Permit-To-Install

Johns Manville Plant 1

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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.

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

1. Compliance Requirements

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

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

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

3. Permit Transfers

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

4. Authorization To Install or Modify

If applicable, authorization to install or modify any new or existing emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of

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

5. Construction of New Sources(s)

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

6. Public Disclosure

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

7. Applicability

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

8. Construction Compliance Certification

If applicable, the applicant shall provide Ohio EPA with a written certification (see enclosed form if applicable) that the facility has been constructed in accordance with the permit-to-install application and the terms and conditions of the permit-to-install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

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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.

Johns Manville Plant 1**Facility ID: 0448000012****PTI Application: 04-01462****Issued: To be entered upon final issuance****C. Permit-To-Install Summary of Allowable Emissions**

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

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

<u>Pollutant</u>	<u>Tons Per Year</u>
PE	2.36
PM10	2.36
SO2	0.03
NOx	3.52
CO	2.94
VOC	27.58

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Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

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

None

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

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P033) - Dielectric drying oven - modification

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	VOC emissions shall not exceed 0.786 pound VOC per ton glass dried and 4.13 tons VOC per year. See section A.I.2.a.
OAC rule 3745-21-07(B)	See section A.I.2.b.
ORC 3704.03(T)(4)	See section A.I.2.c.

2. Additional Terms and Conditions

- 2.a The short term pound per ton and annual emission limitations were established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop monitoring, record keeping and or reporting requirements to ensure compliance with these limitations.
- 2.b The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(C).
- 2.c The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the uncontrolled VOC emissions from this air contaminant source since the potential to emit for VOC is less than ten tons per year.

II. Operational Restrictions

1. The amount of glass dried in emissions unit P033 shall not exceed 21,000,000 pounds per year.

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

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

- a. Emission Limitation:

0.786 pound VOC per ton glass dried

Applicable Compliance Method:

This calculation was based upon the most recent stack test derived emission factor (0.000393 pounds of VOC per pound of glass dried (2/06)) multiplied by 2000 pounds per ton.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 25 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 methods, with prior approval from the Ohio EPA.

- b. Emission Limitation:

4.13 tons of VOC per year

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the 12-month summation of glass dried, in pounds, (21,000,000 pounds) by the most recent stack test derived emission factor (0.000393 pounds of VOC per pound of glass dried (2/06)) and dividing by 2000 pounds per ton.

VI. Miscellaneous Requirements

1. The terms and conditions contained in this PTI supercede those contained in PTI 04-01345 for emissions unit P033.

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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.

Operations, Property, and/or Equipment - (P033) - Dielectric drying oven - modification

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

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

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P054) - 3.0 MMBtu/hr Direct Dry Chop Dryer-1 w/baghouse control

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	<p>Both Particulate Emissions (PE) and PM10 emissions shall be less than 0.06 pounds per ton of glass dried and 0.51 tons per year each. See sections A.I.2.a and A.I.2.f.</p> <p>Volatile Organic Compound (VOC) emissions shall not exceed 0.68 lb per ton of glass dried and 5.81 tons per year. See section A.I.2.e.</p> <p>Sulfur Dioxide (SO₂) emissions shall not exceed 0.6 pound per million standard cubic feet natural gas and 0.01 ton per year. See section A.I.2.e.</p>
OAC rule 3745-17-07(A)(1)	Visible Emissions (VE) from this emissions unit shall not exceed 20% opacity as a six minute average.
OAC rule 3745-17-11(B)(1)	PE shall not exceed 6.41 pounds per hour.
OAC rule 3745-18-06(E)	See section A.I.2.d.
OAC rule 3745-21-07(B)	See section A.I.2.d.
OAC rule 3745-21-08(B)	See sections A.I.2.b and A.I.2.c.
ORC 3704.03(T)(4)	See section A.I.2.c.

2. Additional Terms and Conditions

- 2.a Permit to install 04-01462 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment) as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule

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3745-31-05(A)(3):

- a. The use of a baghouse filter system, whenever this air contaminant source is in operation, with a capture efficiency of 100% and a minimum control efficiency of 99%, by weight of PE and PM10.
- 2.b** 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 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.c** The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the uncontrolled VOC, SO₂, NO_x, and CO emissions from this air contaminant source since the potential to emit for VOC, SO₂, NO_x, and CO is less than 10 tons per year.
 - 2.d** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(C).
 - 2.e** The short term pound per ton or pound per million cubic feet and annual emissions limitations were established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop monitoring, record keeping and/or reporting requirements to ensure compliance with these limitations.
 - 2.f** 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.

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- 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.

