John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

3/12/2015

Certified Mail

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

Mr. Noah McManus
Johns Manville
925 Carpenter Rd
Defiance, OH 43512

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0320010005
Permit Number: P0118520
Permit Type: Administrative Modification
County: Defiance

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 Ohio EPA DAPC, Northwest District Office at (419)352-8461 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
Ohio EPA-NWDO; Michigan; Indiana

FINAL

Division of Air Pollution Control
Permit-to-Install
for
Johns Manville

Facility ID:	0320010005
Permit Number:	P0118520
Permit Type:	Administrative Modification
Issued:	3/12/2015
Effective:	3/12/2015

Division of Air Pollution Control
Permit-to-Install
for
Johns Manville

Table of Contents

Authorization 1
A. Standard Terms and Conditions 3
1. Federally Enforceable Standard Terms and Conditions 4
2. Severability Clause 4
3. General Requirements 4
4. Monitoring and Related Record Keeping and Reporting Requirements 5
5. Scheduled Maintenance/Malfunction Reporting 6
6. Compliance Requirements 6
7. Best Available Technology 7
8. Air Pollution Nuisance 8
9. Reporting Requirements 8
10. Applicability 8
11. Construction of New Sources(s) and Authorization to Install 8
12. Permit-To-Operate Application 9
13. Construction Compliance Certification 10
14. Public Disclosure 10
15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations 10
16. Fees 10
17. Permit Transfers 10
18. Risk Management Plans 10
19. Title IV Provisions 10
B. Facility-Wide Terms and Conditions 11
C. Emissions Unit Terms and Conditions 13
1. Emissions Unit Group – Unit 89 Collection Modules A,B,C: P048, P049, P050 14
2. P051, Unit 89 - Curing Oven 25

Authorization

Facility ID:	0320010005
Facility Description:	Fiberglass manufacturing
Application Number(s):	M0003267
Permit Number:	P0118520
Permit Description:	Administrative modification to revoke the conditions of PTI #P0115992 and reinstate the conditions of PTI #03-10931 issued on December 6, 2001 for emission units P048 through P051. The project for which PTI #P0115992 was issued will not be implemented and therefore, the conditions set forth in the PTI are not applicable.
Permit Type:	Administrative Modification
Permit Fee:	$400.00
Issue Date:	3/12/2015
Effective Date:	3/12/2015

This document constitutes issuance to:

Johns Manville
925 Carpenter Road
Defiance, OH 43512

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:

Ohio EPA DAPC, Northwest District Office
347 North Dunbridge Road
Bowling Green, OH 43402
(419)352-8461

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: P0118520
Permit Description: Administrative modification to revoke the conditions of PTI #P0115992 and reinstate the conditions of PTI #03-10931 issued on December 6, 2001 for emission units P048 through P051. The project for which PTI #P0115992 was issued will not be implemented and therefore, the conditions set forth in the PTI are not applicable.

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

Emissions Unit ID:	**P048**
Company Equipment ID:	Unit 89 - Collection Module A
Superseded Permit Number:	P0115992
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P049**
Company Equipment ID:	Unit 89 - Collection Module B
Superseded Permit Number:	P0115992
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P050**
Company Equipment ID:	Unit 89 - Collection Module C
Superseded Permit Number:	P0115992
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P051**
Company Equipment ID:	Unit 89 - Curing Oven
Superseded Permit Number:	P0115992
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) 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 Ohio EPA DAPC, Northwest District Office.

(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 Ohio EPA DAPC, Northwest District Office. 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 to the Ohio EPA DAPC, Northwest District Office 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 theOhio EPA DAPC, Northwest District Officein 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 Ohio EPA DAPC, Northwest District Office 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 Ohio EPA DAPC, Northwest District Office.

