State of Ohio Environmental Protection Agency

Street Address:
Lazarus Gov. Center
122 S. Front Street
Columbus, OH 43215

TELE: (614) 644-3020 **FAX:** (614) 644-2329

Mailing Address:
Lazarus Gov. Center
P.O. Box 1049
Columbus, OH 43216-1049

03/03/05

CERTIFIED MAIL

RE: Draft Title V Significant Permit Modification Chapter 3745-77 permit

01-45-02-0185
OWENS CORNING
MARK P ARNOLD
400 CASE AVE.
P.O. BOX 3012
NEWARK, OH 43058-3012

Dear MARK P ARNOLD:

You are hereby notified that the Ohio Environmental Protection Agency has prepared the enclosed draft of the Title V permit for the facility referenced above. The purpose of this draft is to solicit public comments. A public notice concerning the draft will appear in the Ohio EPA Weekly Review and the major newspaper in the county where the facility is located. Comments and/or a request for a public hearing from the public and any affected parties will be accepted by Central District Office within 30 days of the date of publication in the newspaper. You will be notified in writing if a public hearing is scheduled.

A decision on processing the Title V permit will be made after consideration of written public comments and oral testimony (if a public hearing is conducted). After the comment period, you will be provided with a Preliminary Proposed Title V permit and an opportunity to comment prior to the Proposed Title V permit submittal to USEPA.

If you have any questions or comments concerning this draft Title V permit, please contact Central District Office.

Very truly yours,

Michael W. Ahern

Michael W. Ahern, Supervisor
Field Operations and Permit Section
Division of Air Pollution Control

cc: USEPA (electronic)
Jim Orlemann, DAPC Engineering
Michael Ahern, DAPC PMU
Central District Office

State of Ohio Environmental Protection Agency

DRAFT TITLE V SIGNIFICANT PERMIT MODIFICATION

Original Effective Date:	Expiration Date:	Modification Effective Date:
2/18/04	2/18/09	***To be entered upon final issuance***

This document constitutes issuance of a Title V significant permit modification for Facility ID: 01-45-02-0185 to:

OWENS CORNING
400 CASE AVE.
NEWARK, OH 43055-5893

Emissions Unit ID (Company ID)/Emissions Unit Activity Description

F001 (Plant Roadways & Parking Areas)
Plant Roadways & Parking Areas

F002 (Landfill Fugitive Dust)
Landfill Fugitive Dust

K003 (Binks Paint Booth)
Spray Booth (Spray Guns)

P001 (F-6 Furnace)
F-6 Furnace

P004 (B-4 Electric Melt Furnace)
B-4 Electric Melt Furnace

P005 (C-4 Electric Melt Furnace)
C-4 Electric Melt Furnace

P006 (D-5 Furnace)
D-5 Furnace

P020 (C-4 Forehearth\ Conditioner)
C-4 Forehearth\Conditioner

P021 (F-5 Forehearth\ Conditioner)
F-5 Forehearth\Conditioner

P022 (F-6 Forehearth\ Conditioner)
F-6 Forehearth\Conditioner

P024 (D-5 Forehearth\ Conditioner)
D-5 Forehearth\Conditioner

P026 (B-4 Forming)
B-4 Forming

P027 (C-4 Forming)
C-4 Forming

P028 (D-5 Forming)
D-5 Forming

P031 (F-5/6 Forming)
F-5/6 Forming

P038 (#1 Aeroflex Forming)
#1 Aeroflex Forming

P039 (#2 Aeroflex Forming)
#2 Aeroflex Forming

P044 (#1 Aeroflex Oven)
#1 Aeroflex Oven

P055 (C-4 Oven)
C-4 Oven

P060 (#2 Aeroflex Oven)
#2 Aeroflex Oven

P064 (D-5 Oven)
D-5 Oven

P066 (F-5/6 Oven)
F-5/6 Oven

P072 (D-5 Cooling Sec)
D-5 Cooling Sec

P073 (C-4 Cooling Sec)
C-4 Cooling Sec

P128 (F6/5 Trim)
F6/5 Trim

P129 (Pipe A-3 Furnace)
Pipe A-3 Furnace

P130 (Pipe A-4 Forming)
Pipe A-4 Forming

P131 (RSM (A-5 Oven))
RSM oven

P133 (Pipe CMP -1 Oven)
Pipe CMP -1 Oven

P134 (Pipe CMP-2 Oven)
Pipe CMP-2 Oven

P135 (Pipe CMP-3 Oven)
Pipe CMP-3 Oven

P136 (Pipe Truck Oven #1)
Pipe Truck Oven #1

P140 (B-4 Oven)
B-4 Oven

P141 (B-4 Forehearth\ Conditioner)
B-4 Forehearth\Conditioner

P142 (Pipe CMP-4 Oven)
Pipe CMP-4 Oven

P143 (Pipe A-5 Forming)
Pipe A-5 Forming

P147 (Pipe Truck Oven #2)
Pipe Truck Oven #2

P162 (Scrap Dock Conveyor)
Scrap Dock Conveyor

P174 (Batch Transfer Mixed Batch)
Batch Transfer Mixed Batch

P175 (Batch Vacuum System)
Batch Vacuum System

P176 (B-4 Cooling)
B-4 Cooling

P180 (Batch Mixer)
Batch Mixer

P194 (Pipe CMP-5 Oven)
Pipe CMP-5 Oven

P901 (Batch House Sand Storage, Silo & Unloading)
Batch House Sand Storage Silo & Unloading

You will be contacted approximately eighteen (18) months prior to the expiration date regarding the renewal of this permit. If you are not contacted, please contact the appropriate Ohio EPA District Office or local air agency listed below. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-08(E) and in accordance with the terms of this permit beyond the expiration date, provided that a complete renewal application is submitted no earlier than eighteen (18) months and no later than one-hundred eighty (180) days prior to the expiration date.

Described below is the current Ohio EPA District Office or local air agency that is responsible for processing and administering your Title V permit:

Central District Office
3232 Alum Creek Drive
Columbus, OH 43207-3417
(614) 728-3778

OHIO ENVIRONMENTAL PROTECTION AGENCY

_____

Joseph P. Koncelik
Director

PART I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Section

1. 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, i.e., in Section A.III of Part III of this Title V permit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

i. The date, place (as defined in the permit), and time of sampling or measurements.
ii. The date(s) analyses were performed.
iii. The company or entity that performed the analyses.
iv. The analytical techniques or methods used.
v. The results of such analyses.
vi. The operating conditions existing at the time of sampling or measurement.
(Authority for term: OAC rule 3745-77-07(A)(3)(b)(i))

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 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.
(Authority for term: OAC rule 3745-77-07(A)(3)(b)(ii))

c. The permittee shall submit required reports in the following manner:

i. **All reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations caused by malfunctions shall be submitted in the following manner:**

Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be promptly reported to the Ohio EPA in accordance with OAC rule 3745-15-06. In addition, to fulfill the OAC rule 3745-77-07(A)(3)(c) deviation reporting requirements for malfunctions, written reports that identify each malfunction that occurred during each calendar quarter (including each malfunction reported only verbally in accordance with OAC rule 3745-15-06) shall be submitted by January 31, April 30, July 31, and October 31 of each year in accordance with General Term and Condition A.1.c.ii below; and each report shall cover the previous calendar quarter.

In accordance with OAC rule 3745-15-06, a malfunction constitutes a violation of an emission limitation (or control requirement) and, therefore, is a deviation of the federally enforceable permit requirements. Even though verbal notifications and written reports are required for malfunctions pursuant to OAC rule 3745-15-06, the written reports required pursuant to this term must be submitted quarterly to satisfy the prompt reporting provision of OAC rule 3745-77-07(A)(3)(c).