II. Operational Restrictions

- 1. The permittee shall burn only natural gas in this emissions unit.
- 2. The permittee shall initiate corrective action within one hour of an alarm from a bag leak detection system and complete corrective actions in a timely manner. Example corrective actions may include:
 - i. inspecting the baghouse for air leaks, torn or broken bags or filter media, or an other conditions that may cause an increase in emission,
 - ii. sealing off defective bags or filter media,
 - iii. replacing defective bags or filter media, or otherwise repairing the control device,
 - iv. sealing off a defective baghouse compartment,

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- v. cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system, and
 - vi. shutting down the process producing the particulate emissions.
3. The amount of glass dried in emissions unit P054 shall not exceed 34,164,000 pounds per year.

III. 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 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 actions taken, and when the cause of the alarm was corrected.

IV. 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 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. If no deviations occurred during the quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that period.
4. The deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.

V. Testing Requirements

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

1. Emission Limitation:

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

Applicable Compliance Method:

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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).

2. Emission Limitation:

0.68 pounds of VOC per ton of glass dried

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit 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 3 MMBtu per hour and then divide by the maximum pounds of glass dried per hour (5,200 pounds/hour) and multiply 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 2000 pounds per ton.

The combination of these two results is the uncontrolled potential to emit 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 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.

3. Emission Limitation:

5.81 tons of VOC per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emission unit. Compliance is demonstrated by multiplying the short term emission rate of 0.68 pounds of VOC per ton of glass dried by 17,082 tons of glass dried per year and dividing by 2,000 pounds per ton.

4. 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 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.

5. 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 MMBtu per hour and then multiply by 8,760 hours per year and divide by 2000 pounds per ton.

6. Emission Limitation:

6.41 pounds of PE per hour

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

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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.

7. Emission Limitation:

0.06 pounds of PE or PM10 per ton of dried glass.

Applicable Compliance Method:

The permittee shall demonstrate compliance with the annual allowable limitations with the most recent stack test derived emission factor (0.06 pound PM10 per ton of glass dried (7/99)).

If required, the permittee shall demonstrate compliance with the stack derived emission factor 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.

8. Emission Limitation:

PM10 shall be less than 0.51 tons per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emission unit. Compliance may be demonstrated through calculations performed as follows: multiply the most recent stack test derived emission factor (0.06 pound PM10 per ton of glass dried (7/99)) by the tons of glass dried per year (17,082 tons/year) and divide by 2000 pounds per ton.

9. Emission Limitation:

PE shall be less than 0.51 tons per year.

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

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the Ohio EPA. The results of the emissions testing shall be used to determine the potential to emit (PTE) on an annual basis (i.e. 8760 hours per year or 365 days per year) for this air contaminant source.

10. Emission Limitation:

NOx emissions shall be less than 10 tons 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 1.4-1 dated 7/98, as follows: divide the emission factor of 100 pounds of NOx 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 MMBtu per hour and then multiply by 8,760 hours per year and divide by 2000 pounds per ton.

11. Emission Limitation:

CO emissions shall be less than 10 tons 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 1.4-1 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 MMBtu per hour and then multiply by 8,760 hours per year and divide by 2000 pounds per ton.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section**I. Applicable Emissions Limitations and/or Control Requirements**

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

Operations, Property, and/or Equipment - (P054) - 3.0 MMBtu/hr Direct Dry Chop Dryer-1 w/baghouse control

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

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

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P055) - 3.0 MMBtu/hr Direct Dry Chop Dryer-2 w/baghouse control

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-02(A)	Both Particulate Emissions (PE) and PM10 emissions shall be less than 0.06 pound per ton of glass dried and 0.51 ton per year each. See section A.I.2.a and A.I.2.f. Volatile Organic Compound (VOC) emissions shall not exceed 0.68 lb per ton of glass dried and 5.81 tons per year. See section A.I.2.e. 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 section A.I.2.e.
OAC rule 3745-17-07(A)(1)	Visible Emissions (VE) from this emissions unit shall not exceed 20% opacity as a six minute average.
OAC rule 3745-17-11(B)(1)	PE shall not exceed 6.41 pounds per hour.
OAC rule 3745-18-06(E)	See section A.I.2.d.
OAC rule 3745-21-07(B)	See section A.I.2.d.
OAC rule 3745-21-08(B)	See section A.I.2.b and A.I.2.c.
ORC 3704.03(T)(4)	See section A.I.2.c.

2. Additional Terms and Conditions

- 2.a Permit to install 04-01462 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment) as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3):

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- a. The use of a baghouse filter system, whenever this air contaminant source is in operation, with a capture efficiency of 100% and a minimum control efficiency of 99%, by weight of PE and PM10.
- 2.b** 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 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.c** The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the uncontrolled VOC, SO₂, NO_x, and CO emissions from this air contaminant source since the potential to emit for VOC, SO₂, NO_x, and CO is less than 10 tons per year.
 - 2.d** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(C).
 - 2.e** The short term pound per ton or pound per million cubic feet and annual emissions limitations were established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop monitoring, record keeping and/or reporting requirements to ensure compliance with these limitations.
 - 2.f** 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.