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 Ohio EPA DAPC, Northwest District Office. 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 beforeoperating 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 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 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. Emissions Unit Group –Unit 89 Collection Modules A,B,C: P048, P049, P050

EU ID	Operations, Property and/or Equipment Description
P048	Unit 89 Collection Module A
P049	Unit 89 Collection Module B
P050	Unit 89 Collection Module C

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D)	Particulate emissions (PE) shall not exceed 66.80 tons per rolling, 365-day period. See b)(2)a.
b.	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of 40 CFR, Part 60 Subpart PPP, 40 CFR, Part 63 Subpart NNN, OAC rule 3745-31-05(D) and OAC rule 3745-17-07(A). <u>PE shall not exceed</u>: For P048, 9.99 pounds per hour (lbs/hr) and 42.96 tons per year (TPY); For P049, 9.02 lbs/hr and 38.79 TPY; and For P050, 7.76 lbs/hr and 33.37 TPY. See b)(2)b. <u>For all units individually:</u> Nitrogen oxide (NOx) emissions shall not exceed 1.93 lbs/hr and 8.30 TPY.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Organic compound (OC) emissions shall not exceed 1.66 lbs/hr and 7.14 TPY. Carbon monoxide (CO) emissions shall not exceed 9.10 lbs/hr and 39.13 TPY. Formaldehyde emissions shall not exceed 0.80 lb/hr and 3.44 TPY. Sulfur dioxide (SO2) emissions shall not exceed 1.0 lbs/hr, 4.30 tons SO2/yr
c.	40 CFR, Part 63, Subpart NNN [40 CFR 63.1380 – 1399] [In accordance with 40 CFR 63.1380(b)(2), this emissions unit is an existing rotary spin wool fiberglass manufacturing line producing a bonded wool fiberglass building insulation product.]	The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 0.6 kg of formaldehyde per mega gram (1.2 lb of formaldehyde per ton) of glass pulled from each existing rotary spin manufacturing line.
d.	40 CFR, Part 60, Subpart PPP [40 CFR 60.680-685] [In accordance with 40 CFR 60.680, this emissions unit is a rotary spin wool fiberglass manufacturing line that commenced construction, modification or reconstruction after February 7, 1984.]	The permittee shall not cause to be discharged into the atmosphere from this emissions unit any gases which contain PE in excess of 5.5 kg/Mg (11.0 lbs/ton) of glass pulled.
e.	OAC rule 3745-17-07(A)	Visible PE from the stack servicing this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
f.	OAC rule 3745-17-11(B)	See b)(2)d.
g.	OAC rule 3745-21-07(M)	See b)(2)e.
h.	40 CFR 63.1 – 15 [40 CFR 63.1380(d)]	Table 1 of Subpart NNN of 40 CFR, Part 63 – Applicability of General Provisions to Subpart NNN shows which parts of the general provisions in 40 CFR 63.1 -15 apply.

(2) Additional Terms and Conditions

a. The permittee has requested a federally enforceable restriction of 66.80 tons PE per rolling, 365-day period for purposes of avoiding PSD.

The combined annual PE from Line 89, which includes emissions units P047, P048, P049, P050, P051, P052, P054 and P055, shall not exceed 66.80 tons, based upon a rolling, 365-day summation of emissions.

b. The "Best Available Technology" (BAT) requirement for this emissions unit has been determined to be the use of a venturi scrubber.

c. All PE is assumed to be in the form of PM10.

d. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

e. This emissions unit is not subject to the requirements of the rule because it does not meet all of the conditions outlined in OAC rule 3745-21-07(M)(3)(a).

c) Operational Restrictions

(1) The maximum annual number of operating hours for this emissions unit shall not exceed 8,600, based upon a rolling, 12-month summation of the monthly numbers of operating hours.

(2) The permittee must initiate corrective action within 1 hour when the average pressure drop, liquid flow rate, or chemical feed rate for any 3-hour block period is outside the limits established during the performance tests as specified in 40 CFR 63.1384 for each wet scrubbing control device and complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan.

(3) The permitee must implement a QIP consistent with the compliance assurance monitoring provisions of 40 CFR, Part 64, Subpart D when any scrubber parameter is outside the limit(s) established during the performance test as specified in 40 CFR 63.1384 for more than 5 percent of the total operating time in a 6-month block reporting period.

(4) The permittee must operate each scrubber such that each monitored parameter is not outside the limit(s) established during the performance test as specified in 40 CFR Part 63.1384 for more than 10 percent of the total operating time in a 6-month block reporting period.

(5) The permittee must use a resin in the formulation of binder such that the free-formaldehyde content of the resin used does not exceed the free-formaldehyde range contained in the specification for the resin used during the performance test as specified in 40 CFR 63.1384.