In identifying each deviation caused by a malfunction, the permittee shall specify the emission limitation(s) (or control requirement(s)) for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. For a specific malfunction, if this information has been provided in a written report that was submitted in accordance with OAC rule 3745-15-06, the permittee may simply reference that written report to identify the deviation. Nevertheless, all malfunctions, including those reported only verbally in accordance with OAC rule 3745-15-06, must be reported in writing on a quarterly basis.

Any scheduled maintenance, as referenced in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described above for malfunctions.
(Authority for term: OAC rule 3745-77-07(A)(3)(c))

ii. **Except as may otherwise be provided in the terms and conditions for a specific emissions unit, i.e., in Section A.IV of Part III of this Title V permit or, in some cases, in Part II of this Title V permit, all reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations of the emission limitations, operational restrictions, and control device operating parameter limitations shall be submitted in the following manner:**

Written reports of (a) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures taken, shall be promptly made to the appropriate Ohio EPA District Office or local air agency. Except as provided below, the written reports shall be submitted by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

In identifying each deviation, the permittee shall specify the emission limitation(s), operational restriction(s), and/or control device operating parameter limitation(s) for which the deviation occurred, describe each deviation, and provide the estimated magnitude and duration of each deviation.

These written reports shall satisfy the requirements (in part) of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations. OAC rule 3745-77-07(A)(3)(c) is not fully satisfied until the permittee addresses all other deviations of the federally enforceable requirements specified in the permit.

If an emissions unit has a deviation reporting requirement for a specific emission limitation, operational restriction, or control device operating parameter limitation that is not on a quarterly basis (e.g., within 30 days following the end of the calendar month, or within 30 or 45 days after the exceedance occurs), that deviation reporting requirement overrides the reporting requirements specified in this General Term and Condition for that specific emission limitation, operational restriction, or control device parameter limitation. Following the provisions of that non-quarterly deviation reporting requirement will also satisfy the requirements (in part) of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations, and additional quarterly deviation reports for that specific emission limitation, operational restriction, or control device parameter limitation are not required pursuant to this General Term and Condition.

See B.6 below if no deviations occurred during the quarter.
(Authority for term: OAC rule 3745-77-07(A)(3)(c))

iii. **All reporting required in accordance with the OAC rule 3745-77-07(A)(3)(c) for other deviations of the federally enforceable permit requirements which are not reported in accordance with General Term and Condition A.1.c.ii above shall be submitted in the following manner:**

Written reports that identify all other deviations of the federally enforceable requirements contained in this permit, including the monitoring, record keeping, and reporting requirements, which are not reported in accordance with General Term and Condition A.1.c.ii above shall be

submitted to the appropriate Ohio EPA District Office or local air agency by January 31 and July 31 of each year; and each report shall cover the previous six calendar months.

In identifying each deviation, the permittee shall specify the federally enforceable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation.

These semi-annual written reports shall satisfy the reporting requirements of OAC rule 3745-77-07(A)(3)(c) for any deviations from the federally enforceable requirements contained in this permit that are not reported in accordance with General Term and Condition A.1.c.ii above.

If no such deviations occurred during a six-month period, the permittee shall submit a semi-annual report which states that no such deviations occurred during that period.
(Authority for term: OAC rules 3745-77-07(A)(3)(c)(i) and (ii))

iv. 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 (including any written malfunction reports required by OAC rule 3745-15-06 that are referenced in the deviation reports) are true, accurate, and complete."
(Authority for term: OAC rule 3745-77-07(A)(3)(c)(iv))

v. Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
(Authority for term: OAC rule 3745-77-07(A)(3)(c))

2. Scheduled Maintenance

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. Except as provided in OAC rule 3745-15-06(A)(3), any scheduled maintenance necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s). Any scheduled maintenance, as defined in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described for malfunctions in General Term and Condition A.1.c.i above.
(Authority for term: OAC rule 3745-77-07(A)(3)(c))

3. Risk Management Plans

If applicable, the permittee shall 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"); and, pursuant to 40 C.F.R. 68.215(a), the permittee shall submit either of the following:

a. a compliance plan for meeting the requirements of 40 C.F.R. Part 68 by the date specified in 40 C.F.R. 68.10(a) and OAC 3745-104-05(A); or

b. as part of the compliance certification submitted under 40 C.F.R. 70.6(c)(5), a certification statement that the source is in compliance with all requirements of 40 C.F.R. Part 68 and OAC Chapter 3745-104, including the registration and submission of the risk management plan.

(Authority for term: OAC rule 3745-77-07(A)(4))

4. 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.

(Authority for term: OAC rule 3745-77-07(A)(5))

5. Severability Clause

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.
(Authority for term: OAC rule 3745-77-07(A)(6))

6. General Requirements

a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.

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, reopened, revoked, or revoked and reissued, for cause, in accordance with A.10 below. 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, reopening 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.

(Authority for term: OAC rule 3745-77-07(A)(7))

7. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78.
(Authority for term: OAC rule 3745-77-07(A)(8))

8. Marketable Permit Programs

No revision of this permit is required under any approved economic incentive, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in this permit.
(Authority for term: OAC rule 3745-77-07(A)(9))

9. Reasonably Anticipated Operating Scenarios

The permittee is hereby authorized to make changes among operating scenarios authorized in this permit without notice to the Ohio EPA, but, contemporaneous with making a change from one operating scenario to another, the permittee must record in a log at the permitted facility the scenario under which the permittee is operating. The permit shield provided in these general terms and conditions shall apply to all operating scenarios authorized in this permit.

(Authority for term: OAC rule 3745-77-07(A)(10))

10. Reopening for Cause

This Title V permit will be reopened prior to its expiration date under the following conditions:

a. Additional applicable requirements under the Act become applicable to one or more emissions units covered by this permit, and this permit has a remaining term of three or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to paragraph (E)(1) of OAC rule 3745-77-08.

b. This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.

c. The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.

d. The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

(Authority for term: OAC rules 3745-77-07(A)(12) and 3745-77-08(D))

11. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that 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, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

(Authority for term: OAC rule 3745-77-07(B))

12. Compliance Requirements

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

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

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

ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with paragraph (E) of OAC rule 3745-77-03.
iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.

c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:

i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

d. Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) and the Administrator of the U.S. EPA in the following manner and with the following content:

i. Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted on or before April 30th of each year during the permit term.
ii. Compliance certifications shall include the following:
(a) An identification of each term or condition of this permit that is the basis of the certification.
(b) The permittee's current compliance status.
(c) Whether compliance was continuous or intermittent.
(d) The method(s) used for determining the compliance status of the source currently and over the required reporting period.
(e) Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.
iii. Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

(Authority for term: OAC rules 3745-77-07(C)(1),(2),(4) and (5) and ORC section 3704.03(L))

13. Permit Shield

a. Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC rule 3745-77-07) shall be deemed compliance with the applicable requirements identified and addressed in this permit as of the date of permit issuance.

b. This permit shield provision shall apply to any requirement identified in this permit pursuant to OAC rule 3745-77-07(F)(2), as a requirement that does not apply to the source or to one or more emissions units within the source.