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- 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 set points, 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.

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.
2. The permittee shall initiate corrective action within one hour of an alarm from a bag leak detection system and complete corrective actions in a timely manner. Example corrective actions may include:
 - i. inspecting the baghouse for air leaks, torn or broken bags or filter media, or an other conditions that may cause an increase in emission,
 - ii. sealing off defective bags or filter media,
 - iii. replacing defective bags or filter media, or otherwise repairing the control device,
 - iv. sealing off a defective baghouse compartment,
 - v. cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system, and
 - vi. shutting down the process producing the particulate emissions.
3. The amount of glass dried in emissions unit P055 shall not exceed 34,164,000 pounds

per year.

III. 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 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 actions taken, and when the cause of the alarm was corrected.

IV. 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 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. If no deviations occurred during the quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that period.
4. The deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.

V. Testing Requirements

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

1. Emission Limitation:

VE 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).

2. Emission Limitation:

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0.68 pounds of VOC per ton of glass dried

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit 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 3 MMBtu per hour and then divide by the maximum pounds of glass dried per hour (5,200 pounds/hour) and multiply 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 2000 pounds per ton.

The combination of these two results is the uncontrolled potential to emit 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 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.

3. Emission Limitation:

5.81 tons of VOC per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emission unit. Compliance is demonstrated by multiplying the short term emission rate of 0.68 pounds of VOC per ton of glass dried by 17,082 tons of glass dried per year and

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dividing by 2,000 pounds per ton.

4. 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 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.

5. 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 MMBtu per hour and then multiply by 8,760 hours per year and divide by 2000 pounds per ton.

6. Emission Limitation:

6.41 pounds of PE per hour

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

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3745-17-03(B)(10); or other U.S. EPA approved test method, with prior approval from the Ohio EPA.

7. Emission Limitation:

0.06 pounds of PE or PM10 per ton of dried glass.

Applicable Compliance Method:

The permittee shall demonstrate compliance with the annual allowable limitations with the most recent stack test derived emission factor (0.06 pound PM10 per ton of glass dried (7/99)).

If required, the permittee shall demonstrate compliance with the stack derived emission factor 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.

8. Emission Limitation:

PM10 shall be less than 0.51 tons per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emission unit. Compliance may be demonstrated through calculations performed as follows: multiply the most recent stack test derived emission factor (0.06 pound PM10 per ton of glass dried (7/99)) by the tons of glass dried per year (17,082 tons/year) and divide by 2000 pounds per ton.

9. Emission Limitation:

PE shall be less than 0.51 tons per year.

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. The results of the emissions testing shall be used to determine the potential to emit (PTE) on an annual basis (i.e. 8760 hours per year or 365 days per year) for this air contaminant source.

10. Emission Limitation:

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NOx emissions shall be less than 10 tons 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 1.4-1 dated 7/98, as follows: divide the emission factor of 100 pounds of NOx 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 MMBtu per hour and then multiply by 8,760 hours per year and divide by 2000 pounds per ton.

11. Emission Limitation:

CO emissions shall be less than 10 tons 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 1.4-1 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 MMBtu per hour and then multiply by 8,760 hours per year and divide by 2000 pounds per ton.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P055) - 3.0 MMBtu/hr Direct Dry Chop Dryer-2 w/baghouse control

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

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

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P056) - Direct Dry Classifier-1 w/baghouse control

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	Both PE and PM10 emissions shall be less than 0.078 pounds per ton of glass dried and 0.67 ton per year each. See sections A.I.2.a and A.I.2.b.
OAC rule 3745-17-07(A)(1)	Visible Emissions (VE) shall not exceed 20% opacity as a 6-minute average.
OAC rule 3745-17-11(B)(1)	Particulate Emissions (PE) shall not exceed 6.41 pounds per hour.

2. Additional Terms and Conditions

- 2.a Permit to install 04-01462 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment) as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3):
 - a. The use of a baghouse filter system, whenever this air contaminant source is in operation, with a capture efficiency of 100% and a minimum control efficiency of 99%, by weight of PE and PM10.
- 2.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

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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 of 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 set points, 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.