(6) The permittee must use a binder formulation that does not vary from the specification and operating range established and used during the performance test as specified in 40 CFR 63.1384. For the purposes of this standard, adding or increasing the quantity of urea and/or lignin in the binder formulation does not constitute a change in the binder formulation.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee must operate each scrubber such that each monitored parameter is not outside the limit(s) established during the performance test as specified in 40 CFR 63.1384 for more than 10 percent of the total operating time in a 6-month block reporting period.

(2) The shall install, calibrate, maintain, and operate monitoring devices that continuously monitor and record the gas pressure drop across each scrubber and scrubbing liquid flow rate to each scrubber according to the procedures in the operations, maintenance, and monitoring plan. The pressure drop monitor is to be certified by its manufacturer to be accurate within 250 Pascal (1 inch water gauge) over its operating range, and the flow rate monitor is to be certified by its manufacturer to be accurate within 5 percent over its operating range. The permittee must also continuously monitor and record the feed rate of any chemical(s) added to the scrubbing liquid. 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.

(3) Whenever the monitored value for any parameter deviates from the range(s) or minimum limit(s) 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:

a. a description of the corrective action;

b. the date the corrective action was completed;

c. the date and time the deviation ended;

d. the total period of time (in minutes) during which there was a deviation;

e. the pressure drop and flow rate readings immediately after the corrective action was implemented; and

f. 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.

These range(s) and/or limit(s) for the pressure drop and liquid flow rate 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. The permittee may request revisions to the permitted range or limit for the pressure drop or liquid flow rate based upon information obtained during future performance tests that demonstrate compliance with the allowable particulate emission rate for this/these emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

(4) All monitoring devices required under 40 CFR, Part 60, Subpart PPP shall be recalibrated quarterly in accordance with procedures under section 60.13(b).

(5) The permittee shall maintain monthly records of the following information:

a. the operating hours for each month; and

b. the rolling, 12-month summation of the operating hours.

(6) The permittee shall maintain the following daily records for this emissions unit:

a. the company identification for each product group manufactured;

b. the numbers of hours of production for each product group manufactured;

c. the calculated PE factor (lbs PE/hour of production), based upon the emission factor curve*, for each product group manufactured; and

d. the total PE rate (lbs/day), for all the product groups manufactured [summation of (c x b) for all product groups].

* The permittee calculates the hourly PE by employing a pack factor. The pack factor is the design density of each product produced multiplied by the design thickness of the same product. This resultant value is used to figure out the PE (lbs/hr) from the emission factor curve. The emission factor curve is a statistical polynomial and was derived from multiple stack tests on this emissions unit. The hourly PE calculated from the polynomial is then multiplied by the number of hours of production of the product for which the pack factor was calculated.

(7) The permittee shall calculate and maintain dailyrecords of the particulateemissions and the rolling 365-dayemissions of particulates, in tons, for emissions units P047, P048, P049, P048, P049, P050, P051, P052, P054 and P055, combined.

(8) The permittee must monitor and record the free-formaldehyde content of each resin shipment received and used in the formulation of binder.

(9) The permittee must monitor and record the formulation of each batch of binder used.

(10) The permittee must monitor and record at least once every 8 hours, the product Loss on Ignition (LOI) and product density of each bonded wool fiberglass product manufactured.

(11) The permittee shall develop and implement a written plan as described in 40 CFR Part 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process modifications and control systems used to comply with the standard. In addition to the information required in 40 CFR Part 63.6(e)(3), the plan shall include:

a. procedures to determine and record the cause of the malfunction and the time the malfunction began and ended;

b. corrective actions to be taken in the event of a malfunction of a control device or process modification, including procedures for recording the actions taken to correct the malfunction or minimize emissions; and

c. a maintenance schedule for each control device and process modification that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

(12) The permittee shall keep records of each event as required by 40 CFR Part 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR Part 63.10(e)(3)(iv).

