



5/12/2015

Certified Mail

Sarah Harrison  
 Johns Manville / Plant #01 - wtv1  
 6050 N. River Rd.  
 Waterville, OH 43566

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL  
 Facility ID: 0448000012  
 Permit Number: P0118484  
 Permit Type: OAC Chapter 3745-31 Modification  
 County: Lucas

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

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA) Air Pollution Permit-to-Install (PTI) which will allow you to install or modify the described emissions unit(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, we urge you to read it carefully. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

**How to appeal this permit**

The issuance of this PTI is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission  
 77 South High Street, 17th Floor  
 Columbus, OH 43215

## **How to save money, reduce pollution and reduce energy consumption**

The Ohio EPA is encouraging 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 Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: [www.ohioairquality.org/clean\\_air](http://www.ohioairquality.org/clean_air)

## **How to give us feedback on your permitting experience**

Please complete a survey at [www.epa.ohio.gov/survey.aspx](http://www.epa.ohio.gov/survey.aspx) and give us feedback on your permitting experience. We value your opinion.

## **How to get an electronic copy of your permit**

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, [www.epa.ohio.gov/dapc](http://www.epa.ohio.gov/dapc) by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

If you have any questions, please contact Toledo Department of Environmental Services at (419)936-3015 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



Erica R. Engel-Ishida, Manager  
Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA  
TDES; Michigan; Indiana; Canada



## Response to Comments

Facility ID:	0448000012
Facility Name:	Johns Manville / Plant #01 - wtv1
Facility Description:	Fiber Glass Manufacturer
Facility Address:	6050 River Road Waterville, OH 43566 Lucas County
Permit:	P0118484, Permit-To-Install - OAC Chapter 3745-31 Modification
A public notice for the draft permit issuance was published in the Ohio EPA Weekly Review and appeared in the Toledo Blade on 04/01/2015. The comment period ended on 05/01/2015.	
Hearing date (if held)	
Hearing Public Notice Date (if different from draft public notice)	

The following comments were received during the comment period specified. Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health. Often, public concerns fall outside the scope of that authority. For example, concerns about zoning issues are addressed at the local level. Ohio EPA may respond to those concerns in this document by identifying another government agency with more direct authority over the issue.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format. PDF copies of the original comments in the format submitted are available upon request.

### 1. **Topic: Air toxics modeling exemption for trial glass fiber formulations**

- a. Comment: JM is requesting the addition of language stating that the requirement of item 10 (re-model to demonstrate MAGLC compliance) does not apply to the testing of trial formulations referenced in C.1.c)(2) that do not exceed 3% of the throughput of glass dried in the emissions units.
- b. Response: The requested change will be made to the final permit.





**FINAL**

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

Facility ID: 0448000012  
Permit Number: P0118484  
Permit Type: OAC Chapter 3745-31 Modification  
Issued: 5/12/2015  
Effective: 5/12/2015





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

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**Final Permit-to-Install**  
Johns Manville / Plant #01 - wtv1  
**Permit Number:** P0118484  
**Facility ID:** 0448000012  
**Effective Date:** 5/12/2015

## Authorization

Facility ID: 0448000012  
Facility Description: Fiber Glass Manufacturer  
Application Number(s): A0052833  
Permit Number: P0118484  
Permit Description: Chapter 31 modification to glass fiber drying ovens  
Permit Type: OAC Chapter 3745-31 Modification  
Permit Fee: \$4,000.00  
Issue Date: 5/12/2015  
Effective Date: 5/12/2015

This document constitutes issuance to:

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

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

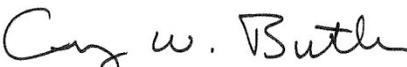
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

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

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

  
Craig W. Butler  
Director



## Authorization (continued)

Permit Number: P0118484  
 Permit Description: Chapter 31 modification to glass fiber drying ovens

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

**Emissions Unit ID: P045**  
 Company Equipment ID: Gypsum Line Oven  
 Superseded Permit Number: P0116005  
 General Permit Category and Type: Not Applicable

**Group Name: P058, P061-P064, P069, P070**

<b>Emissions Unit ID:</b>	<b>P058</b>
Company Equipment ID:	P058
Superseded Permit Number:	P0116005
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P061</b>
Company Equipment ID:	Direct Chop Oven and Classifier #1 Leg #5
Superseded Permit Number:	P0116005
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P062</b>
Company Equipment ID:	Direct Chop Oven & Classifier #2
Superseded Permit Number:	P0116005
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P063</b>
Company Equipment ID:	Direct Chop Oven & Classifier #3
Superseded Permit Number:	P0116005
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P064</b>
Company Equipment ID:	Direct Chop Oven & Classifier #4
Superseded Permit Number:	P0116005
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P069</b>
Company Equipment ID:	P067
Superseded Permit Number:	P0116005
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P070</b>
Company Equipment ID:	P068
Superseded Permit Number:	P0116005
General Permit Category and Type:	Not Applicable



**Final Permit-to-Install**  
Johns Manville / Plant #01 - wtv1  
**Permit Number:** P0118484  
**Facility ID:** 0448000012  
**Effective Date:**5/12/2015

## **A. Standard Terms and Conditions**



## **1. Federally Enforceable Standard Terms and Conditions**

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

## **2. Severability Clause**

- a) A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.
- b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

## **3. General Requirements**

- a) 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.

