John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

9/23/2013

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: P0115303
Permit Type: Administrative Modification
County: Lucas

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

How to give us feedback on your permitting experience

Please complete a survey at 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 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,

Michael W. Ahern

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

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

FINAL

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

Facility ID:	0448000012
Permit Number:	P0115303
Permit Type:	Administrative Modification
Issued:	9/23/2013
Effective:	9/23/2013

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

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Authorization

Facility ID:	0448000012
Facility Description:	Fiber Glass Manufacturer
Application Number(s):	M0002315
Permit Number:	P0115303
Permit Description:	Administrative modification to change monitoring terms for baghouse pressure drop to alternative method as outlined in Ohio EPA Permit terms and conditions library.
Permit Type:	Administrative Modification
Permit Fee:	$100.00
Issue Date:	9/23/2013
Effective Date:	9/23/2013

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

Scott J. Nally
Director

Authorization (continued)

Permit Number: P0115303
Permit Description: Administrative modification to change monitoring terms for baghouse pressure drop to alternative method as outlined in Ohio EPA Permit terms and conditions library.

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:	P0112207
General Permit Category and Type:	Not Applicable

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:

(1) Standard Term and Condition A.2.a), Severability Clause

(2) Standard Term and Condition A.3.c) through A. 3.e)General Requirements

(3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements

(4) Standard Term and Condition A.9., Reporting Requirements

(5) Standard Term and Condition A.10., Applicability

(6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install

(7) Standard Term and Condition A.14., Public Disclosure

(8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

(9) Standard Term and Condition A.16., Fees

(10) Standard Term and Condition A.17., Permit Transfers

2. Severability Clause

a) A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

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

3. General Requirements

a) The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and re-issuance, or modification.

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 emissionlimitations, operationalrestrictions, andcontroldeviceoperatingparameterlimitations, 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, andreportingrequirements contained in this permit shall be submitted (i.e., postmarked) to the Toledo Department of Environmental Services every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.

(4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

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

5. Scheduled Maintenance/Malfunction Reporting

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

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

6. Compliance Requirements

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

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

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

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

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

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

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

d) The permittee shall submit progress reports to the Toledo Department of Environmental Services concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:

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

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

7. Best Available Technology

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

8. Air Pollution Nuisance

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

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Toledo Department of Environmental Services.

b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission

limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Toledo Department of Environmental Services. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

10. Applicability

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

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

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

b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as “permanently shut down” in Ohio EPA’s “Air Services” along with the date the emissions unit(s) was permanently

removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).

d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

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

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

12. Permit-To-Operate Application

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

13. Construction Compliance Certification

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

a) Completion of initial installation date shall be enteredupon 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 (i.e., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

16. Fees

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

17. Permit Transfers

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

18. Risk Management Plans

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

19. Title IV Provisions

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

B. Facility-Wide Terms and Conditions

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

   a) None.

C. Emissions Unit Terms and Conditions

1. P045, Gypsum Line Oven with web scrubber control

Operations, Property and/or Equipment Description:

Gypsum Line Oven (9212 Leg 4) with wet scrubber control

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T)	Volatile organic compound (VOC) emissions shall not exceed 2.23 pounds per ton of glass dried.
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001	Filterable particulate emissions (PE) shall not exceed 0.11 pound per hour.
		Particulate matter less than 10 microns (PM_{10}) shall not exceed 0.82 pound per hour.
		Sulfur dioxide (SO_2) emissions shall not exceed 0.01 pound per hour.
		Carbon monoxide (CO) shall not exceed 0.17 pound per hour and 0.75 ton per year.
		Nitrogen oxides (NO_x) shall not exceed 0.20 pound per hour and 0.88 ton per year.
		See b)(2)a through b)(2)d.
c.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions (VE) shall not exceed 20% opacity as a 6-minute average.
d.	OAC rule 3745-17-11(B)(1)	PE shall not exceed 4.17 pounds per hour.
e.	OAC rule 3745-18-06(E)	SO_2 emissions shall not exceed 30.51 pounds per hour.
f.	OAC rule 3745-31-05(D)	PE shall not exceed 0.45 ton per rolling, 12-month period.
		PM_{10} shall not exceed 3.60 tons per rolling, 12-month period.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		SO_2 emissions shall not exceed 0.01 ton per rolling, 12-month period. See b)(2)c.
		See b)(2)e.
g..	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/1/2006	See b)(2)f. and b)(2)g.