(13) As required by 40 CFR Part 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart:

a. The permittee must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.

b. The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche.

c. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

(14) In addition to the general records required by 40 CFR Part 63.10(b)(2), the permittee shall maintain records of the following information:

a. The formulation of each binder batch and the LOI and density for each product manufactured on a rotary spin manufacturing line subject to the provisions of this subpart, and the free formaldehyde content of each resin shipment received and used in the binder formulation.

b. Scrubber pressure drop, scrubbing liquid flow rate, and any chemical additive (including chemical feed rate to the scrubber), including any period when a parameter level(s) deviated from the established limit(s), the date and time of the deviation, when corrective actions were initiated, the cause of the deviation, an explanation of the corrective actions taken, and when the cause of the deviation was corrected.

e) Reporting Requirements

(1) 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 e)(1)a. or e)(1)b. (above) where a prompt investigation was not conducted;

d. each incident of deviation described in e)(1)a. or e)(1)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;

e. each incident of deviation described in e)(1)a. or e)(1)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.

f. all exceedances of the rolling, 12-month hours of operation restriction of 8,600;

g. all exceedances of the rolling, 365-day PE limitation of 68.8 tons (for emissions units P047, P048, P049, P050, P051, P052, P054 and P055, combined); and

(2) As required by 40 CFR Part 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of the applicable standard or a monitored parameter deviates from the levels established during the performance test. The report shall contain the information specified in 40 CFR Part 63.10(c) as well as the additional records required by the record keeping requirements of 40 CFR Part 63.1386(d). When no deviations have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period.

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:

66.80 tons PE per rolling, 365-day period (for emissions units P047, P048, P049, P050, P051, P052, P054 and P055, combined)

Applicable Compliance Method:

Compliance with the rolling, 365-day PE limitation shall be demonstrated by the record keeping requirements specified in d)(5) and d)(6) of this permit.

b. Emission Limitations:

PE for emissions unit P048 shall not exceed 9.99 lbs/hr and 42.96 tpy.

PE for emissions unit P049 shall not exceed 9.02 lbs/hr and 38.79 tpy.

PE for emissions unit P050 shall not exceed 7.76 lbs/hr and 33.37 tpy.

Applicable Compliance Method:

Compliance with the hourly emission limitations were demonstrated based on stack testing conducted in accordance with Methods 1 through 5 of 40 CFR, Part 60, Appendix A. If required, additional testing shall be conducted at the discretion of the agency.

The annual emission limitations were developed by multiplying the hourly emission limitations by 8,600, and then dividing by 2,000. Therefore, provided compliance is shown with the hourly limitations and the restriction on the annual number of hours of operation of 8,600, compliance shall also be shown with the annual limitations.

c. Emission Limitations:

OC emissions shall not exceed 1.66 lbs/hr and 7.14 tpy.

Applicable Compliance Method:

If required, compliance shall be demonstrated by stack testing conducted in accordance with Methods 1 - 4 and 18, 25 or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly emission limitation by 8,600, and then dividing by 2,000. Therefore, provided compliance is shown with the hourly limitation and the restriction on the annual number of hours of operation of 8,600, compliance shall also be shown with the annual limitation.

d. Emission Limitations:

NOx emissions shall not exceed 1.93 lbs/hr and 8.30 tpy.

Applicable Compliance Method:

If required, compliance shall be demonstrated by stack testing conducted with Methods 1 - 4 and 7E of 40 CFR, Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly emission limitation by 8,600, and then dividing by 2,000. Therefore, provided compliance is shown with the hourly limitation and the restriction on the annual number of hours of operation of 8,600, compliance shall also be shown with the annual limitation.

e. Emission Limitations:

CO emissions shall not exceed 9.10 lbs/hr and 39.13 tpy.

Applicable Compliance Method:

Compliance with the hourly emission limitation was demonstrated based on stack testing conducted in accordance with Methods 1 - 4 and 10 of 40 CFR, Part 60, Appendix A. If required, additional testing shall be conducted at the discretion of the agency.

The annual emission limitation was developed by multiplying the hourly emission limitation by 8,600, and then dividing by 2,000. Therefore, provided compliance is shown with the hourly limitation and the restriction on the annual number of hours of operation of 8,600, compliance shall also be shown with the annual limitation.

f. Emission Limitations:

Formaldehyde emissions shall not exceed 0.80 lb/hr and 3.44 tpy.

Applicable Compliance Method:

If required, compliance shall be demonstrated by stack testing conducted in accordance with Method 316 or 318 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly emission limitation by 8,600, and then dividing by 2,000. Therefore, provided compliance is shown with the hourly limitation and the restriction on the annual number of hours of operation of 8,600, compliance shall also be shown with the annual limitation.

g. Emission Limitations:

SO2 emissions shall not exceed 1.0 lb/hr and 4.30 tpy.