#### **4. Monitoring and Related Record Keeping and Reporting Requirements**

- a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
  - (1) The date, place (as defined in the permit), and time of sampling or measurements.
  - (2) The date(s) analyses were performed.
  - (3) The company or entity that performed the analyses.
  - (4) The analytical techniques or methods used.
  - (5) The results of such analyses.
  - (6) The operating conditions existing at the time of sampling or measurement.
- b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
  - (1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Toledo Department of Environmental Services.



- (2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Toledo Department of Environmental Services. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.
  - (3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the Toledo Department of Environmental Services every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
  - (4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

## **5. Scheduled Maintenance/Malfunction Reporting**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the Toledo Department of Environmental Services in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

## **6. Compliance Requirements**

- a) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the appropriate Ohio EPA District Office or contracted



local air agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the electronic signature date shall constitute the date that the required application, notification or report is considered to be "submitted". Any document requiring signature may be represented by entry of the personal identification number (PIN) by responsible official as part of the electronic submission process or by the scanned attestation document signed by the Authorized Representative that is attached to the electronically submitted written report.

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:
  - (1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
  - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
  - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
  - (4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c) The permittee shall submit progress reports to the Toledo Department of Environmental Services concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
  - (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
  - (2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

## **7. Best Available Technology**

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



**8. Air Pollution Nuisance**

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

**9. Reporting Requirements**

The permittee shall submit required reports in the following manner:

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

**10. Applicability**

This Permit-to-Install is applicable only to the emissions unit(s) identified in the Permit-to-Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s) not exempt from the requirement to obtain a Permit-to-Install.

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

- a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.
- b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the



Director within a reasonable time before the termination date and the permittee shows good cause for any such extension.

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

Unless otherwise exempted, no emissions unit certified by the responsible official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31 and OAC Chapter 3745-77 if the restarted operation is subject to one or more applicable requirements.

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

## **12. Permit-To-Operate Application**

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



**13. Construction Compliance Certification**

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

- a) Completion of initial installation date shall be entered upon completion of construction and prior to start-up.
- b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

**14. Public Disclosure**

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

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

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

**16. Fees**

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

**17. Permit Transfers**

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

**18. Risk Management Plans**

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

**19. Title IV Provisions**

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.



**Final Permit-to-Install**  
Johns Manville / Plant #01 - wtv1  
**Permit Number:** P0118484  
**Facility ID:** 0448000012  
**Effective Date:**5/12/2015

## **B. Facility-Wide Terms and Conditions**



1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
  - a) None.
2. Recordkeeping for purposes of OAC rule 3745-31-10(A) for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, and VOC.
  - a) The permittee shall monitor the emissions of PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, and VOC that are emitted by emissions units F004, F005, F006, P001, P011, P013, P045, P058, P061 through P064, P069, and P070; and calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five years following resumption of regular operations after the change, or for a period of ten years following resumption of regular operations after the change if the NSR project increases the design capacity or potential to emit of that regulated NSR pollutant at such emissions unit.
  - b) The permittee shall submit a report if the annual emissions, in tons per year, from the above listed emissions units, exceed the baseline actual emissions (as documented and maintained pursuant to paragraph (A)(3) of OAC rule 3745-31-10, by a significant amount for that regulated NSR pollutant, and if such emissions differ from the preconstruction projection as documented and maintained pursuant to paragraph (A)(1)(c) of OAC rule 3745-31-10 as provided in Application A0052833. Such report shall be submitted to Ohio EPA within 60 days after the end of such year. The report shall contain the following:
    - (1) The name, address and telephone number of the major stationary source;
    - (2) The annual emissions as calculated pursuant to 2.a) above; and
    - (3) Any other information that the permittee wishes to include in the report (e.g., an explanation as to why the emissions differ from the preconstruction projection).



**Final Permit-to-Install**  
Johns Manville / Plant #01 - wtv1  
**Permit Number:** P0118484  
**Facility ID:** 0448000012  
**Effective Date:** 5/12/2015

## **C. Emissions Unit Terms and Conditions**



**1. P045, Gypsum Line Oven**

**Operations, Property and/or Equipment Description:**

Direct fired glass fiber drying oven with wet scrubber for Furnace 9212 Leg 4

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

(1) b)(1)h., d)(9) through d)(13), and e)(9).

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T)	VOC emissions shall not exceed 1.34 tons per month averaged over a 12-month rolling period.
b.	OAC rule 3745-31-05(A)(3) June 30, 2008	PM <sub>10</sub> emissions shall not exceed 0.30 ton per month averaged over a 12-month rolling period.  Install a burner designed to meet 84 lb CO/mmscf natural gas burned.  Install a burner designed to meet 100 lb NO <sub>x</sub> /mmscf natural gas burned.  Install a burner designed to meet 0.6 lb SO <sub>2</sub> /mmscf natural gas burned.  See b)(2)a.
c.	OAC rule 3745-31-05(A)(3)(a)(ii) June 30, 2008	See b)(2)b. through b)(2)d.
d.	OAC rule 3745-31-05(D) (Synthetic Minor Restrictions to avoid PSD)	PM <sub>10</sub> emissions from P045, P058, P061 through P064, P069, and P070 combined shall not exceed 16.69 tons per rolling, 12-month period.  VOC emissions from P045, P058, P061 through P064, P069, and P070 combined shall not exceed 50.10 tons per rolling, 12-month period.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		See b)(2)e. and b)(2)f.
e.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
f.	OAC rule 3745-17-11(B)(1)	Particulate emissions (PE) shall not exceed 3.3 lbs/hr.
g.	OAC rule 3745-18-06(C)	Exempt – See b)(2)g.
h.	ORC 3704.03(F)(4)	See d)(9) through d)(13), and e)(9).