(Authority for term: OAC rule 3745-77-07(F))

14. Operational Flexibility

The permittee is authorized to make the changes identified in OAC rule 3745-77-07(H)(1)(a) to (H)(1)(c) within the permitted stationary source without obtaining a permit revision, if such change is not a modification under any provision of Title I of the Act [as defined in OAC rule 3745-77-01(JJ)], and does not result in an exceedance of the emissions allowed under this permit (whether expressed therein as a rate of emissions or in terms of total emissions), and the permittee provides the Administrator of the U.S. EPA and the appropriate Ohio EPA District Office or local air agency with written notification within a minimum of seven days in advance of the proposed changes, unless the change is associated with, or in response to, emergency conditions. If less than seven days notice is provided because of a need to respond more quickly to such emergency conditions, the permittee shall provide notice to the Administrator of the U.S. EPA and the appropriate District Office of the Ohio EPA or local air agency as soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).
(Authority for term: OAC rules 3745-77-07(H)(1) and (2))

15. Emergencies

The permittee shall have an affirmative defense of emergency to an action brought for noncompliance with technology-based emission limitations if the conditions of OAC rule 3745-77-07(G)(3) are met. This emergency defense provision is in addition to any emergency or upset provision contained in any applicable requirement.
(Authority for term: OAC rule 3745-77-07(G))

16. Off-Permit Changes

The owner or operator of a Title V source may make any change in its operations or emissions at the source that is not specifically addressed or prohibited in the Title V permit, without obtaining an amendment or modification of the permit, provided that the following conditions are met:

a. The change does not result in conditions that violate any applicable requirements or that violate any existing federally enforceable permit term or condition.

b. The permittee provides contemporaneous written notice of the change to the Director and the Administrator of the U.S. EPA. Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change.

c. The change shall not qualify for the permit shield under OAC rule 3745-77-07(F).

d. The permittee shall keep a record describing all changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.

e. The change is not subject to any applicable requirement under Title IV of the Act or is not a modification under any provision of Title I of the Act.

Paragraph (I) of rule 3745-77-07 of the Administrative Code applies only to modification or amendment of the permittee's Title V permit. The change made may require a permit to install under Chapter 3745-31 of the Administrative Code if the change constitutes a modification as defined in that Chapter. Nothing in paragraph (I) of rule 3745-77-07 of the Administrative Code shall affect any applicable obligation under Chapter 3745-31 of the Administrative Code.
(Authority for term: OAC rule 3745-77-07(I))

17. Compliance Method Requirements

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee, including but not limited to,

any challenge to the Credible Evidence Rule (see 62 Fed. Reg. 8314, Feb. 24, 1997), in the context of any future proceeding.
(This term is provided for informational purposes only.)

18. Insignificant Activities

Each insignificant activity that has one or more applicable requirements shall comply with those applicable requirements.
(Authority for term: OAC rule 3745-77-07(A)(1))

19. Permit to Install Requirement

Prior to the "installation" or "modification" of any "air contaminant source," as those terms are defined in OAC rule 3745-31-01, a permit to install must be obtained from the Ohio EPA pursuant to OAC Chapter 3745-31.
(Authority for term: OAC rule 3745-77-07(A)(1))

20. 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.
(Authority for term: OAC rule 3745-77-07(A)(1))

21. Permanent Shutdown of an Emissions Unit

The permittee may notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification by the responsible official of the date on which the emissions unit was permanently shut down. Authorization to operate the affected part or activity of the stationary source shall cease upon the date certified by the responsible official that the emissions unit was permanently shut down.

If an emissions unit is permanently shut down (i.e., that 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 and therefore ceases to meet the definition of an "emissions unit" as defined in OAC rule 3745-77-01(O)), rendering existing permit terms and conditions irrelevant, the permittee shall not be required, after the date of the certification and submission to Ohio EPA, to meet any monitoring, record keeping, reporting, or testing requirements, applicable to that emissions unit, except for any residual requirements, such as the quarterly deviation reports, semi-annual deviation reports and annual compliance certification covering the period during which the emissions unit last operated. All records relating to the shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law.

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

B. *State Only Enforceable Section*

1. Reporting Requirements Related to Monitoring and Record Keeping Requirements

The permittee shall submit required reports in the following manner:

a. Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (i) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. 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., 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.)

2. Records Retention Requirements

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.

3. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. 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, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

4. 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 of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. 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 emissions unit(s) that is (are) served by such control system(s).

5. Permit Transfers

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

6. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)

If no emission limitation (or control requirement), operational restriction and/or control device parameter limitation 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 by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

The permittee is not required to submit a quarterly report which states that no deviations occurred during that quarter for the following situations:

a. where an emissions unit has deviation reporting requirements for a specific emission limitation, operational restriction, or control device parameter limitation that override the deviation reporting requirements specified in General Term and Condition A.1.c.ii;

b. where an uncontrolled emissions unit has no monitoring, record keeping, or reporting requirements and the emissions unit's applicable emission limitations are established at the potentials to emit; and

c. where the company's responsible official has certified that an emissions unit has been permanently shut down.

Part II - Specific Facility Terms and Conditions

A. State and Federally Enforceable Section

1. The terms and conditions of this permit do not follow the standard STARS numbering format when referencing the requirements of the MACT Subpart NNN. The Ohio EPA deviated from the traditional format due to the length and complexity of this federal rule.

The terms and conditions of this permit do not follow the standard STARS numbering format when referencing the requirements of the MACT Subpart NNN. The Ohio EPA deviated from the traditional format due to the length and complexity of this federal rule.

1.a Glass-melting furnaces P001, P004, P005, P006, and P129 are subject to 40 CFR 63, Subpart NNN - National Emission Standards for Hazardous Air Pollutants for Wool Fiberglass Manufacturing.

Rotary spin manufacturing line equipment P026, P027, P028, P031, P055, P064, P066, P072, P073, P128, P140 and P176 are subject to 40 CFR 63, Subpart NNN - National Emission Standards for Hazardous Air Pollutants for Wool Fiberglass Manufacturing.

In accordance with 40 CFR 63.1387, the permittee subject to the provisions of 40 CFR 63, Subpart NNN shall demonstrate compliance with the requirements of this subpart no later than June 14, 2002, for an existing glass-melting furnace and rotary spin manufacturing line, and upon startup for a new glass-melting furnace and rotary spin manufacturing line.

Glass-melting furnaces P001, P004, P005, P006, and P129 are subject to 40 CFR 63, Subpart NNN - National Emission Standards for Hazardous Air Pollutants for Wool Fiberglass Manufacturing.

Rotary spin manufacturing line equipment P026, P027, P028, P031, P055, P064, P066, P072, P073, P128, P140 and P176 are subject to 40 CFR 63, Subpart NNN - National Emission Standards for Hazardous Air Pollutants for Wool Fiberglass Manufacturing.

In accordance with 40 CFR 63.1387, the permittee subject to the provisions of 40 CFR 63, Subpart NNN shall demonstrate compliance with the requirements of this subpart no later than June 14, 2002, for an existing glass-melting furnace and rotary spin manufacturing line, and upon startup for a new glass-melting furnace and rotary spin manufacturing line.

2. Emission limits for P001, P004, P005, P006 and P129

In accordance with 40 CFR 63.1382(a)(1), on and after the date the initial performance test is completed or required to be completed under section 63.7 of this part, whichever date is earlier, the permittee shall not discharge or cause to be discharged into the atmosphere in excess of 0.5 pound of PM per ton of glass pulled for each existing glass melt furnace.

Emission limits for P001, P004, P005, P006 and P129

In accordance with 40 CFR 63.1382(a)(1), on and after the date the initial performance test is completed or required to be completed under section 63.7 of this part, whichever date is earlier, the permittee shall not discharge or cause to be discharged into the atmosphere in excess of 0.5 pound of PM per ton of glass pulled for each existing glass melt furnace.

3. Emission limits for P026, P027, P028, P031, P055, P064, P066, P072, P073, P128, P140 and P176

In accordance with 40 CFR 63.1382(a)(2)(i), on and after the date the initial performance test is completed or required to be completed under section 63.7 of this part, whichever date is earlier, the permittee shall not discharge or cause to be discharged into the atmosphere in excess of 1.2 pounds of formaldehyde per ton of glass pulled for each existing rotary spin manufacturing line.