Applicable Compliance Method:

Compliance with the hourly emission limitation was demonstrated based on stack testing conducted in accordance with Methods 1 - 4 and 6 of 40 CFR, Part 60, Appendix A. If required, additional testing shall be conducted at the discretion of the agency.

The annual emission limitation was developed by multiplying the hourly emission limitation by 8,600, and then dividing by 2,000. Therefore, provided compliance is shown with the hourly limitation and the restriction on the annual number of hours of operation of 8,600, compliance shall also be shown with the annual limitation.

h. Emission Limitations:

Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance in accordance with the methods specified in OAC rule 3745-17-03 (B)(1).

i. Emission Limitations:

PE shall not exceed 11.0 lbs/ton of glass pulled (5.5 kg/Mg).

Applicable Compliance Method:

Compliance with the emission limitation was demonstrated based on stack testing conducted in accordance with Methods 1 through 5E of 40 CFR, Part 60, Appendix A. If required, additional testing shall be conducted at the discretion of the agency.

j. Emission Limitation:

Formaldehyde emissions shall not exceed 1.2 lbs per ton of glass pulled.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the monitoring requirements specified in the operation, maintenance and monitoring plan.

(2) Unless disapproved by the Director, the permittee of a rotary spin manufacturing line regulated by this subpart may conduct short-term experimental production runs using binder formulations or other process modifications where the process parameter values would be outside those established during performance tests without first conducting performance tests. Such runs must not exceed 1 week in duration unless the Director approves a longer period. The permittee must notify the Director and postmark or deliver the notification at least 15 days prior to commencement of the short-term experimental production runs. The Director must inform the permittee of a decision to disapprove or must request additional information prior to the date of the short-term experimental

production runs. Notification of intent to perform an experimental short-term production run shall include the following information:

a. The purpose of the experimental production run;

b. The affected line;

c. How the established process parameters will deviate from previously approved levels;

d. The duration of the experimental production run;

e. The date and time of the experimental production run; and

f. A description of any emission testing to be performed during the experimental production run.

g) Miscellaneous Requirements

(1) For all control device and process operating parameters measured during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new control device or process parameter levels, they comply with the applicable emission limits in 40 CFR Part 63.1382. The permittee shall conduct all additional performance tests according to the procedures 40 CFR, Part 63, Subpart A and in 40 CFR, Part 63.1384.

(2) The written operations, maintenance and monitoring plan required by 40 CFR, Part 63.1383(a) has been submitted and approved by the Administrator. This plan shall be updated if the control device and/or process operating parameters measured during the initial performance are modified in accordance with g)(1) above.

2. P051, Unit 89 - Curing Oven

Operations, Property and/or Equipment Description:

Line 89 Curing Oven with thermal oxidizer

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D)	Particulate emissions (PE) shall not exceed 66.80 tons per rolling, 365-day period. See b)(2)a.
b.	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of 40 CFR, Part 60, Subpart PPP, 40 CFR, Part 63 Subpart NNN, OAC rule 3745-31-05(D) and OAC rule 3745-17-07(A). See b)(2)b. PE shall not exceed 1.63 pounds per hour (lbs/hr) and 7.01 tons per year (TPY). [See b)(2)c.] Nitrogen oxide (NOx) emissions shall not exceed 10.54 lbs/hr and 45.32 TPY. Organic compound (OC) emissions shall not exceed 1.21 lbs/hr and 5.20 TPY. Carbon monoxide (CO) emissions shall not exceed 2.01 lbs/hr and 8.64 TPY. Formaldehyde emissions shall not exceed 0.50 lb/hr and 2.15 TPY.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Sulfur dioxide (SO2) emissions shall not exceed 0.50 lb/hr and 2.15 TPY
c.	40 CFR, Part 63, Subpart NNN [40 CFR 63.1380 – 1399] In accordance with 40 CFR 63.1380(b)(2), this emissions unit is an existing rotary spin wool fiberglass manufacturing line producing a bonded wool fiberglass building insulation product.]	The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 0.6 kg of formaldehyde per mega gram (1.2 lb of formaldehyde per ton) of glass pulled.
d.	40 CFR 63.1 – 15 [40 CFR 63.1380(d)]	Table 1 of Subpart NNN of 40 CFR, Part 63 – Applicability of General Provisions to Subpart NNN shows which parts of the general provisions in 40 CFR 63.1 -15 apply.
e.	40 CFR, Part 60, Subpart PPP	The permittee shall not cause to be discharged into the atmosphere from this emissions unit any gases which contain PE in excess of 5.5 kg/Mg (11.0 lbs/ton) of glass pulled.
f.	OAC rule 3745-17-07(A)	Visible PE from the stack servicing this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
g.	OAC rule 3745-17-11(B)	See b)(2)d.
i.	OAC rule 3745-18-06(E)	See b)(2)d.
j.	OAC rule 3745-21-07(M)(4)	Exempt, pursuant to OAC rule 3745-21-07(M)(5)(d)(ii).