(2) Additional Terms and Conditions

- a. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).
- b. The requirements referenced by b)(1)c. apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.
- c. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the CO, NO<sub>x</sub>, and SO<sub>2</sub> emissions from this air contaminant source since the uncontrolled potential to emit is less than 10 tons per year.
- d. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM<sub>10</sub> emissions from this air contaminant source since the calculated annual emission rate for PM<sub>10</sub> is less than 10 tons per year taking into account the federally enforceable air pollution control requirements of OAC rule 3745-31-05(D).
- e. The maximum glass dried in the combination of emission units P045, P058, P061 through P064, P069, and P070 shall be limited by either of the following formulas, calculated as a rolling, 12-month summation:

$$16.69 \text{ tons PM}_{10} \geq \sum_{i=1}^n [Q_i \times EF_{PM10_i}] \div 2000 \text{ pounds/ton}$$

$$50.10 \text{ tons VOC} \geq \sum_{i=1}^n [Q_i \times EF_{VOC_i}] \div 2000 \text{ pounds/ton}$$



Where:

$Q_i$  = total amount of glass for a specific formulation dried  $i$  in emission units P045, P058, P061 through P064, P069, and P070 for the current month and the previous 11 months, tons

$EF_{PM10_i}$  = emissions unit specific emission factor derived from stack test that matches formulation of glass dried  $i$ , pounds  $PM_{10}$  per ton of glass dried.

$EF_{VOC_i}$  = emissions unit specific emission factor derived from stack test that matches formulation of glass dried  $i$ , pounds VOC per ton of glass dried.

$n$  = number of different formulations of glass dried in emission units P045, P058, P061 through P064, P069, and P070.

- f. The emissions from this emissions unit shall be vented to the wet scrubber at all times the emissions unit is in operation.
- g. The permittee has indicated that the only source of  $SO_2$  emissions is from the combustion of natural gas that is used as fuel for the dryer. Since there are no  $SO_2$  emissions from the process materials, the process weight rate for purposes of OAC rule 3745-18-06(C) is zero, since gaseous fuels used solely as fuels and air introduced for combustion are excluded from the process weight rate.

c) Operational Restrictions

- (1) The permittee shall burn only natural gas as fuel in this emissions unit.
- (2) The testing of trial formulations of glass fiber shall not exceed 3% of the throughput of glass dried in emission units P045, P058, P061 through P064, P069 and P070, combined, on a rolling, 12-month basis.

d) Monitoring and/or Recordkeeping Requirements

- (1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- (2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable minimum pressure drop across the scrubber, that must be maintained in order to demonstrate compliance, shall not be less than the value established during the most recent emission test demonstrating compliance.
- (3) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable scrubber liquid flow rate, that shall be maintained in order to demonstrate compliance, shall not be less than the value established during the most recent emission test demonstrating compliance, while the emissions unit is in operation.



- (4) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop across the scrubber (in pounds per square inch, gauge) and the scrubber liquid flow rate (in gallons per minute) during operation of this emissions unit, including periods of startup and shutdown. The permittee shall record the pressure drop across the scrubber and the scrubber liquid flow rate once during each 8-hour shift. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for flow rate or pressure drop deviates from the minimum limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the control equipment parameters within the acceptable range(s), or at or above the minimum limit(s) specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- f. a description of the corrective action;
- g. the date the corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the pressure drop and flow rate readings immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The permitted pressure drop and flow rate are based upon information obtained during the most recent stack test demonstrating compliance. These limits are effective for the



duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or Local Air Agency.

- (5) The permittee shall maintain the monthly records of the following for purposes of calculating the rolling, 12-month PM<sub>10</sub> and VOC emissions:
- a. the company identification of each formulation of glass fiber dried;
  - b. the weight, in tons, of each formulation of glass fiber dried;
  - c. the PM<sub>10</sub> and VOC emission factor for each formulation of glass fiber dried;
  - d. the PM<sub>10</sub> and VOC emissions per rolling, 12-month period from P045, P058, P061 through P064, P069, and P070 combined, calculated using the below equations.

$$PM10 \geq \sum_{i=1}^n [Q_i \times EF_{PM10_i}] \div 2000 \text{ pounds/ton}$$

$$VOC \geq \sum_{i=1}^n [Q_i \times EF_{VOC_i}] \div 2000 \text{ pounds/ton}$$

Where:

PM10 = PM<sub>10</sub> emissions per rolling, 12-month period from P045, P058, P061 through P064, P069, and P070 combined

VOC = VOC emissions per rolling, 12-month period from P045, P058, P061 through P064, P069, and P070 combined

Q<sub>i</sub> = total amount of glass for a specific formulation dried *i* in emission units P045, P058, P061 through P064, P069, and P070 for the current month and the previous 11 months, tons

EF<sub>PM10<sub>i</sub></sub> = emissions unit specific emission factor derived from stack test that matches formulation of glass dried *i*, pounds PM<sub>10</sub> per ton of glass dried.