II. Operational Restrictions

1. The permittee shall initiate corrective action within 1 hour of an alarm from a bag leak detection system and complete corrective action in a timely manner. Example correction actions may include:
 - i. inspecting the baghouse for air leaks, torn or broken bags or filter media, or any other conditions that may cause an increase in emission,

- ii. sealing off defective bags or filter media,
 - iii. replacing defective bags or filter media, or otherwise repairing the control device,
 - iv. sealing off a defective baghouse compartment,
 - v. cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system, and
 - vi. shutting down the process producing the particulate emissions.
2. The amount of glass dried in emissions unit P056 shall not exceed 34,164,000 pounds per year.

III. Monitoring and/or Recordkeeping Requirements

1. 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 actions taken, and when the cause of the alarm was corrected.

IV. Reporting Requirements

1. 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), an explanation of the corrective actions taken, and when the cause of the alarm(s) was corrected.
2. If no deviations occurred during the quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that period.
3. The deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.

V. Testing Requirements

Compliance with the allowable emissions limitations in this permit shall be determined according to the following methods:

1. Emission Limitation:

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

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Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A, using the methods and procedures specified in OAC rule 3745-17-03(B)(1); or other U.S. EPA approved test method, with prior approval from the Ohio EPA.

2. Emission Limitation:

6.41 pounds of PE per hour

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.

3. Emission Limitation:

0.078 pounds of PE or PM10 per ton of glass dried

Applicable Compliance Method:

The permittee shall demonstrate compliance with the allowable PE and PM10 limitation above with the most recent stack test derived emission factor (0.078 pound PM10 per ton of glass dried (6/01)).

4. Emission Limitation:

PM10 emissions shall be less than 0.67 ton per year.

Applicable Compliance Method:

The permittee shall demonstrate compliance with the annual allowable PM10 limitation above by multiplying the most recent stack test derived emission factor (0.078 pound PM10 per ton of glass dried (6/01)) by the annual amount of glass dried (17,082 tons) and dividing the result by 2000 pounds per ton.

If required, the permittee shall demonstrate compliance with the stack derived emission

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factor 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.

5. Emission Limitation:

PE shall be less than 0.67 ton per year.

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. The results of the emissions testing shall be used to determine the potential to emit (PTE) on an annual basis (i.e. 8760 hours per year or 365 days per year) for this air contaminant source.

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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.

Operations, Property, and/or Equipment - (P056) - Direct Dry Classifier-1 w/baghouse control

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

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

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P057) - Direct Dry Chop Classifier-2 w/baghouse control

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	Both PE and PM10 emissions shall be less than 0.078 pounds per ton of glass dried and 0.67 ton per year each. See section A.I.2.a and A.I.2.b.
OAC rule 3745-17-07(A)(1)	Visible Emissions (VE) shall not exceed 20% opacity as a 6-minute average.
OAC rule 3745-17-11(B)(1)	Particulate Emissions (PE) shall not exceed 6.41 pounds per hour.

2. Additional Terms and Conditions

- 2.a Permit to install 04-01462 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment) as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3):
 - a. The use of a baghouse filter system, whenever this air contaminant source is in operation, with a capture efficiency of 100% and a minimum control efficiency of 99%, by weight of PE and PM10.
- 2.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

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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 of 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 set points, 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.

II. Operational Restrictions

1. The permittee shall initiate corrective action within 1 hour of an alarm from a bag leak detection system and complete corrective action in a timely manner. Example correction actions may include:
 - i. inspecting the baghouse for air leaks, torn or broken bags or filter media, or any other conditions that may cause an increase in emission,
 - ii. sealing off defective bags or filter media,
 - iii. replacing defective bags or filter media, or otherwise repairing the control

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device,

- iv. sealing off a defective baghouse compartment,
 - v. cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system, and
 - vi. shutting down the process producing the particulate emissions.
2. The amount of glass dried in emissions unit P057 shall not exceed 34,164,000 pounds per year.

III. Monitoring and/or Recordkeeping Requirements

1. 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 actions taken, and when the cause of the alarm was corrected.

IV. Reporting Requirements

1. 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 alarms(s), when corrective actions were initiated, the cause of the alarm(s), an explanation of the corrective actions taken, and when the cause of the alarm(s) was corrected.
2. If no deviations occurred during the quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that period.
3. The deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.

V. Testing Requirements

Compliance with the allowable emissions limitations in this permit shall be determined according to the following methods:

1. Emission Limitation:

Visible emissions shall not exceed 20% opacity of visible PE, as a 6-minute average.

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Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A, using the methods and procedures specified in OAC rule 3745-17-03(B)(1); or other U.S. EPA approved test method, with prior approval from the Ohio EPA.

2. Emission Limitation:

6.41 pounds of PE per hour

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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.

3. Emission Limitation:

0.078 pounds of PE or PM10 per ton of glass dried

Applicable Compliance Method:

The permittee shall demonstrate compliance with the allowable PE and PM10 limitation above with the most recent stack test derived emission factor (0.078 pound PM10 per ton of glass dried (6/01)).