(2) Additional Terms and Conditions

a. The permittee has requested a federally enforceable restriction of 66.80 tons PE per rolling, 365-day period for purposes of avoiding PSD.

The combined annual PE from Line 89, which includes emissions units P047, P048, P049, P050, P051, P052, P054 and P055, shall not exceed 66.80 tons, based upon a rolling, 365-day summation of emissions.

b. The "Best Available Technology" (BAT) requirement for this emissions unit has been determined to be the use of a thermal incinerator.

c. All PE is assumed to be in the form of PM10.

d. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

c) Operational Restrictions

(1) The maximum annual number of operating hours for this emissions unit shall not exceed 8,600, based upon a rolling, 12-month summation of the monthly numbers of operating hours.

(2) The use of any liquid organic material or substance containing liquid organic material with a volatile content greater than twenty percent, by volume, is prohibited.

(3) The permittee must operate each incinerator used to control formaldehyde emissions such that any 3-hour block average temperature in the firebox does not fall below the average established during the performance test as specified in 40 CFR 63.1384.

(4) The permittee must use a resin in the formulation of binder such that the free-formaldehyde content of the resin used does not exceed the free-formaldehyde range contained in the specification for the resin used during the performance test as specified in 40 CFR 63.1384.

(5) The permittee must use a binder formulation that does not vary from the specification and operating range established and used during the performance test as specified in 40 CFR 63.1384. For the purposes of this standard, adding or increasing the quantity of urea and/or lignin in the binder formulation does not constitute a change in the binder formulation.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall collect and record the following information each month for this emissions unit:

a. The composition of the volatile content of each material employed; and

b. The liquid organic portion of the volatile content, in % by volume, of each material employed;

(2) The permittee shall maintain the following daily records for this emissions unit:

a. the company identification for each product group manufactured;

b. the numbers of hours of production for each product group manufactured;

c. the calculated PE factor (lbs PE/hour of production), based upon the emission factor curve*, for each product group manufactured; and

d. the total PE rate (lbs/day), for all the product groups manufactured [summation of (c x b) for all product groups].

*The permittee calculates the hourly PE by employing a pack factor. The pack factor is the design density of each product produced multiplied by the design thickness of the same product. This resultant value is used to figure out the PE (lbs/hr) from the emission factor curve. The emission factor curve is a statistical polynomial and was derived from multiple stack tests on this emissions unit. The hourly PE calculated from the polynomial

is then multiplied by the number of hours of production of the product for which the pack factor was calculated.

(3) The permittee shall calculate and maintain dailyrecords of the particulateemissions and the rolling 365-dayemissions of particulates, in tons, for emissions units P047, P048, P049, P048, P049, P050, P051, P052, P054 and P055, combined.

(4) The permittee shall maintain monthly records of the following information:

a. the operating hours for each month; and

b. the rolling, 12-month summation of the operating hours.

(5) The permittee shall properly install, operate, and maintain a monitoring device that continuously measures and records the operating temperature in the firebox of each incinerator when the emissions unit(s) is/are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or ± 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:

a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the firebox of each incineratorfell below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and

b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.

(6) Whenever the monitored average combustion temperature within the thermal oxidizer/incinerator deviates from the range or 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 operation of the control equipment within the acceptable range/limit 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:

a. a description of the corrective action;

b. the date corrective action was completed;

c. the date and time the deviation ended;

d. the total period of time (in minutes) during which there was a deviation;

e. the temperature readings immediately after the corrective action was implemented; and

f. 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 temperature range/limit is 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. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