EF<sub>VOC<sub>i</sub></sub> = emissions unit specific emission factor derived from stack test that matches formulation of glass dried *i*, pounds VOC per ton of glass dried.

*n* = number of formulations of glass dried in emission units P045, P058, P061 through P064, P069, and P070

- (6) The permittee shall maintain monthly records of the following information for testing of new glass fiber formulations, as follows:



- a. throughput of glass dried for the trial runs of new formulation in emission units P045, P058, P061 through P064, P069, and P070, in tons, combined;
  - b. throughput of glass dried for all formulations in emission units P045, P058, P061 through P064, P069, and P070, in tons, combined;
  - c. the rolling, 12-month totals of a. and b. above, in tons; and
  - d. a percentage based on the rolling, 12-month total of glass dried for trial runs for new formulations, as calculated in c. above, divided by the rolling, 12-month total of the throughput of all formulations of glass dried, as calculated in c. above, multiplied by 100%.
- (7) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
- a. the color of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - d. the total duration of any visible emissions incident; and
  - e. any corrective actions taken to minimize or eliminate the visible emissions.
- If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.
- (8) If the daily checks show no visible emissions for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check by the permittee or an Ohio EPA inspector indicates visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of no visible emissions.
- (9) The permit-to-install (PTI) application for these emissions unit(s), P045, P058, P061 through P064, P069, and P070, was evaluated based on the actual materials and the



design parameters of the emissions unit's(s) exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
  - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
  - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

- d. The following summarizes the results of dispersion modeling for the "worst case" toxic contaminant emitted at 1 or more tons/year:

Toxic Contaminant: Epichlorohydrin

TLV (mg/m<sup>3</sup>): 1.89

Maximum Hourly Emission Rate (lbs/hr): 0.75

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 17.4



MAGLC (ug/m3): 45.0

The permittee, has demonstrated that emissions of epichlorohydrin, from emissions unit(s) P045, P058, P061 through P064, P069, and P070, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

- (10) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
  - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
  - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

- (11) The requirements of d)(10) do not apply to the testing of trial formulations of glass fiber, referenced in c)(2), that do not exceed 3% of the throughput of glass dried in emissions units P045, P058, P061 through P064, P069, and P070, combined, on a rolling, 12-month basis.
- (12) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):



- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
  - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
  - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
  - d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
- (13) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.
- e) Reporting Requirements
- (1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
  - (2) The permittee shall submit quarterly deviation (excursion) reports that identify any exceedance of the 16.69 tons PM<sub>10</sub> per rolling, 12-month period or 50.10 tons VOC per rolling, 12-month period from emissions units P045, P058, P061 through P064, P069, and P070 combined.
  - (3) The permittee shall submit quarterly deviation (excursion) reports that identify any exceedance of the 3% throughput of glass dried allowed for trial runs of products as calculated in d)(6)d. for this emission unit.
  - (4) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
    - a. each period of time (start time and date, and end time and date) when the pressure drop across the scrubber and/or the liquid flow rate was/were outside of the appropriate range or exceeded the applicable limit contained in this permit;



- b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the scrubber;
- c. each incident of deviation described in a. or b. (above) where a prompt investigation was not conducted;
- d. each incident of deviation described in a. or b. where prompt corrective action, that would bring the pressure drop and/or liquid flow rate into compliance with the acceptable range, was determined to be necessary and was not taken; and
- e. each incident of deviation described in a. or b. where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

- (5) The permittee shall submit quarterly deviation (excursion) reports that identify any periods of time during which the scrubber was not operating when the emission unit was operating, as well as, any deviations from the operating parameters as defined in d)(2) and d)(3). The report shall include date, time of outage or deviation, the amount of deviation, and what was done to correct the problem.
- (6) The permittee shall submit semiannual written reports that identify:
  - a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and
  - b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

These reports shall be submitted to the Director (the Toledo Division of Environmental Services) by January 31 and July 31 of each year and shall cover the previous 6-month period.

- (7) If no deviations occurred during the quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that period.
- (8) The deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.
- (9) The permittee shall submit annual reports by January 31 of each year that include any changes to any parameter or value used in the dispersion model used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1 hour maximum concentration. The report should include:
  - a. the original model input;
  - b. the updated model input;



- c. the reason for the change(s) to the input parameter(s); and
- d. a summary of the results of the updated modeling, including the input changes; and
- e. a statement that the model results indicate that the 1-hour maximum ground-level concentration is less than 80% of the MAGLC.

If no changes to the emissions, emissions unit(s), or the exhaust stack have been made during the reporting period, then the report shall include a statement to that effect.

- (10) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

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

Applicable Compliance Method:

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

- b. Emission Limitation:

Particulate emissions shall not exceed 3.3 lbs/hr.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance using Method 5 of 40 CFR Part 60, Appendix A.

- c. Emission Limitation:

PM<sub>10</sub> emissions shall not exceed 0.30 ton per month averaged over a 12-month rolling period.

Applicable Compliance Method:

This emissions limitation was developed by multiplying the PM<sub>10</sub> emission factor supplied by the permittee (0.50 lb/ton) by the maximum process weight rate (1.65



tons/hr) multiplied by 8,760 hours/yr divided by 2,000 pounds per ton, and divided by 12 months per year.