4. Emission Limitation:

PM10 shall be less than 0.67 ton per year.

Applicable Compliance Method:

The permittee shall demonstrate compliance with the annual allowable PM10 limitation above by multiplying the most recent stack test derived emission factor (0.078 pound PM10 per ton of glass dried (6/01)) by the annual amount of glass dried (17,082 tons) and dividing the result by 2000 pounds per ton.

If required, the permittee shall demonstrate compliance with the stack derived emission factor 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.

5. Emission Limitation:

PE shall be less than 0.67 ton per year.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation

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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. The results of the emissions testing shall be used to determine the potential to emit (PTE) on an annual basis (i.e. 8760 hours per year or 365 days per year) for this air contaminant source.

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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.

Operations, Property, and/or Equipment - (P057) - Direct Dry Chop Classifier-2 w/baghouse control

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

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

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P058) - 2.0 MMBtu/hr Finishing Gypsum Dryer-1 w/baghouse control

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	Both Particulate Emissions (PE) and PM10 emissions shall be less than 0.000014 pounds per ton of glass dried and 0.01 tons per year. See section A.I.2.a and A.I.2.f. Volatile Organic Compound (VOC) emissions shall not exceed 0.68 lb per ton of glass dried and 7.70 tons per year. See section A.I.2.e. 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 section A.I.2.e.
OAC rule 3745-17-07(A)(1)	Visible Emissions (VE) from this emissions unit shall not exceed 20% opacity as a six minute average.
OAC rule 3745-17-11(B)(1)	PE shall not exceed 7.78 pounds per hour.
OAC rule 3745-18-06(E)	See section A.I.2.d.
OAC rule 3745-21-07(B)	See section A.I.2.d.
OAC rule 3745-21-08(B)	See sections A.I.2.b and A.I.2.c.
ORC 3704.03(T)(4)	See section A.I.2.c.

2. Additional Terms and Conditions

- 2.a Permit to install 04-01462 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment) as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3):

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- a. The use of a baghouse filter system, whenever this air contaminant source is in operation, with a capture efficiency of 100% and a minimum control efficiency of 99%, by weight of PE and PM10.
- 2.b** 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 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.c** The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the uncontrolled VOC, SO₂, NO_x, and CO emissions from this air contaminant source since the potential to emit for VOC, SO₂, NO_x, and CO is less than 10 tons per year.
 - 2.d** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(C).
 - 2.e** The short term pound per ton or pound per million cubic feet and annual emissions limitations were established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop monitoring, record keeping and/or reporting requirements to ensure compliance with these limitations.
 - 2.f** 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 of relative particulate emissions.

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- 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 set points, 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.

II. Operational Restrictions

- 1. The permittee shall burn only natural gas in this emissions unit.
- 2. The permittee shall initiate corrective action within 1 hour of an alarm from a bag leak detection system and complete corrective action in a timely manner. Example correction actions may include:
 - i. inspecting the baghouse for air leaks, torn or broken bags or filter media, or any other conditions that may cause an increase in emission,
 - ii. sealing off defective bags or filter media,
 - iii. replacing defective bags or filter media, or otherwise repairing the control device,
 - iv. sealing off a defective baghouse compartment,
 - v. cleaning the bag leak detection system probe, or otherwise repairing the bag

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leak detection system, and

- vi. shutting down the process producing the particulate emissions.
3. The amount of glass dried in emissions unit P058 shall not exceed 45,552,000 pounds per year.

III. 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 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 actions taken, and when the cause of the alarm was corrected.

IV. 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 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 alarms(s), when corrective actions were initiated, the cause of the alarm(s), an explanation of the corrective actions taken, and when the cause of the alarm(s) was corrected.
3. If no deviations occurred during the quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that period.
4. The deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.

V. Testing Requirements

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

1. Emission Limitation:

Visible emissions shall not exceed 20% opacity, as a six minute average.

Applicable Compliance Method:

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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); or other U.S. EPA approved test method, with prior approval from the Ohio EPA.

2. Emission Limitation:

0.68 pounds of VOC per ton of glass dried

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit 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 3 MMBtu per hour and then divide by the maximum pounds of glass dried per hour (5,200 pounds/hour) and multiply 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 2000 pounds per ton.

The combination of these two results is the uncontrolled potential to emit 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 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.

3. Emission Limitation:

7.70 tons of VOC per year

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Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emission unit. Compliance is demonstrated by multiplying the short term emission rate of 0.68 pounds of VOC per ton of glass dried by 22,776 tons of glass dried per year and dividing by 2,000 pounds per ton.

4. 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 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.

5. 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 MMBtu per hour and then multiply by 8,760 hours per year and divide by 2000 pounds per ton.