(7) The permittee must inspect each incinerator at least once per year according to the procedures in the operations, maintenance, and monitoring plan. At a minimum, an inspection must include the following:

a. Inspect all burners, pilot assemblies, and pilot sensing devices for proper operation and clean pilot sensor, as necessary;

b. Ensure proper adjustment of combustion air and adjust, as necessary;

c. Inspect, when possible, internal structures, for example, baffles, to ensure structural integrity per the design specifications;

d. Inspect dampers, fans, and blowers for proper operation;

e. Inspect for proper sealing;

f. Inspect motors for proper operation;

g. Inspect combustion chamber refractory lining and clean and repair/replace lining, as necessary;

h. Inspect incinerator shell for corrosion and/or hot spots;

i. For the burn cycle that follows the inspection, document that the incinerator is operating properly and make any necessary adjustments;

j. Generally observe that the equipment is maintained in good operating condition; and

k. Complete all necessary repairs as soon as practicable.

(8) The permittee must monitor and record the free-formaldehyde content of each resin shipment received and used in the formulation of binder.

(9) The permittee must monitor and record the formulation of each batch of binder used.

(10) The permittee must monitor and record at least once every 8 hours, the product (LOI) and product density of each bonded wool fiberglass product manufactured.

(11) The permittee shall develop and implement a written plan as described in 40 CFR, Part 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process modifications and control systems used to comply with the standard. In addition to the information required in 40 CFR, Part 63.6(e)(3), the plan shall include:

a. Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended;

b. Corrective actions to be taken in the event of a malfunction of a control device or process modification, including procedures for recording the actions taken to correct the malfunction or minimize emissions; and

c. A maintenance schedule for each control device and process modification that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

(12) The permittee shall also keep records of each event as required by 40 CFR, Part 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR, Part 63.10(e)(3)(iv).

(13) As required by 40 CFR, Part 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart:

a. The permittee must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or

record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.

b. The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche.

c. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

(14) In addition to the general records required by 40 CFR, Part 63.10(b)(2), the permittee shall maintain records of the following information:

a. The formulation of each binder batch and the LOI and density for each product manufactured on a rotary spin manufacturing line subject to the provisions of this subpart, and the free formaldehyde content of each resin shipment received and used in the binder formulation.

b. Incinerator operating temperature and results of periodic inspection of incinerator components, including any period when the temperature fell below the established average or the inspection identified problems with the incinerator, the date and time of the problem, when corrective actions were initiated, the cause of the problem, an explanation of the corrective actions taken, and when the cause of the problem was corrected.

e) Reporting Requirements

(1) 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 average combustion temperature within the firebox of each incinerator was outside of the acceptable range;

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 incinerator;

c. each incident of deviation described in e)(1)a. or e)(1)b. (above) where a prompt investigation was not conducted;

d. each incident of deviation described in e)(1)a. or e)(1)b. where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature within the firebox of the incinerator into compliance with the acceptable range, was determined to be necessary and was not taken;

e. each incident of deviation described in e)(1)a. or e)(1)b. where proper records were not maintained for the investigation and/or the corrective action(s);

f. each month during which a non-complying material [See c)(2)] was employed;

g. all exceedances of the rolling, 12-month numbers of operating hours restriction of 8,600; and

h. all exceedances of the rolling, 365-day PE limitation of 66.8 tons (for emissions units P047, P048, P049, P050, P051, P052, P054 and P055, combined).

These deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

(2) As required by 40 CFR, Part 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of the applicable standard or a monitored parameter deviates from the levels established during the performance test. The report shall contain the information specified in 40 CFR, Part 63.10(c) as well as the additional records required by recordkeeping requirements d)(13) and d)(14). When no deviations have occurred, the owner or operator shall submit a report stating that no excess emissions occurred during the reporting period.

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. <u>Emission Limitation</u>:

66.80 tons PE per rolling, 365-day period (for emissions units P047, P048, P049, P050, P051, P052, P054 and P055, combined)

<u>Applicable Compliance Method:</u>

Compliance with the rolling, 365-day PE limitation shall be demonstrated by the record keeping requirements specified in d)(2) and d)(3) of this permit.

b. <u>Emission Limitations</u>:

PE shall not exceed 1.63 lbs/hr and 7.01 tpy.

<u>Applicable Compliance Method:</u>

If required, compliance shall be demonstrated based on the results of stack testing conducted in accordance with Methods 1 through 5 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly emission limitation by 8,600, and then dividing by 2,000. Therefore, provided compliance is shown with the hourly limitation and the restriction on the annual number of hours of operation of 8,600, compliance shall also be shown with the annual limitation.

c. Emission Limitations:

OC emissions shall not exceed 1.21 lbs/hr and 5.20 tpy.