When required, the permittee shall determine the actual PM<sub>10</sub> emission factor in pound per ton of glass dried through emission testing performed in accordance with Method 5 of 40 CFR Part 60, Appendix A, and Method 202 of 40 CFR Part 51 Appendix M. Alternate U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

d. Emission Limitation:

1.34 tons of VOC per month averaged over a 12-month rolling period

Applicable Compliance Method:

This emission limitation was developed by multiplying the maximum process weight rate (1.65 tons/hr) by the VOC emission factor supplied by the permittee (2.23 lb/ton) multiplied by the maximum annual hours of operation (8,760 hrs/yr), divided by 2,000 lbs/ton, and divided by 12 months per year.

Compliance with this emission limitation may be determined by multiplying the actual process weight rate per month (tons/month) by the VOC emission factor (lb/ton) multiplied by the 12-month rolling tons of glass dried (tons), divided by 12 months per year.

When required, the permittee shall determine the actual VOC emission factor in pounds per ton of glass dried through emission testing performed in accordance with Methods 1 through 4 and 18, 25 or 25A, as appropriate, of 40 CFR Part 60 Appendix A. Use of Method 18, 25 or 25A is to be selected based on the results of pre-survey stack sampling and U.S. EPA guidance documents. To convert a mass emission value from VOC as carbon to VOC, divide the mass emission value of VOC as carbon by the weight fraction of carbon in the average molecular weight of the VOC emission. The determination of this weight fraction of carbon may be based on standard analytical techniques or material formulation data. Alternate U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

e. Emission Limitation:

The PM<sub>10</sub> emissions from P045, P061 through P064, P069, and P070 combined shall not exceed 16.69 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the emissions limitation shall be determined by the records required by d)(5).

f. Emission Limitation:

The VOC emissions from P045, P061 through P064, P069, and P070 combined shall not exceed 50.10 tons per rolling, 12-month period.



Applicable Compliance Method:

Compliance with the emissions limitation shall be determined by the records required by d)(5).

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

a. The emission testing shall be conducted to establish an emission factor for each formulation of glass dried for which emission testing has not been previously conducted to establish an emission factor for PM<sub>10</sub> and VOC or when required by the Toledo Division of Environmental Services or Ohio EPA.

Emission testing shall not be required for trial runs of new formulations, provided that trial formulations of glass fiber do not exceed 3% of the throughput of glass dried in emission units P045, P058, P061 through P064, P069 and P070, combined, on a rolling, 12-month basis. The facility shall calculate emissions for these trials using the worst case emission factor established for this emission unit type.

b. Testing shall take place within 120 days of employing a formulation of glass for which an emission factor has not been established, except as provided in f)(2)a.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass rate(s): For PM<sub>10</sub>, Method 5 of 40 CFR Part 60, Appendix A, and Method 202 of 40 CFR Part 51 Appendix M. For VOC, Methods 1 through 4 and 18, 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A. Use of Method 18, 25 or 25A is to be selected based on the results of pre-survey stack sampling and U.S. EPA guidance documents. To convert a mass emission value from VOC as carbon to VOC, divide the mass emission value of VOC as carbon by the weight fraction of carbon in the average molecular weight of the VOC emission. The determination of this weight fraction of carbon may be based on standard analytical techniques or material formulation data. Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

e. The 3-hour average process weight rate in tons of glass dried per hour, shall be determined during the stack testing, and included in the test report, to allow for a determination of an emission factor in pounds of regulated pollutant per ton of



glass dried. The test report shall also include the company identification of the glass formulation that was being dried during the test.

- f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).
- g. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- h. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

g) Miscellaneous Requirements

- (1) None.



**2. Emissions Unit Group -P058, P061-P064, P069, P070: P058,P061,P062,P063,P064,P069,P070,**

EU ID	Operations, Property and/or Equipment Description
P058	Direct fired glass fiber drying oven, sorter, and classifier with baghouse for Furnace 9211 Leg 4 (Gypsum Dryer 1)
P061	Direct fired glass fiber drying oven, sorter, and classifier with baghouse for Furnace 9212 Leg 5
P062	Direct fired glass fiber drying oven, sorter, and classifier with baghouse for Furnace 9212 Leg 6 (Direct Chop Oven & Classifier #2)
P063	Direct fired glass fiber drying oven, sorter, and classifier with baghouse for Furnace 9212 Leg 7 (Direct Chop Oven & Classifier #3)
P064	Direct fired glass fiber drying oven, sorter, and classifier with baghouse for Furnace 9212 Leg 8 (Direct Chop Oven & Classifier #4)
P069	Direct fired glass fiber drying oven, sorter, and classifier with baghouse for Furnace 9211 Leg 5
P070	Direct fired glass fiber drying oven, sorter, and classifier with baghouse for Furnace 9211 Leg 6

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

(1) b)(1)h., d)(8) through d)(12), and e)(8).