Emission limits for P026, P027, P028, P031, P055, P064, P066, P072, P073, P128, P140 and P176

In accordance with 40 CFR 63.1382(a)(2)(i), on and after the date the initial performance test is completed or required to be completed under section 63.7 of this part, whichever date is earlier, the permittee shall not discharge or cause to be discharged into the atmosphere in excess of 1.2 pounds of formaldehyde per ton of glass pulled for each existing rotary spin manufacturing line.

A. State and Federally Enforceable Section (continued)

4. Operating Limits for P001, P004, P005, P006, and P129

In accordance with 40 CFR 63.1382(b), on and after the date on which the performance test required to be conducted by sections 63.7 and 63.1384 is completed, the permittee must operate all affected control equipment and processes according to the following requirements:

Operating Limits for P001, P004, P005, P006, and P129

In accordance with 40 CFR 63.1382(b), on and after the date on which the performance test required to be conducted by sections 63.7 and 63.1384 is completed, the permittee must operate all affected control equipment and processes according to the following requirements:

4.a Emissions units P001 and P006 will comply with the particulate emission limit in A.2 using a baghouse and baghouse bag leak detection system. The bag leak detection system will be operated as follows:

In accordance with 40 CFR 63.1382(b)(1)(i), the permittee must initiate corrective action within 1 hour of an alarm from a bag leak detection system and complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan;

In accordance with 40 CFR 63.1382(b)(1)(ii), the permittee must implement a Quality Improvement Plan (QIP) consistent with the compliance assurance monitoring provisions of 40 CFR part 64, subpart D when the bag leak detection system alarm is sounded for more than 5 percent of the total operating time in a 6-month block reporting period.

Emissions units P001 and P006 will comply with the particulate emission limit in A.2 using a baghouse and baghouse bag leak detection system. The bag leak detection system will be operated as follows:

In accordance with 40 CFR 63.1382(b)(1)(i), the permittee must initiate corrective action within 1 hour of an alarm from a bag leak detection system and complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan;

In accordance with 40 CFR 63.1382(b)(1)(ii), the permittee must implement a Quality Improvement Plan (QIP) consistent with the compliance assurance monitoring provisions of 40 CFR part 64, subpart D when the bag leak detection system alarm is sounded for more than 5 percent of the total operating time in a 6-month block reporting period.

4.b Emissions unit P129 will comply with the particulate emission limit in A.2 using an electrostatic precipitator (ESP). The ESP will have to be operated according to the following requirements:

In accordance with 40 CFR 63.1382(b)(2)(i), the permittee must initiate corrective action within 1 hour when any 3-hour block average voltage at each field within the ESP is outside the limit(s) established during the performance test as specified in section 63.1384 and complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan;

In accordance with 40 CFR 63.1382(b)(2)(ii), the permittee must implement a QIP consistent with the compliance assurance monitoring provisions of 40 CFR part 64 subpart D when the voltage at each field within the ESP is outside the limit(s) established during the performance test as specified in section 63.1384 for more than 5 percent of the total operating time in a 6-month block reporting period;

In accordance with 40 CFR 63.1382(b)(2)(iii), the permittee must operate the ESP such that the voltage at each field within the ESP is not outside the limit(s) established during the performance test as specified in section 63.1384 for more than 10 percent of the total operating time in a 6-month block reporting period.

A. State and Federally Enforceable Section (continued)

Emissions unit P129 will comply with the particulate emission limit in A.2 using an electrostatic precipitator (ESP). The ESP will have to be operated according to the following requirements:

In accordance with 40 CFR 63.1382(b)(2)(i), the permittee must initiate corrective action within 1 hour when any 3-hour block average voltage at each field within the ESP is outside the limit(s) established during the performance test as specified in section 63.1384 and complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan;

In accordance with 40 CFR 63.1382(b)(2)(ii), the permittee must implement a QIP consistent with the compliance assurance monitoring provisions of 40 CFR part 64 subpart D when the voltage at each field within the ESP is outside the limit(s) established during the performance test as specified in section 63.1384 for more than 5 percent of the total operating time in a 6-month block reporting period;

In accordance with 40 CFR 63.1382(b)(2)(iii), the permittee must operate the ESP such that the voltage at each field within the ESP is not outside the limit(s) established during the performance test as specified in section 63.1384 for more than 10 percent of the total operating time in a 6-month block reporting period.

4.c Emissions units P004 and P005 will comply with the particulate emission limit in A.2 as follows:

The permittee must initiate corrective action within 1 hour when the batch wetting water flow rate, in gallons per minute, is below the limit specified in the terms and conditions for P004 and P005, and the permittee shall complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan.

Emissions units P004 and P005 will comply with the particulate emission limit in A.2 as follows:

The permittee must initiate corrective action within 1 hour when the batch wetting water flow rate, in gallons per minute, is below the limit specified in the terms and conditions for P004 and P005, and the permittee shall complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan.

4.d In accordance with 40 CFR 63.1382(b)(5)(i), the permittee must initiate corrective action within 1 hour when the average glass pull rate of any 4-hour block period for glass melting furnaces equipped with continuous glass pull rate monitors, or daily glass pull rate for glass melting furnaces not so equipped, exceeds the average glass pull rate established during the performance test as specified in section 63.1384, by greater than 20 percent and complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan.

In accordance with 40 CFR 63.1382(b)(5)(ii), the permittee must implement a QIP consistent with the compliance assurance monitoring provisions of 40 CFR part 64, subpart D when the glass pull rate exceeds, by more than 20 percent, the average glass pull rate established during the performance test as specified in section 63.1384 for more than 5 percent of the total operating time in a 6-month block reporting period.

In accordance with 40 CFR 63.1382(b)(5)(iii), the permittee must operate each glass-melting furnace such that the glass pull rate does not exceed, by more than 20 percent, the average glass pull rate established during the performance test as specified in section 63.1384 for more than 10 percent of the total operating time in a 6-month block reporting period.

A. State and Federally Enforceable Section (continued)

In accordance with 40 CFR 63.1382(b)(5)(i), the permittee must initiate corrective action within 1 hour when the average glass pull rate of any 4-hour block period for glass melting furnaces equipped with continuous glass pull rate monitors, or daily glass pull rate for glass melting furnaces not so equipped, exceeds the average glass pull rate established during the performance test as specified in section 63.1384, by greater than 20 percent and complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan.

In accordance with 40 CFR 63.1382(b)(5)(ii), the permittee must implement a QIP consistent with the compliance assurance monitoring provisions of 40 CFR part 64, subpart D when the glass pull rate exceeds, by more than 20 percent, the average glass pull rate established during the performance test as specified in section 63.1384 for more than 5 percent of the total operating time in a 6-month block reporting period.

In accordance with 40 CFR 63.1382(b)(5)(iii), the permittee must operate each glass-melting furnace such that the glass pull rate does not exceed, by more than 20 percent, the average glass pull rate established during the performance test as specified in section 63.1384 for more than 10 percent of the total operating time in a 6-month block reporting period.

5. Operating Limits for P026, P027, P028, P031, P055, P064, P066, P072, P073, P128, P140 and P176

In accordance with 40 CFR 63.1382(b), on and after the date on which the performance test required to be conducted by sections 63.7 and 63.1384 is completed, the permitee must operate all affected control equipment and processes according to the following requirements:

In accordance with 63.1382(b)(6), the permittee must operate each incinerator used to control formaldehyde emissions from forming or curing 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 section 63.1384.

In accordance with 63.1382(b)(7)(i), 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 section 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.