Applicable Compliance Method:

If required, compliance shall be demonstrated by stack testing conducted in accordance with Methods 1 - 4 and 18, 25 or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly emission limitation by 8,600, and then dividing by 2,000. Therefore, provided compliance is shown with the hourly limitation and the restriction on the annual number of hours of operation of 8,600, compliance shall also be shown with the annual limitation.

d. Emission Limitations:

NOx emissions shall not exceed 10.54 lbs/hr and 45.32 tpy.

Applicable Compliance Method:

If required, compliance shall be demonstrated based on the results of stack testing conducted in accordance with Methods 1 - 4 and 7E of 40 CFR, Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly emission limitation by 8,600, and then dividing by 2,000. Therefore, provided compliance is shown with the hourly limitation and the restriction on the annual number of hours of operation of 8,600, compliance shall also be shown with the annual limitation.

e. Emission Limitations:

CO emissions shall not exceed 2.01 lbs/hr and 8.64 tpy.

Applicable Compliance Method:

If required, compliance shall be demonstrated by stack testing conducted in accordance with Methods 1 - 4 and 10 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly emission limitation by 8,600, and then dividing by 2,000. Therefore, provided compliance is shown with the hourly limitation and the restriction on the annual number of hours of operation of 8,600, compliance shall also be shown with the annual limitation.

f. Emission Limitations:

Formaldehyde emissions shall not exceed 0.50 lb/hr and 2.15 tpy.

Applicable Compliance Method:

If required, compliance shall be demonstrated by stack testing conducted in accordance with Methods 1 - 4, 316 or 318 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly emission limitation by 8,600, and then dividing by 2,000. Therefore, provided compliance is shown with the hourly limitation and the restriction on the annual number of hours of operation of 8,600, compliance shall also be shown with the annual limitation.

g. Emission Limitations:

SO2 emissions shall not exceed 0.50 lb/hr and 2.15 tpy.

Applicable Compliance Method:

If required, compliance shall be demonstrated by stack testing conducted in accordance with Methods 1 - 4 and 6 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly emission limitation by 8,600, and then dividing by 2,000. Therefore, provided compliance is shown with the hourly limitation and the restriction on the annual number of hours of operation of 8,600, compliance shall also be shown with the annual limitation.

h. Emission Limitations:

Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

i. Emission Limitations:

PE shall not exceed 11.0 lbs/ton of glass pulled (5.5 kg/Mg).

Applicable Compliance Method:

If required, compliance with the allowable PE limitation above shall be determined based on the results of emission testing conducted in accordance with Methods 1 - 5E of 40 CFR, Part 60, Appendix A.

j. Emission Limitation:

Formaldehyde emissions shall not exceed 1.2 lbs per ton of glass pulled.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the monitoring requirements specified in the operation, maintenance and monitoring plan.

(2) Unless disapproved by the Director, the permittee of a rotary spin manufacturing line regulated by this subpart may conduct short-term experimental production runs using binder formulations or other process modifications where the process parameter values would be outside those established during performance tests without first conducting performance tests. Such runs must not exceed 1 week in duration unless the Director approves a longer period. The permittee must notify the Director and postmark or deliver the notification at least 15 days prior to commencement of the short-term experimental production runs. The Director must inform the permittee of a decision to disapprove or must request additional information prior to the date of the short-term experimental production runs. Notification of intent to perform an experimental short-term production run shall include the following information:

a. The purpose of the experimental production run;

b. The affected line;

c. How the established process parameters will deviate from previously approved levels;

d. The duration of the experimental production run;

e. The date and time of the experimental production run; and

f. A description of any emission testing to be performed during the experimental production run.

g) Miscellaneous Requirements

(1) For all control device and process operating parameters measured during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new control device or process parameter levels, they comply with the applicable emission limits in 40 CFR, Part 63.1382. The permittee shall conduct all additional performance tests according to the procedures 40 CFR, Part 63, Subpart A and in 40 CFR, Part 63.1384.

(2) The written operations, maintenance and monitoring plan required by 40 CFR, Part 63.1383(a) has been submitted and approved by the Administrator. This plan shall be updated if the control device and/or process operating parameters measured during the initial performance are modified in accordance with g)(1) above.