(2) Additional Terms and Conditions

a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutant less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the December 1, 2006 version of 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then these emission limits/control measures no longer apply.

b. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).

c. These emission limitations were established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limitations.

d. Visible particulate emissions from the stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average.

e. The maximum glass dried in the combination of emissions units P045, P058, P061-P064, P069, and P070 shall be limited by either of the following formulas, calculated as a rolling, 12-month summation:

$$16.69 \text{ tons PM10} \geq \sum_{i=1}^{n} (Q_i)(EF(PM10)_i) \div 2000 \text{ pounds/ton})$$

$$50.10 \text{ tons VOC} \geq \sum_{i=1}^{n} (Q_i)(EF(VOC)_i) \div 2000 \text{ pounds/ton})$$

Where:

Q_i = total amount of glass for a specific formulation dried in emission units P045, P058, P061-P064, P069, and P070 for the current month and the previous 11 months i, tons
$EF(PM10)_i$ = control specific emission factor derived from stack test that matches formulation of glass dried *i*, pounds PM_{10} per ton of glass dried.
$EF(VOC)_i$ = control 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-P064, P069, and P070

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

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the NO_x, SO_2 and CO emissions from this air contaminant source since the uncontrolled potential to emit for NO_x, SO_2 and CO is each less than 10 tons per year.

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

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

c) Operational Restrictions

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

(2) The permittee shall employ the wet scrubber whenever this emissions unit is in operation.

(3) The pressure drop across the scrubber shall be continuously maintained at a value not less than the pressure drop established during the last emission test demonstrating compliance, while the emissions unit is in operation.

(4) The scrubber water flow rate shall be continuously maintained at a value not less than the value established during the last emission test demonstrating compliance, while the emissions unit is in operation.

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 properly operate and maintain equipment to continuously monitor the static pressure drop across the scrubber and the scrubber water flow rate while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

(3) The permittee shall collect and record the following information a minimum of once during each 8-hour shift:

a. the pressure drop across the scrubber, in inches of water;

b. the scrubber water flow rate, in gallons per minute; and

c. the operating times for the capture (collection) system, control device, monitoring equipment, and this emissions unit.

(4) The permittee shall maintain records, on a monthly basis, of the throughput of glass dried for each formulation, in tons, for this emissions unit as a rolling, 12-month summation.

(5) The permittee shall maintain records, on a monthly basis, of the PM_{10} and VOC emissions (in tons) for the combined emissions units P045, P058, P061-P064, P069, and P070 as a rolling, 12-month summation per the formula in b)(2)e of this emissions unit.

(6) 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.

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 rolling, 12-month summation for the PM_{10} or VOC emissions limits for the combined emissions units P045, P058, P061-P064, P069, and P070.

(3) 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 c)(3) and c)(4). The report shall include date, time of outage or deviation, the amount of deviation, and what was done to correct the problem.

(4) 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.

(5) If no exceedances occurred during the quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that period.

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

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

f) Testing Requirements

(1) Compliance with the 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:

10% opacity as a 6-minute average

20% opacity as a 6-minute average

Applicable Compliance Method:

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

b. Emission Limitation:

0.11 pound of PE per hour

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60 Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

c. Emission Limitation:

4.17 pounds of PE per hour

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60 Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

d. Emission Limitation:

0.82 pound of PM_{10} per hour

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

e. Emission Limitation:

0.01 pound of SO_2 per hour

Applicable Compliance Method:

This emission limitation was developed by a one-time calculation of the potential to emit. The calculation was based on emissions factors developed from US

EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98 as follows: divide the emission factor of 0.6 pound of SO_2 emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 2.0 MMBtu per hour.

f. Emission Limitation:

30.51 pounds of SO_2 per hour

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation with a one-time calculation of the potential to emit. The calculation was based on emissions factors developed from US EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98 as follows: divide the emission factor of 0.6 pound of SO_2 emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 2.0 MMBtu per hour.