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T)	VOC emissions shall not exceed 1.18 tons per month averaged over a 12-month rolling period.
b.	OAC rule 3745-31-05(A)(3) June 30, 2008	PM <sub>10</sub> emissions from P058 shall not exceed 1.14 tons per month averaged over a 12-month rolling period.  PM <sub>10</sub> emissions from P061 shall not exceed 0.37 ton per month averaged over a 12-month rolling period.  PM <sub>10</sub> emissions from P062 and P064 shall not exceed 0.42 ton per month averaged over a 12-month rolling period.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>PM<sub>10</sub> emissions from P063 shall not exceed 0.32 ton per month averaged over a 12-month rolling period.</p> <p>PM<sub>10</sub> emissions from P069 and P070 shall not exceed 1.14 tons per month averaged over a 12-month rolling period.</p> <p>The following emissions limitations apply to P058, P061 through P064, P069, and P070.</p> <p>Install a burner designed to meet 84 lb CO/mmscf natural gas burned.</p> <p>Install a burner designed to meet 100 lb NO<sub>x</sub>/mmscf natural gas burned.</p> <p>Install a burner designed to meet 0.6 lb SO<sub>2</sub>/mmscf natural gas burned.</p> <p>See b)(2)a.</p>
c.	OAC rule 3745-31-05(A)(3)(a)(ii) June 30, 2008	See b)(2)b., b)(2)c. and b)(2)d.
d.	OAC rule 3745-31-05(D) (Synthetic Minor Restrictions to avoid PSD)	<p>PM<sub>10</sub> emissions from P045, P058, P061 through P064, P069, and P070 combined shall not exceed 16.69 tons per rolling, 12-month period.</p> <p>VOC emissions from P045, P058, P061 through P064, P069, and P070 combined shall not exceed 50.10 tons per rolling, 12-month period.</p> <p>See b)(2)e. and f.</p>
e.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
f.	OAC rule 3745-17-11(B)(1)	Particulate emissions shall not exceed 5.2 lbs/hr.
g.	OAC rule 3745-18-06(C)	Exempt – See b)(2)g.
h.	ORC 3704.03(F)(4)	See d)(8) through d)(12) and e)(8).



(2) Additional Terms and Conditions

- a. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).
- b. The requirements referenced by b)(1)c. apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.
- c. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the CO, NO<sub>x</sub>, and SO<sub>2</sub> emissions from this air contaminant source since the uncontrolled potential to emit is less than 10 tons per year.
- d. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM<sub>10</sub> emissions from this air contaminant source since the calculated annual emission rate for PM<sub>10</sub> is less than 10 tons per year taking into account the federally enforceable air pollution control requirements of OAC rule 3745-31-05(D).
- e. The maximum glass dried in the combination of emission units P045, P058, P061 through P064, P069, and P070 shall be limited by either of the following formulas, calculated as a rolling, 12-month summation:

$$16.69 \text{ tons PM}_{10} \geq \sum_{i=1}^n [Q_i \times EF_{PM10_i}] \div 2000 \text{ pounds/ton}$$

$$50.10 \text{ tons VOC} \geq \sum_{i=1}^n [Q_i \times EF_{VOC_i}] \div 2000 \text{ pounds/ton}$$

Where:

Q<sub>i</sub> = total amount of glass for a specific formulation dried in emission units P045, P058, P061 through P064, P069, and P070 for the current month and the previous 11 months i, tons

EF<sub>PM10<sub>i</sub></sub> = emissions unit specific emission factor derived from stack test that matches formulation of glass dried i, pounds PM<sub>10</sub> per ton of glass dried.

EF<sub>VOC<sub>i</sub></sub> = emissions unit specific emission factor derived from stack test that matches formulation of glass dried i, pounds VOC per ton of glass dried.

n = number of different formulations of glass dried in emission units P045, P058, P061 through P064, P069, and P070.



- f. The emissions from this emissions unit shall be vented to the baghouse at all times the emissions unit is in operation
  - g. The permittee has indicated that the only source of SO<sub>2</sub> emissions is from the combustion of natural gas that is used as fuel for the dryer. Since there are no SO<sub>2</sub> emissions from the process materials, the process weight rate for purposes of OAC rule 3745-18-06(C) is zero, since gaseous fuels used solely as fuels and air introduced for combustion are excluded from the process weight rate.
- c) Operational Restrictions
- (1) The permittee shall burn only natural gas in this emissions unit.
  - (2) The testing of trial formulations of glass fiber shall not exceed 3% of the throughput of glass dried in emission units P045, P058, P061 through P064, P069 and P070, combined, on a rolling, 12-month basis.
- d) Monitoring and/or Recordkeeping Requirements
- (1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
  - (2) The permittee shall maintain daily records that document any time periods when the bag house was not in service when the emissions unit was in operation.
  - (3) The permittee shall install, calibrate, maintain, and continuously operate a bag leak detection system.
    - a. 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.
    - b. The bag leak detection system shall be certified by the manufacturer to be capable of detecting particulate emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.
    - c. The bag leak detection system sensor shall produce an output of relative particulate emissions loading, and the permittee shall continuously monitor and record the output signal from the sensor.
    - d. 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.



- e. The bag leak detection system shall be installed downstream of the bag house. Where multiple bag leak detection systems are required, the system instrumentation and alarm may be shared among the monitors.
  - f. Initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time.
  - g. Following the initial adjustment of the bag leak detection system, 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 bag house has been inspected and found to be in good operating condition.
- (4) The permittee shall initiate corrective action within one hour of an alarm from the bag leak detection system and complete corrective actions in a timely manner. Example corrective actions may include:
- a. inspecting the bag house for air leaks, torn or broken bags or filter media, or another conditions that may cause an increase in emission,
  - b. sealing off defective bags or filter media,
  - c. replacing defective bags or filter media, or otherwise repairing the control device,
  - d. sealing off a defective bag house compartment,
  - e. cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system, and
  - f. shutting down the process producing the particulate emissions.
- (5) The permittee shall maintain records of any bag leak detection system alarms, including the date and time of the alarm, when corrective actions were initiated, the cause of the alarm, an explanation of the corrective action taken, and when the cause of the alarm was corrected.
- (6) The permittee shall maintain monthly records of the following for purposes of calculating the rolling, 12-month PM<sub>10</sub> and VOC emissions:
- a. the company identification of each formulation of glass fiber dried;
  - b. the weight, in tons, of each formulation of glass fiber dried;
  - c. the PM<sub>10</sub> and VOC emission factor for each formulation of glass fiber dried;
  - d. the PM<sub>10</sub> and VOC emissions per rolling, 12-month period from P045, P058, P061 through P064, P069, and P070 combined, calculated using the below equations.