6. Emission Limitation:

7.78 pounds of PE per hour

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

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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.

7. Emission Limitation:

0.000014 pounds of PE or PM10 per ton of glass dried

Applicable Compliance Method:

The permittee shall demonstrate compliance with the allowable limitations above by multiplying the most recent stack test derived emission factor ($7.11 \times 10E-09$ pound PM10 per pound of glass dried (8/05)) by 2000 pounds per ton.

8. Emission Limitation:

0.01 tons per year of PM10.

Applicable Compliance Method:

The permittee shall demonstrate compliance with the annual allowable limitations above by multiplying the most recent stack test derived emission factor ($7.11 \times 10E-09$ pound PM10 per pound of glass dried (8/05)) by the annual amount of glass dried (45,552,000 pounds) and dividing by 2000 pounds per ton.

If required, the permittee shall demonstrate PM10 compliance with the stack derived emission factor 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.

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9. Emission Limitation:

0.01 tons per year of PE.

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. The results of the emissions testing shall be used to determine the potential to emit (PTE) on an annual basis (i.e. 8760 hours per year or 365 days per year) for this air contaminant source.

10. Emission Limitation:

NO_x emissions shall be less than 10 tons 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 1.4-1 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 3 MMBtu per hour and then multiply by 8,760 hours per year and divide by 2000 pounds per ton.

11. Emission Limitation:

CO emissions shall be less than 10 tons 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 1.4-1 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 MMBtu per hour and then multiply by 8,760 hours per year and divide by 2000 pounds per ton.

Johns Manville Plant 1
RTI Application: 04-01462

Facility ID: 0448000012

Emissions Unit ID: P058

VI. Miscellaneous Requirements

None

Issued: To be entered upon final issuance

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P058) - 2.0 MMBtu/hr Finishing Gypsum Dryer-1 w/baghouse control

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

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

Issued: To be entered upon final issuance

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P059) - Dielectric Oven 2

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(C)	Volatile Organic Compounds (VOC) emissions shall not exceed 0.786 pound per ton of glass dried and 4.13 tons per year. See section A.I.2.a.
OAC rule 3745-21-07(B)	See section A.I.2.b.
ORC 3704.03(T)(4)	See section A.I.2.c.

2. Additional Terms and Conditions

- 2.a The short term pound per ton and annual emission limitations were established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop monitoring, record keeping and or reporting requirements to ensure compliance with these limitations.
- 2.b The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(C).
- 2.c The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the uncontrolled VOC emissions from this air contaminant source since the potential to emit for VOC is less than ten tons per year.

II. Operational Restrictions

1. The amount of glass dried in emissions unit P059 shall not exceed 21,000,000 pounds per year.

Johns Manville Plant 1

DTL Application: 04-01462

Facility ID: 0448000012

Emissions Unit ID: P059

III. Monitoring and/or Recordkeeping Requirements

None

Issued: To be entered upon final issuance

IV. Reporting Requirements

None

V. Testing Requirements

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

a. Emission Limitation:

0.786 pound of VOC per ton of glass dried

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the most recent stack test derived emission factor (0.000393 lb of VOC per pound of glass dried (2/06)) by 2000 pounds per ton.

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

b. Emission Limitation:

4.13 tons of VOC per year

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the rolling, 12-month summation of glass dried (21,000,000 pounds) by the most recent stack test derived emission factor (0.000393 lb of VOC per pound of glass dried (2/06)) and dividing by 2000 pounds per ton.

VI. Miscellaneous Requirements

None

Issued: To be entered upon final issuance

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment - (P059) - Dielectric Oven 2

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures

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

NEW SOURCE REVIEW FORM B

PTI Number: 04-01462 Facility ID: 0448000012

FACILITY NAME Johns Manville Plant 1

FACILITY DESCRIPTION To add gypsum dryer, two direct dry chop dryers, two direct dry classifiers, one dielectric dryer and modify an existing dielectric dryer

CITY/TWP Waterville

SIC CODE 3229 SCC CODE 30501215 EMISSIONS UNIT ID P033

EMISSIONS UNIT DESCRIPTION Dielectric drying oven - modification

DATE INSTALLED 9/1992

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

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	N/A				
PM ₁₀	Unclassified				
Sulfur Dioxide	Attainment				
Organic Compounds	Non-Attainment	0.786 lb per ton glass dried	4.13	0.786 lb per ton glass dried	4.13
Nitrogen Oxides	Unclassified/attainment				
Carbon Monoxide	Unclassified/attainment				
Lead	N/A (attainment)				
Other: Air Toxics	N/A				

APPLICABLE FEDERAL RULES:

NSPS? N

NESHAP? N

PSD? N

OFFSET POLICY? N

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

Not subject to BAT per SB265. All pollutants are less than 10.0 tons per year.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY?