In accordance with 63.1382(b)(7)(ii), the permittee must implement a QIP consistent with the compliance assurance moitoring 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 section 63.1384 for more than 5 percent of the total operating time in a 6-month block reporting period.

In accordance with 63.1382(b)(7)(iii), 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 section 63.1384 for more than 10 percent of the total operating time in a 6-month block reporting period.

A. State and Federally Enforceable Section (continued)

In accordance with 40 CFR 63.1382(b)(8)(i), the permittee must initiate corrective action within 1 hour when the monitored process parameter level(s) is outside the limit(s) established during the performance test as specified in section 63.1384 for the process modification(s) used to control formaldehyde emissions and complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan.

In accordance with 40 CFR 63.1382(b)(8)(ii), the permittee must implement a QIP consistent with the compliance assurance monitoring provisions of 40 CFR part 64, subpart D when the process parameter(s) is outside the limit(s) established during the performance test as specified in section 63.1384 for more than 5 percent of the total operating time in a 6-month block reporting period.

In accordance with 40 CFR 63.1382(b)(8)(iii), the permittee must operate the process modifications such that the monitored process parameter(s) is not outside the limit(s) established during the performance test as specified in section 63.1384 for more than 10 percent of the total operating time in a 6-month block reporting period.

In accordance with 40 CFR 63.1382(b)(9), 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 section 63.1384.

In accordance with 40 CFR 63.1382(b)(10), 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 section 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.

Operating Limits for P026, P027, P028, P031, P055, P064, P066, P072, P073, P128, P140 and P176

In accordance with 40 CFR 63.1382(b), on and after the date on which the performance test required to be conducted by sections 63.7 and 63.1384 is completed, the permitee must operate all affected control equipment and processes according to the following requirements:

In accordance with 63.1382(b)(6), the permittee must operate each incinerator used to control formaldehyde emissions from forming or curing 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 section 63.1384.

In accordance with 63.1382(b)(7)(i), 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 section 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.

In accordance with 63.1382(b)(7)(ii), the permittee must implement a QIP consistent with the compliance assurance moitoring 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 section 63.1384 for more than 5 percent of the total operating time in a 6-month block reporting period.

In accordance with 63.1382(b)(7)(iii), 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 section 63.1384 for more than 10 percent of the total operating time in a 6-month block reporting period.

A. State and Federally Enforceable Section (continued)

In accordance with 40 CFR 63.1382(b)(8)(i), the permittee must initiate corrective action within 1 hour when the monitored process parameter level(s) is outside the limit(s) established during the performance test as specified in section 63.1384 for the process modification(s) used to control formaldehyde emissions and complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan.

In accordance with 40 CFR 63.1382(b)(8)(ii), the permittee must implement a QIP consistent with the compliance assurance monitoring provisions of 40 CFR part 64, subpart D when the process parameter(s) is outside the limit(s) established during the performance test as specified in section 63.1384 for more than 5 percent of the total operating time in a 6-month block reporting period.

In accordance with 40 CFR 63.1382(b)(8)(iii), the permittee must operate the process modifications such that the monitored process parameter(s) is not outside the limit(s) established during the performance test as specified in section 63.1384 for more than 10 percent of the total operating time in a 6-month block reporting period.

In accordance with 40 CFR 63.1382(b)(9), 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 section 63.1384.

In accordance with 40 CFR 63.1382(b)(10), 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 section 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.

6. Monitoring Requirements

In accordance with 40 CFR 63.1383, on and after the date on which the performance test required to be conducted by sections 63.7 and 63.1384 is completed, the permittee must monitor all affected control equipment and processes according to the following requirements:

a. The permittee of each wool fiberglass manufacturing facility must prepare for each glass-melting furnace and rotary spin manufacturing line subject to the provisions of this subpart, a written operations, maintenance, and monitoring plan. The plan must be submitted to the Administrator for review and approval as part of the application for a part 70 permit. The plan must include the following information:

i. Procedures for the proper operation and maintenance of process modifications and add-on control devices used to meet the emission limits in section 63.1382;

ii. Procedures for the proper operation and maintenance of monitoring devices used to determine compliance, including quarterly calibration and certification of accuracy of each monitoring device according to the manufacturers's instructions; and

iii. Corrective actions to be taken when process parameters or add-on control device parameters deviate from the limit(s) established during initial performance tests.

In accordance with 40 CFR 63.1383(m), for all control device and process operating parameters measured during the initial performance tests, the permittee of the identified glass-melting furnaces and rotary spin manufacturing lines subject to this subpart 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 section 63.1382. The permittee shall conduct all additional performance tests according to the procedures in this part 63, subpart A and in section 63.1384.

A. State and Federally Enforceable Section (continued)

Monitoring Requirements

In accordance with 40 CFR 63.1383, on and after the date on which the performance test required to be conducted by sections 63.7 and 63.1384 is completed, the permittee must monitor all affected control equipment and processes according to the following requirements:

a. The permittee of each wool fiberglass manufacturing facility must prepare for each glass-melting furnace and rotary spin manufacturing line subject to the provisions of this subpart, a written operations, maintenance, and monitoring plan. The plan must be submitted to the Administrator for review and approval as part of the application for a part 70 permit. The plan must include the following information:

i. Procedures for the proper operation and maintenance of process modifications and add-on control devices used to meet the emission limits in section 63.1382;

ii. Procedures for the proper operation and maintenance of monitoring devices used to determine compliance, including quarterly calibration and certification of accuracy of each monitoring device according to the manufacturers's instructions; and

iii. Corrective actions to be taken when process parameters or add-on control device parameters deviate from the limit(s) established during initial performance tests.

In accordance with 40 CFR 63.1383(m), for all control device and process operating parameters measured during the initial performance tests, the permittee of the identified glass-melting furnaces and rotary spin manufacturing lines subject to this subpart 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 section 63.1382. The permittee shall conduct all additional performance tests according to the procedures in this part 63, subpart A and in section 63.1384.

6.a Specific Monitoring Requirements for P001 and P006

In accordance with 40 CFR 63.1383(b)(1), where a baghouse is used to control particulate emissions from a glass-melting furnace, the permittee shall calibrate, maintain, and continuously operate a bag leak detection system.

i. The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.

ii. The bag leak detection system sensor must produce output of relative particulate emissions.

iii. The bag leak detection system must be equipped with an alarm system that will sound automatically when an increase in relative particulate emissions over a preset level is detected and the alarm must be located such that it can be heard by the appropriate plant personnel.

iv. For positive pressure fabric filter systems, a bag leak detection system must be installed in each baghouse compartment or cell. If a negative pressure or induced air baghouse is used, the bag leak detection system must be installed downstream of the baghouse. Where multiple bag leak detection systems are required (for either type of baghouse), the system instrumentation and alarm may be shared among the monitors.

v. A triboelectric bag leak detection system shall be installed, operated, adjusted, and maintained in a manner consistent with the U.S. Environmental Protection Agency guidance, "Fabric Filter Bag Leak Detection Guidance" (EPA-454/R-98-015, September 1997). Other bag leak detection systems shall be installed, operated, adjusted, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.

A. State and Federally Enforceable Section (continued)

vi. Initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time.

vii. Following the initial adjustment, the permittee shall not adjust the range, averaging period, alarm setpoints, or alarm delay time except as detailed in the approved operations, maintenance, and monitoring plan required under 63.1383(a). In no event shall the range be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless a responsible official as defined in section 63.2 of the general provisions in subpart A of this part certifies that the baghouse has been inspected and found to be in good operating condition.