$$PM_{10} \geq \sum_{i=1}^n [Q_i \times EF_{PM_{10}i}] \div 2000 \text{ pounds/ton}$$

$$VOC \geq \sum_{i=1}^n [Q_i \times EF_{VOCi}] \div 2000 \text{ pounds/ton}$$

Where:

PM<sub>10</sub> = PM<sub>10</sub> emissions per rolling, 12-month period from P045, P058, P061 through P064, P069, and P070 combined

VOC = VOC emissions per rolling, 12-month period from P045, P058, P061 through P064, P069, and P070 combined

Q<sub>i</sub> = total amount of glass for a specific formulation dried in emission units P045, P058, P061 through P064, P069, and P070 for the current month and the previous 11 months i, tons

EF<sub>PM<sub>10</sub>i</sub> = emissions unit specific emission factor derived from stack test that matches formulation of glass dried i, pounds PM<sub>10</sub> per ton of glass dried.

EF<sub>VOCi</sub> = emissions unit specific emission factor derived from stack test that matches formulation of glass dried i, pounds VOC per ton of glass dried.

n = number of formulations of glass dried in emission units P045, P058, P061 through P064, P069, and P070.

- (7) The permittee shall maintain monthly records of the following information for testing of new glass fiber formulations, as follows:
- throughput of glass dried for the trial runs of new formulation in emission units P045, P058, P061 through P064, P069, and P070, in tons, combined;
  - throughput of glass dried for all formulations in emission units P045, P058, P061 through P064, P069, and P070, in tons, combined;
  - the rolling, 12-month totals of a. and b. above, in tons; and
  - a percentage based on the rolling, 12-month total of glass dried for trial runs for new formulations, as calculated in c. above, divided by the rolling, 12-month total of the throughput of all formulations of glass dried, as calculated in c. above, multiplied by 100%.
- (8) The permit-to-install (PTI) application for these emissions unit(s), P045, P058, P061 through P064, P069, and P070, was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to



this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
  - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
  - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

- d. The following summarizes the results of dispersion modeling for the "worst case" toxic contaminant emitted at 1 or more tons/year:

Toxic Contaminant: Epichlorohydrin

TLV (mg/m<sup>3</sup>): 1.89

Maximum Hourly Emission Rate (lbs/hr): 0.75

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 17.4

MAGLC (ug/m<sup>3</sup>): 45.0



The permittee, has demonstrated that emissions of epichlorohydrin, from emissions unit(s) P045, P058, P061 through P064, P069, and P070, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

- (9) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
  - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
  - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

- (10) The requirements of d)(9) do not apply to the testing of trial formulations of glass fiber, referenced in c)(2), that do not exceed 3% of the throughput of glass dried in emissions units P045, P058, P061 through P064, P069, and P070, combined, on a rolling, 12-month basis
- (11) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s)



modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);

- b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
  - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
  - d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
- (12) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.
- e) Reporting Requirements
- (1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
  - (2) The permittee shall submit quarterly deviation (excursion) reports that identify each day that the bag house was not in service when the emissions unit was in operation.
  - (3) The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which any bag leak detection system alarms were sounded. The reports shall include a summary of the date and time of the alarm(s), when corrective actions were initiated, the cause of the alarm(s), the explanation of the corrective actions taken, and when the cause of the alarm(s) was corrected.
  - (4) The permittee shall submit quarterly deviation (excursion) reports that identify any exceedance of the 16.69 tons PM<sub>10</sub> per rolling, 12-month period or 50.10 tons VOC per rolling, 12-month period from emissions units P045, P058, P061 through P064, P069, and P070 combined.
  - (5) The permittee shall submit quarterly deviation (excursion) reports that identify any exceedance of the 3% throughput of glass dried allowed for trial runs of products as calculated in d)(7)d. for this emission unit.
  - (6) If no deviations occurred during the quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that period.



- (7) The deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.
- (8) The permittee shall submit annual reports that include any changes to any parameter or value used in the dispersion model used to demonstrate compliance with the "Toxic Air Contaminate Statute", ORC 3704.03(F), through the predicted 1 hour maximum concentration. The report should include:
  - a. the original model input;
  - b. the updated model input;
  - c. the reason for the change(s) to the input parameter(s); and
  - d. a summary of the results of the updated modeling, including the input changes; and
  - e. a statement that the model results indicate that the 1-hour maximum ground-level concentration is less than 80% of the MAGLC.

If no changes to the emissions, emissions unit(s), or the exhaust stack have been made during the reporting period, then the report shall include a statement to that effect.