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT?

\$

TOXIC AIR CONTAMINANTS

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

AIR TOXICS MODELING PERFORMED*?

_____ YES

_____ NO

IDENTIFY THE AIR CONTAMINANTS: _____

NEW SOURCE REVIEW FORM B

PTI Number: 04-01462 Facility ID: 0448000012

FACILITY NAME Johns Manville Plant 1

FACILITY DESCRIPTION To add onsum dryer two direct drv CITY/TWP Waterville

Emissions Unit ID: P059

SIC CODE 3229 SCC CODE 30501215 EMISSIONS UNIT ID P054

EMISSIONS UNIT DESCRIPTION Direct Dry Chop Dryer-1 w/baghouse control

DATE INSTALLED N/A

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

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	N/A	0.12 lb/hr	0.51	0.06 lb per ton glass dried	0.51
PM ₁₀	Unclassified	0.12 lb/hr	0.51	0.06 lb per ton glass dried	0.51
Sulfur Dioxide	Attainment	0.002 lb/hr	0.01	0.6 lb per MMSCF natural gas	0.01
Organic Compounds	Non-attainment	1.33 lb/hr	5.81	0.68 lb/ton glass dried	5.81
Nitrogen Oxides	Unclassified/Attainment	0.30 lbs/hr	1.32		
Carbon Monoxide	Unclassified/Attainment	0.25 lbs/hr	1.10		
Lead	N/A (attainment)				
Other: Air Toxics	N/A				

APPLICABLE FEDERAL RULES:

NSPS? N

NESHAP? N

PSD? N

OFFSET POLICY? N

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

Not subject to BAT per SB265. All pollutants are less than 10.0 tons per year.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY?

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT?

\$

TOXIC AIR CONTAMINANTS

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

AIR TOXICS MODELING PERFORMED*?

YES

NO

IDENTIFY THE AIR CONTAMINANTS:

NEW SOURCE REVIEW FORM B

PTI Number: 04-01462 Facility ID: 0448000012

FACILITY NAME Johns Manville Plant 1

FACILITY DESCRIPTION To add onsum dryer two direct drv CITY/TWP Waterville

Emissions Unit ID: P059

SIC CODE 3229 SCC CODE 30501215 EMISSIONS UNIT ID P055

EMISSIONS UNIT DESCRIPTION Direct Dry Chop Dryer-2 w/baghouse control

DATE INSTALLED N/A

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

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	N/A	0.12 lb/hr	0.51	0.06 lb per ton glass dried	0.51
PM ₁₀	Unclassified	0.12 lb/hr	0.51	0.06 lb per ton glass dried	0.51
Sulfur Dioxide	Attainment	0.002 lb/hr	0.01	0.6 lb per MMSCF natural gas	0.01
Organic Compounds	Non-attainment	1.33 lbs/hr	5.81	0.68 lb/ton glass dried	5.81
Nitrogen Oxides	Unclassified/attainment	0.30 lb/hr	1.32		
Carbon Monoxide	Unclassified/attainment	0.25 lb/hr	1.10		
Lead	N/A (attainment)				
Other: Air Toxics	N/A				

APPLICABLE FEDERAL RULES:

NSPS? N

NESHAP? N

PSD? N

OFFSET POLICY? N

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

Not subject to BAT per SB265. All pollutants are less than 10.0 tons per year.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY?

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

TOXIC AIR CONTAMINANTS

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

AIR TOXICS MODELING PERFORMED*? _____ YES _____ NO

IDENTIFY THE AIR CONTAMINANTS: _____

NE
P1
FA

Emissions Unit ID: P059

FACILITY DESCRIPTION To add gypsum dryer, two direct dry chop dryers, two direct dry classifiers, one dielectric dryer and modify an existing dielectric dryer

CITY/TWP Waterville

SIC CODE 3229 SCC CODE 30501299 EMISSIONS UNIT ID P056
EMISSIONS UNIT DESCRIPTION Direct Dry Classifier-1 w/baghouse control
DATE INSTALLED

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

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	N/A	0.15 lb/hr	0.67	0.078 lb per ton glass dried	0.67
PM ₁₀	Unclassified	0.15 lb/hr	0.67	0.078 lb per ton glass dried	0.67
Sulfur Dioxide	Attainment				
Organic Compounds	Non-attainment				
Nitrogen Oxides	Unclassified/attainment				
Carbon Monoxide	Unclassified/attainment				
Lead	N/A (attainment)				
Other: Air Toxics	N/A				

APPLICABLE FEDERAL RULES:

NSPS? N NESHAP? N PSD? N OFFSET POLICY? N

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

Not subject to BAT per SB265. All pollutants are less than 10.0 tons per year.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? No

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

TOXIC AIR CONTAMINANTS

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

AIR TOXICS MODELING PERFORMED*? _____ YES _____ NO

IDENTIFY THE AIR CONTAMINANTS: _____

NEW SOURCE REVIEW FORM B

PTI Number: 04-01462 Facility ID: 0448000012

FACILITY NAME Johns Manville Plant 1

FACILITY DESCRIPTION To add onsum driver two direct drv CITY/TWP Waterville

Emissions Unit ID: P059

SIC CODE 3229 SCC CODE 30501299 EMISSIONS UNIT ID P057

EMISSIONS UNIT DESCRIPTION Direct Dry Chop Classifier-2 w/baghouse control

DATE INSTALLED

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

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	N/A	0.15 lb/hr	0.67	0.078 lb per ton glass dried	0.67
PM ₁₀	Unclassified	0.15 lb/hr	0.67	0.078 lb per ton glass dried	0.67
Sulfur Dioxide	Attainment				
Organic Compounds	Non-attainment				
Nitrogen Oxides	Unclassified/attainment				
Carbon Monoxide	Unclassified/attainment				
Lead	N/A (attainment)				
Other: Air Toxics	N/A				

APPLICABLE FEDERAL RULES:

NSPS? N

NESHAP? N

PSD? N

OFFSET POLICY? N

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

Not subject to BAT per SB265. All pollutants are less than 10.0 tons per year.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? No

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

TOXIC AIR CONTAMINANTS

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

AIR TOXICS MODELING PERFORMED*? _____ YES _____ NO

IDENTIFY THE AIR CONTAMINANTS: _____

NEW SOURCE REVIEW FORM B

PTI Number: 04-01462 Facility ID: 0448000012

FACILITY NAME Johns Manville Plant 1

FACILITY DESCRIPTION To add onsum driver two direct drv CITY/TWP Waterville

Emissions Unit ID: P059

SIC CODE 3229 SCC CODE 30501215 EMISSIONS UNIT ID P058

EMISSIONS UNIT DESCRIPTION Finishing Gypsum Dryer-1 w/baghouse control

DATE INSTALLED

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

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	N/A	3.7x10 ⁻⁵ lb/hr	0.00016	0.000014 lb per ton glass dried	0.01
PM ₁₀	Unclassified	3.7x10 ⁻⁵ lb/hr	0.00016	0.000014 lb per ton glass dried	0.01
Sulfur Dioxide	Attainment	0.0012 lb/hr	0.0053	0.6 lb per MMSCF natural gas	0.01
Organic Compounds	Non-attainment	1.76 lbs/hr	7.70	0.68 lb per ton glass dried	7.70
Nitrogen Oxides	Unclassified/attainment	0.20 lb/hr	0.88		
Carbon Monoxide	Unclassified/attainment	0.17 lb/hr	0.74		
Lead	N/A (attainment)				
Other: Air Toxics	N/A				

APPLICABLE FEDERAL RULES:

NSPS? N

NESHAP? N

PSD? N

OFFSET POLICY? N

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

Not subject to BAT per SB265. All pollutants are less than 10.0 tons per year.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY?

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

TOXIC AIR CONTAMINANTS

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

AIR TOXICS MODELING PERFORMED*? _____ YES _____ NO

IDENTIFY THE AIR CONTAMINANTS: _____

7 NEW SOURCE REVIEW FORM B

PTI Number: 04-01462 Facility ID: 0448000012

FACILITY NAME Johns Manville Plant 1

FACILITY DESCRIPTION To add onsum driver two direct drv CITY/TWP Waterville

Emissions Unit ID: P059

SIC CODE 3229 SCC CODE 30501215 EMISSIONS UNIT ID P059

EMISSIONS UNIT DESCRIPTION Dielectric Oven 2

DATE INSTALLED N/A

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

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	N/A				
PM ₁₀	Unclassified				
Sulfur Dioxide	Attainment				
Organic Compounds	Non-attainment	0.94 lb/hr	4.13	0.786 lb per ton glass dried	4.13
Nitrogen Oxides	Unclassified/attainment				
Carbon Monoxide	Unclassified/attainment				
Lead	N/A (attainment)				
Other: Air Toxics	N/A				

APPLICABLE FEDERAL RULES:

NSPS? N

NESHAP? N

PSD? N

OFFSET POLICY? N

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

Not subject to BAT per SB265. All pollutants are less than 10.0 tons per year.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY?

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

TOXIC AIR CONTAMINANTS

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

AIR TOXICS MODELING PERFORMED*? _____ YES _____ NO

IDENTIFY THE AIR CONTAMINANTS: _____