In accordance with 40 CFR 63.1383(b)(2), the operations, maintenance, and monitoring plan required by 40 CFR 63.1383(a) must specify corrective actions to be followed in the event of a bag leak detection system alarm. Example corrective actions that may be included in the plan include the following:

i. Inspecting the baghouse for air leaks, torn or broken bags or filter media, or any other conditions that may cause an increase in emissions.
ii. Sealing off defective bags or filter media.
iii. Replacing defective bags or filter media, or otherwise repairing the control device.
iv. Sealing off a defective baghouse compartment.
v. Cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system.
vi. Shutting down the process producing the particulate emissions.

Specific Monitoring Requirements for P001 and P006

In accordance with 40 CFR 63.1383(b)(1), where a baghouse is used to control particulate emissions from a glass-melting furnace, the permittee shall calibrate, maintain, and continuously operate a bag leak detection system.

i. The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.

ii. The bag leak detection system sensor must produce output of relative particulate emissions.

iii. The bag leak detection system must be equipped with an alarm system that will sound automatically when an increase in relative particulate emissions over a preset level is detected and the alarm must be located such that it can be heard by the appropriate plant personnel.

iv. For positive pressure fabric filter systems, a bag leak detection system must be installed in each baghouse compartment or cell. If a negative pressure or induced air baghouse is used, the bag leak detection system must be installed downstream of the baghouse. Where multiple bag leak detection systems are required (for either type of baghouse), the system instrumentation and alarm may be shared among the monitors.

v. A triboelectric bag leak detection system shall be installed, operated, adjusted, and maintained in a manner consistent with the U.S. Environmental Protection Agency guidance, "Fabric Filter Bag Leak Detection Guidance" (EPA-454/R-98-015, September 1997). Other bag leak detection systems shall be installed, operated, adjusted, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.

A. State and Federally Enforceable Section (continued)

vi. Initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time.

vii. Following the initial adjustment, the permittee shall not adjust the range, averaging period, alarm setpoints, or alarm delay time except as detailed in the approved operations, maintenance, and monitoring plan required under 63.1383(a). In no event shall the range be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless a responsible official as defined in section 63.2 of the general provisions in subpart A of this part certifies that the baghouse has been inspected and found to be in good operating condition.

In accordance with 40 CFR 63.1383(b)(2), the operations, maintenance, and monitoring plan required by 40 CFR 63.1383(a) must specify corrective actions to be followed in the event of a bag leak detection system alarm. Example corrective actions that may be included in the plan include the following:

i. Inspecting the baghouse for air leaks, torn or broken bags or filter media, or any other conditions that may cause an increase in emissions.
ii. Sealing off defective bags or filter media.
iii. Replacing defective bags or filter media, or otherwise repairing the control device.
iv. Sealing off a defective baghouse compartment.
v. Cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system.
vi. Shutting down the process producing the particulate emissions.

6.b Specific Monitoring Requirements for P129

In accordance with 40 CFR 63.1383(c)(1), where an ESP is used to control particulate emissions from a glass-melting furnace, the permittee must monitor the ESP according to the procedures in the operations, maintenance, and monitoring plan.

In accordance with 40 CFR 63.1383(c)(2), the operations, maintenance, and monitoring plan for the ESP must contain the following information:

i. The ESP operating parameter(s), such as secondary voltage of each electrical field, to be monitored and the minimum and/or maximum value(s) that will be used to identify any operational problems;

ii. A schedule for monitoring the ESP operating parameter(s);

iii. Recordkeeping procedures, consistent with the recordkeeping requirements of section 63.1386, to show that the ESP operating parameter(s) is within the limit(s) established during the performance test; and

iv. Procedures for the proper operation and maintenance of the ESP.

Specific Monitoring Requirements for P129

In accordance with 40 CFR 63.1383(c)(1), where an ESP is used to control particulate emissions from a glass-melting furnace, the permittee must monitor the ESP according to the procedures in the operations, maintenance, and monitoring plan.

In accordance with 40 CFR 63.1383(c)(2), the operations, maintenance, and monitoring plan for the ESP must contain the following information:

i. The ESP operating parameter(s), such as secondary voltage of each electrical field, to be monitored and the minimum and/or maximum value(s) that will be used to identify any operational problems;

ii. A schedule for monitoring the ESP operating parameter(s);

iii. Recordkeeping procedures, consistent with the recordkeeping requirements of section 63.1386, to show that the ESP operating parameter(s) is within the limit(s) established during the performance test; and

iv. Procedures for the proper operation and maintenance of the ESP.

A. State and Federally Enforceable Section (continued)

6.c Specific Monitoring Requirements for P004 and P005

In accordance with 40 CFR 63.1381(d), the permittee must measure and record at least once per shift the batch wetting flow rates as specified in the terms and conditions for P004 and P005.

Specific Monitoring Requirements for P004 and P005

In accordance with 40 CFR 63.1381(d), the permittee must measure and record at least once per shift the batch wetting flow rates as specified in the terms and conditions for P004 and P005.

6.d Specific Monitoring Requirements for P001, P004, P005, P006 and P129

In accordance with 40 CFR 63.1383(f)(1), the permittee of an existing glass-melting furnace equipped with continuous glass pull rate monitors must monitor and record the glass pull rate on an hourly basis. For glass-melting furnaces that are not equipped with continuous glass pull rate monitors, the glass pull rate must be monitored and recorded once per day.

In accordance with 40 CFR 63.1383(f)(2), on any new glass-melting furnace, the owner or operator must install, calibrate, and maintain a continuous glass pull rate monitor that monitors and records on an hourly basis the glass pull rate.

Specific Monitoring Requirements for P001, P004, P005, P006 and P129

In accordance with 40 CFR 63.1383(f)(1), the permittee of an existing glass-melting furnace equipped with continuous glass pull rate monitors must monitor and record the glass pull rate on an hourly basis. For glass-melting furnaces that are not equipped with continuous glass pull rate monitors, the glass pull rate must be monitored and recorded once per day.

In accordance with 40 CFR 63.1383(f)(2), on any new glass-melting furnace, the owner or operator must install, calibrate, and maintain a continuous glass pull rate monitor that monitors and records on an hourly basis the glass pull rate.

A. State and Federally Enforceable Section (continued)

6.e Specific Monitoring Requirements for P055 and P066

In accordance with 63.1383(g)(1), the permittee who uses an incinerator to control formaldehyde emissions from forming or curing shall install, calibrate, maintain, and operate a monitoring device that continuously measures and records the operating temperature in the firebox of each incinerator.

In accordance with 40 CFR 63.1383(g)(2), 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:

(i) Inspect all burners, pilot assemblies, and pilot sensing devices for proper operation and clean pilot sensor, as necessary;

(ii) Ensure proper adjustment of combustion air and adjust, as necessary;

(iii) Inspect, when possible, internal structures, for example, baffles, to ensure structural integrity per the design specifications;

(iv) Inspect dampers, fans, and blowers for proper operation;

(v) Inspect for proper sealing;

(vi) Inspect motors for proper operation;

(vii) Inspect combustion chamber refractory lining and clean and repair/replace lining, as necessary;

(viii) Inspect incinerator shell for corrosion and/or hot spots;

(ix) For the burn cycle that follows the inspection, document that the incinerator is operating properly and make any necessary adjustments;

(x) Generally observe that the equipment is maintained in good operating condition; and

(xi) Complete all necessary repairs as soon as practicable.

A. State and Federally Enforceable Section (continued)

In accordance with 40 CFR 63.1383(h), the permittee who uses a wet scrubbing control device to control formaldehyde emissions must 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 pascals (+/- 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.

In accordance with 63.1383(i)(1), the permittee who uses process modifications to control formaldehyde emissions must establish a correlation between formaldehyde emissions and a process parameter(s) to be monitored.

(2) The permittee must monitor the established parameter(s) according to the procedures in the operations, maintenance, and monitoring plan.