- (9) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- f) Testing Requirements
- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:
    - a. Emission Limitation:  
  
Visible particulate emissions shall not exceed 20% opacity, as a 6-minute average.  
  
Applicable Compliance Method:  
  
When required, compliance shall be determined through visible emissions observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A and the procedures specified in OAC rule 3745-17-03(B)(1).
    - b. Emission Limitation:  
  
Particulate emissions shall not exceed 5.2 lbs/hr.



Applicable Compliance Method:

If required, the permittee shall demonstrate compliance using Method 5 of 40 CFR Part 60, Appendix A.

c. Emission Limitation:

PM<sub>10</sub> emissions from P058 shall not exceed 1.14 tons per month averaged over a 12-month rolling period. PM<sub>10</sub> emissions from P061 shall not exceed 0.37 ton per month averaged over a 12-month rolling period. PM<sub>10</sub> emissions from P062 and P064 shall not exceed 0.42 ton per month averaged over a 12-month rolling period. PM<sub>10</sub> emissions from P063 shall not exceed 0.32 ton per month averaged over a 12-month rolling period. PM<sub>10</sub> emissions from P069 and P070 shall not exceed 1.14 tons per month averaged over a 12-month rolling period.

Applicable Compliance Method:

This emissions limitation was developed by multiplying the PM<sub>10</sub> emission factor supplied by the permittee for each emissions unit (lb/ton) by the maximum process weight rate (tons/hr) multiplied by 8,760 hours/yr divided by 2,000 pounds per ton, and divided by 12 months per year.

The following controlled PM<sub>10</sub> emission factors and maximum process weight rates were used in the above calculation.

<u>Emissions Unit</u>	<u>Production Rate (tons/hr)</u>	<u>Emission Factor (lb/ton)</u>
P058	1.45	2.16
P061	1.45	0.70
P062	1.45	0.80
P063	1.45	0.61
P064	1.45	0.80
P069	1.45	2.16
P070	1.45	2.16

When required, the permittee shall determine the actual PM<sub>10</sub> emission factor in pound per ton of glass dried through emission testing performed in accordance with Methods 201 and 202 of 40 CFR Part 51 Appendix M. Alternate U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

d. Emission Limitation:

1.18 tons of VOC per month averaged over a 12-month rolling period



Applicable Compliance Method:

This emission limitation was developed by multiplying the maximum process weight rate (1.45 tons/hr) by the VOC emission factor supplied by the permittee (2.23 lb/ton) multiplied by the maximum annual hours of operation (8,760 hrs/yr), divided by 2,000 lbs/ton, and divided by 12 months per year.

Compliance with this emission limitation may be determined by multiplying the actual process weight rate per month (tons/month) by the VOC emission factor (lb/ton) multiplied by the 12-month rolling tons of glass dried (tons), divided by 12 months per year.

When required, the permittee shall determine the actual VOC emission factor in pounds per ton of glass dried through emission testing performed in accordance with Methods 1 through 4 and 18, 25 or 25A, as appropriate, of 40 CFR Part 60 Appendix A. Use of Method 18, 25 or 25A is to be selected based on the results of pre-survey stack sampling and U.S. EPA guidance documents. To convert a mass emission value from VOC as carbon to VOC, divide the mass emission value of VOC as carbon by the weight fraction of carbon in the average molecular weight of the VOC emission. The determination of this weight fraction of carbon may be based on standard analytical techniques or material formulation data. Alternate U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

e. Emission Limitation:

The PM<sub>10</sub> emissions from P045, P061 through P064, P069, and P070 combined shall not exceed 16.69 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the emissions limitation shall be determined by the records required by d)(6).

f. Emission Limitation:

The VOC emissions from P045, P061 through P064, P069, and P070 combined shall not exceed 50.10 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the emissions limitation shall be determined by the records required by d)(6).

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

- a. The emission testing shall be conducted to establish an emission factor for each formulation of glass dried for which emission testing has not been previously conducted to establish an emission factor for PM<sub>10</sub> and VOC or when required by the Toledo Division of Environmental Services or Ohio EPA.



Emission testing shall not be required for trial runs of new formulations, provided that trial formulations of glass fiber do not exceed 3% of the throughput of glass dried in emission units P045, P058, P061 through P064, P069 and P070, combined, on a rolling, 12-month basis. The facility shall calculate emissions for these trials using the worst case emission factor established for this emission unit type.

- b. Testing shall take place within 120 days of employing a formulation of glass for which an emission factor has not been established, except as provided in f)(2)a.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass rate(s): For PM<sub>10</sub>, Methods 201 and 202 of 40 CFR Part 51, Appendix M. For VOC, Methods 1 through 4 and 18, 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A. Use of Method 18, 25 or 25A is to be selected based on the results of pre-survey stack sampling and U.S. EPA guidance documents. To convert a mass emission value from VOC as carbon to VOC, divide the mass emission value of VOC as carbon by the weight fraction of carbon in the average molecular weight of the VOC emission. The determination of this weight fraction of carbon may be based on standard analytical techniques or material formulation data. Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.
- d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.
- e. The 3-hour average process weight rate in tons of glass dried per hour, shall be determined during the stack testing, and included in the test report, to allow for a determination of an emission factor in pounds of regulated pollutant per ton of glass dried. The test report shall also include the company identification of the glass formulation that was being dried during the test.
- f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).
- g. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire



data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

- h. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

g) Miscellaneous Requirements

- (1) None.