g. Emission Limitation:

0.17 pound of CO per hour

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1, dated 7/98, as follows: divide the emission factor of 84 pounds of CO emissions per million standard cubic feet (MMscf) by a heating value of 1,020 Btu per standard cubic foot and multiply the result by the maximum heat input capacity of 2 MMBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 10 of 40 CFR Part 60 Appendix A, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

h. Emission Limitation:

0.75 ton of CO per year

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable hourly CO emission limitation by the maximum annual hours of operation (8,760 hours per year), and then dividing by 2000 pounds per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

i. Emission Limitation:

0.20 pound of NO_x per hour

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1, dated 7/98, as follows: divide the emission factor of 100 pounds of NO_x emissions per MMscf by a heating value of 1,020 Btu per standard cubic foot and multiply the result by the maximum heat input capacity of 2 MMBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 7 of 40 CFR Part 60 Appendix A, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

j. Emission Limitation:

0.88 ton of NO_x per year

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable hourly NO_x emission limitation by the maximum annual hours of operation (8760 hours per year), and then dividing by 2000 pounds per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

k. Emission Limitation:

0.45 ton of PE per rolling, 12-month period

Applicable Compliance Method:

This emission limitation was developed by multiplying the emission factor for the worst case product determined during the most recent stack test which demonstrated compliance with this emission limitation (0.10 pound PE per ton of glass dried per stack test of similar unit dated December 8, 2006) by the maximum throughput of glass fibers for this emissions unit (8979 tons per year) then divided by 2000 pounds per ton.

l. Emission Limitation:

3.60 tons of PM_{10} per rolling, 12-month period

Applicable Compliance Method:

This emission limitation was developed by multiplying the emission factor for the worst case product determined during the most recent stack test which

demonstrated compliance with this emission limitation for PM_{10} (0.80 pound PM_{10} per ton of glass dried per stack test of similar unit dated December 8, 2006) by the maximum throughput of glass fibers for this emissions unit (8979 tons per year) then divided by 2000 pounds per ton.

m. Emission Limitation:

0.01 ton of SO_2 per rolling, 12-month period

Applicable Compliance Method:

This emission limitation was developed by a one-time calculation of the potential to emit. The calculation was based on emissions factors developed from US EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 0.6 pound of SO_2 emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 2.0 MMBtu per hour and then multiply by 8,760 hours per year and divide by 2000 pounds per ton.

n. Emission Limitation:

2.23 pounds of VOC per ton of glass dried

Applicable Compliance Method:

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

o. Emission Limitation:

16.69 tons of PM_{10} per rolling, 12-month period

Applicable Compliance Method:

Compliance shall be shown with this emission limitation by the record keeping requirements specified in d)(5) of this emissions unit.

p. Emission Limitation:

50.10 tons of VOC per rolling, 12-month period

Applicable Compliance Method:

Compliance shall be shown with this emission limitation by the record keeping requirements specified in d)(5) of this emissions unit.

(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 and when required by the Toledo Division of Environmental Services or Ohio EPA Central Office.

b. Testing shall take place within 120 days of employing a formulation of glass for which an emission factor has not been established.

c. The emission testing shall be conducted to demonstrate compliance with the PM_{10}& VOC emission limitation. The testing shall be used to establish a minimum pressure drop and scrubber water flow rate for normal operating conditions of the wet scrubber, assuming compliance is demonstrated.

d. The following test method(s) shall be employed to demonstrate compliance with the allowable mass rate(s): For PM_{10}, 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. Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

e. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

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

g. The permittee shall record pressure drop across the scrubber and the scrubber water flow rate during each test run.

h. The test report shall include a description of the glass formulation that was being produced during the test.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Toledo Division of Environmental Services. 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 Toledo Division of Environmental Services or Ohio EPA Central Office's refusal to accept the results of the emission test(s).

Personnel from the Toledo Division of Environmental Services or Ohio EPA Central Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions

unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or performance of the control equipment.

A comprehensive written report of the results of the emissions test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Toledo Division of Environmental Services or the Ohio EPA Central Office.

g) Miscellaneous Requirements

(1) None.