(3) The permittee must include as part of their operations, maintenance, and monitoring plan the following information:

(i) Procedures for the proper operation and maintenance of the process;

(ii) Process parameter(s) to be monitored to demonstrate compliance with the applicable emission limits in section 63.1382. Examples of process parameters include loss on ignition (LOI), binder solids content, and binder application rate;

(iii) Correlation(s) between process parameter(s) to be monitored and formaldehyde emissions;

(iv) A schedule for monitoring the process parameter(s); and

(v) Recordkeeping procedures, consistent with the recordkeeping requirements of section 63.1386, to show that the process parameter value(s) established during the performance test is not exceeded.

In accordance with 40 CFR 63.1383(j), the permittee must monitor and record the free-formaldehyde content of each resin shipment received and used in the formulation of binder.

In accordance with 40 CFR 63.1383(k), the permittee must monitor and record the formulation of each batch of binder used.

In accordance with 40 CFR 63.1383(l), 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.

A. State and Federally Enforceable Section (continued)

Specific Monitoring Requirements for P055 and P066

In accordance with 63.1383(g)(1), the permittee who uses an incinerator to control formaldehyde emissions from forming or curing shall install, calibrate, maintain, and operate a monitoring device that continuously measures and records the operating temperature in the firebox of each incinerator.

In accordance with 40 CFR 63.1383(g)(2), 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:

(i) Inspect all burners, pilot assemblies, and pilot sensing devices for proper operation and clean pilot sensor, as necessary;

(ii) Ensure proper adjustment of combustion air and adjust, as necessary;

(iii) Inspect, when possible, internal structures, for example, baffles, to ensure structural integrity per the design specifications;

(iv) Inspect dampers, fans, and blowers for proper operation;

(v) Inspect for proper sealing;

(vi) Inspect motors for proper operation;

(vii) Inspect combustion chamber refractory lining and clean and repair/replace lining, as necessary;

(viii) Inspect incinerator shell for corrosion and/or hot spots;

(ix) For the burn cycle that follows the inspection, document that the incinerator is operating properly and make any necessary adjustments;

(x) Generally observe that the equipment is maintained in good operating condition; and

(xi) Complete all necessary repairs as soon as practicable.

A. State and Federally Enforceable Section (continued)

In accordance with 40 CFR 63.1383(h), the permittee who uses a wet scrubbing control device to control formaldehyde emissions must 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 pascals (+/- 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.

In accordance with 63.1383(i)(1), the permittee who uses process modifications to control formaldehyde emissions must establish a correlation between formaldehyde emissions and a process parameter(s) to be monitored.

(2) The permittee must monitor the established parameter(s) according to the procedures in the operations, maintenance, and monitoring plan.

(3) The permittee must include as part of their operations, maintenance, and monitoring plan the following information:

(i) Procedures for the proper operation and maintenance of the process;

(ii) Process parameter(s) to be monitored to demonstrate compliance with the applicable emission limits in section 63.1382. Examples of process parameters include loss on ignition (LOI), binder solids content, and binder application rate;

(iii) Correlation(s) between process parameter(s) to be monitored and formaldehyde emissions;

(iv) A schedule for monitoring the process parameter(s); and

(v) Recordkeeping procedures, consistent with the recordkeeping requirements of section 63.1386, to show that the process parameter value(s) established during the performance test is not exceeded.

In accordance with 40 CFR 63.1383(j), the permittee must monitor and record the free-formaldehyde content of each resin shipment received and used in the formulation of binder.

In accordance with 40 CFR 63.1383(k), the permittee must monitor and record the formulation of each batch of binder used.

In accordance with 40 CFR 63.1383(l), 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.

A. State and Federally Enforceable Section (continued)

7. Performance Test Requirements and Reporting

In accordance with 40 CFR 63.1384(a), the permittee subject to the provisions of this subpart shall conduct a performance test to demonstrate compliance with the applicable emission limits in section 63.1382. Compliance is demonstrated when the emission rate of the pollutant is equal to or less than each of the applicable emission limits in section 63.1382. The permittee shall conduct the performance test according to the procedures in 40 CFR Part 63, Subpart A and in this section. Per 63.1384(a), the following requirements must be met:

a. All monitoring systems and equipment must be installed, operational, and calibrated prior to the performance test.

b. Unless a different frequency is specified in this section, the permittee must monitor and record process and/or add-on control device parameters at least every 15 minutes during the performance tests.
The arithmetic average for each parameter must be calculated using all of the recorded measurements for the parameter.

c. During each performance test, the permittee must monitor and record the glass pull rate for each glass-melting furnace and, if different, the glass pull rate for each rotary spin manufacturing line. Record the glass pull rate every 15 minutes during any performance test required by this subpart and determine the arithmetic average of the recorded measurements for each test run and calculate the average of the three test runs.

d. The permittee shall conduct a performance test for each existing and new glass-melting furnace.

e. During the performance test, the permittee of a glass-melting furnace controlled by an ESP shall monitor and record the ESP parameter level(s), as specified in the operations, maintenance, and monitoring plan, and establish the minimum and/or maximum value(s) that will be used to demonstrate compliance after the initial performance test.

f. During the performance test, the permittee of a cold top electric furnace that is not equipped with an add-on control device for PM emissions control, must monitor and record the temperature 46 to 61 centimeters (18 to 24 inches) above the molten glass surface to ensure that the maximum temperature does not exceed 120 degrees C (250 degrees F).

g. During the performance test, the permittee of a glass melting furnace (other than a cold top electric furnace) that is not equipped with an add-on control device for PM emissions control, must monitor and record the furnace parameter level, and establish the minimum and/or maximum value(s) that will be used to demonstrate compliance after the initial performance test.

h. The permittee must conduct a performance test for each rotary spin manufacturing line, subject to this subpart, while producing the building insulation with the highest LOI expected to be produced on that line.

i. The permittee of each rotary spin manufacturing line regulated by this subpart must conduct performance tests using the resin with the highest free-formaldehyde content. During the performance test of each rotary spin manufacturing line regulated by 40 CFR 63, Subpart NNN, the permittee shall monitor and record the free-formaldehyde content of the resin, the binder formulation used, and the product LOI and density.

A. State and Federally Enforceable Section (continued)

j. During the performance test, the permittee of a rotary spin manufacturing line who plans to use process modifications to comply with the emission limits in section 63.1382 must monitor and record the process parameter level(s), as specified in the operations, maintenance, and monitoring plan, which will be used to demonstrate compliance after the initial performance test.

k. During the performance test, the permittee of a rotary spin manufacturing line who plans to use a wet scrubbing control device to comply with the emission limits in section 63.1382 must continuously monitor and record the pressure drop across the scrubber, the scrubbing liquid flow rate, and addition of any chemical to the scrubber, including the chemical feed rate, and establish the minimum and/or maximum value(s) that will be used to determine compliance after the initial performance test.

l. During the performance test, the permittee of a rotary spin manufacturing line shall continuously record the operating temperature of each incinerator and record the average during each 1-hour test; the average operating temperature of the three 1-hour tests shall be used to monitor compliance.

m. Unless disapproved by the Director (the Ohio EPA, Central District Office), the permittee of a rotary spin regulated by 40 CFR 63, Subpart NNN, 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.

A. State and Federally Enforceable Section (continued)

The Director (the Ohio EPA, Central District Office) 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:

i. The purpose of the experimental production run;

ii. The affected line;

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

iv. The duration of the experimental production run;

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

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

In accordance with 40 CFR 63.1384(b), to determine compliance with the particulate emission (PE) limit for glass-melting furnaces, use the following equation:

E = C x Q x K1/P

Where:
E = Emission rate of PE, kg/Mg (lb/ton) of glass pulled;
C = Concentration of PE, g/dscm (gr/dscf);
Q = Volumetric flow rate of exhaust gases, dscm/h (dscf/h);
K1 = Conversion factor, 1 kg/1,000 g (1 lb/7,000 gr); and
P = Average glass pull rate, Mg/h (tons/h).

In accordance with 40 CFR 63.1384(c), to determine compliance with the emission limit for formaldehyde for rotary spin manufacturing lines, use the following equation:

E = [C x MW x Q x K1 x K2] / [K3 x P x 10^6]
Where:
E = Emission rate of formaldehyde, kg/Mg (lb/ton) of glass pulled;
C = Measured volume fraction of formaldehyde, ppm;
MW = Molecular weight of formaldehyde, 30.03 g/g-mol;
Q = Volumetric flow rate of exhaust gases, dscm/h (dscf/h);
K1 = Conversion factor, 1 kg/1,000 g (1 lb/453.6 g);
K2 = Conversion factor, 1,000 L/m3 (28.3 L/ft3);
K3 = Conversion factor, 24.45 L/g-mol; and
P = Average glass pull rate, Mg/h (tons/h).

A. State and Federally Enforceable Section (continued)

Performance Test Requirements and Reporting

In accordance with 40 CFR 63.1384(a), the permittee subject to the provisions of this subpart shall conduct a performance test to demonstrate compliance with the applicable emission limits in section 63.1382. Compliance is demonstrated when the emission rate of the pollutant is equal to or less than each of the applicable emission limits in section 63.1382. The permittee shall conduct the performance test according to the procedures in 40 CFR Part 63, Subpart A and in this section. Per 63.1384(a), the following requirements must be met:

a. All monitoring systems and equipment must be installed, operational, and calibrated prior to the performance test.

b. Unless a different frequency is specified in this section, the permittee must monitor and record process and/or add-on control device parameters at least every 15 minutes during the performance tests.
The arithmetic average for each parameter must be calculated using all of the recorded measurements for the parameter.

c. During each performance test, the permittee must monitor and record the glass pull rate for each glass-melting furnace and, if different, the glass pull rate for each rotary spin manufacturing line. Record the glass pull rate every 15 minutes during any performance test required by this subpart and determine the arithmetic average of the recorded measurements for each test run and calculate the average of the three test runs.

d. The permittee shall conduct a performance test for each existing and new glass-melting furnace.

e. During the performance test, the permittee of a glass-melting furnace controlled by an ESP shall monitor and record the ESP parameter level(s), as specified in the operations, maintenance, and monitoring plan, and establish the minimum and/or maximum value(s) that will be used to demonstrate compliance after the initial performance test.

f. During the performance test, the permittee of a cold top electric furnace that is not equipped with an add-on control device for PM emissions control, must monitor and record the temperature 46 to 61 centimeters (18 to 24 inches) above the molten glass surface to ensure that the maximum temperature does not exceed 120 degrees C (250 degrees F).

g. During the performance test, the permittee of a glass melting furnace (other than a cold top electric furnace) that is not equipped with an add-on control device for PM emissions control, must monitor and record the furnace parameter level, and establish the minimum and/or maximum value(s) that will be used to demonstrate compliance after the initial performance test.

h. The permittee must conduct a performance test for each rotary spin manufacturing line, subject to this subpart, while producing the building insulation with the highest LOI expected to be produced on that line.

i. The permittee of each rotary spin manufacturing line regulated by this subpart must conduct performance tests using the resin with the highest free-formaldehyde content. During the performance test of each rotary spin manufacturing line regulated by 40 CFR 63, Subpart NNN, the permittee shall monitor and record the free-formaldehyde content of the resin, the binder formulation used, and the product LOI and density.

A. State and Federally Enforceable Section (continued)

j. During the performance test, the permittee of a rotary spin manufacturing line who plans to use process modifications to comply with the emission limits in section 63.1382 must monitor and record the process parameter level(s), as specified in the operations, maintenance, and monitoring plan, which will be used to demonstrate compliance after the initial performance test.

k. During the performance test, the permittee of a rotary spin manufacturing line who plans to use a wet scrubbing control device to comply with the emission limits in section 63.1382 must continuously monitor and record the pressure drop across the scrubber, the scrubbing liquid flow rate, and addition of any chemical to the scrubber, including the chemical feed rate, and establish the minimum and/or maximum value(s) that will be used to determine compliance after the initial performance test.

l. During the performance test, the permittee of a rotary spin manufacturing line shall continuously record the operating temperature of each incinerator and record the average during each 1-hour test; the average operating temperature of the three 1-hour tests shall be used to monitor compliance.

m. Unless disapproved by the Director (the Ohio EPA, Central District Office), the permittee of a rotary spin regulated by 40 CFR 63, Subpart NNN, 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.

A. State and Federally Enforceable Section (continued)

The Director (the Ohio EPA, Central District Office) 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:

i. The purpose of the experimental production run;

ii. The affected line;

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

iv. The duration of the experimental production run;

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

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

In accordance with 40 CFR 63.1384(b), to determine compliance with the particulate emission (PE) limit for glass-melting furnaces, use the following equation:

E = C x Q x K1/P

Where:
E = Emission rate of PE, kg/Mg (lb/ton) of glass pulled;
C = Concentration of PE, g/dscm (gr/dscf);
Q = Volumetric flow rate of exhaust gases, dscm/h (dscf/h);
K1 = Conversion factor, 1 kg/1,000 g (1 lb/7,000 gr); and
P = Average glass pull rate, Mg/h (tons/h).

In accordance with 40 CFR 63.1384(c), to determine compliance with the emission limit for formaldehyde for rotary spin manufacturing lines, use the following equation:

E = [C x MW x Q x K1 x K2] / [K3 x P x 10^6]
Where:
E = Emission rate of formaldehyde, kg/Mg (lb/ton) of glass pulled;
C = Measured volume fraction of formaldehyde, ppm;
MW = Molecular weight of formaldehyde, 30.03 g/g-mol;
Q = Volumetric flow rate of exhaust gases, dscm/h (dscf/h);
K1 = Conversion factor, 1 kg/1,000 g (1 lb/453.6 g);
K2 = Conversion factor, 1,000 L/m3 (28.3 L/ft3);
K3 = Conversion factor, 24.45 L/g-mol; and
P = Average glass pull rate, Mg/h (tons/h).

A. State and Federally Enforceable Section (continued)

8. Test Methods and Procedures

In accordance with 40 CFR 63.1385(a), the permittee shall use the following methods to determine compliance with the applicable emission limits:

a. Method 1 (40 CFR part 60, appendix A) for the selection of the sampling port location and number of sampling ports;

b. Method 2 (40 CFR part 60, appendix A) for volumetric flow rate;

c. Method 3 or 3A (40 CFR part 60, appendix A) for O2 and CO2 for diluent measurements needed to correct the concentration measurements to a standard basis;

d. Method 4 (40 CFR part 60, appendix A) for moisture content of the stack gas;

e. Method 5 (40 CFR part 60, appendix A) for the concentration of PM. Each run shall consist of a minimum run time of 2 hours and a minimum sample volume of 60 dry standard cubic feet (dscf). The probe and filter holder heating system may be set to provide a gas temperature no greater than 177 +/- 14 degrees C (350+/-25 degrees F);

f. Method 316 or Method 318 (appendix A of Part 63) for the concentration of formaldehyde. Each run shall consist of a minimum run time of 1 hour;

g. Method contained in appendix A of Part 63 for the determination of product LOI;

h. Method contained in appendix B of Part 63 for the determination of the free-formaldehyde content of resin;

i. Method contained in appendix C of Part 63 for the determination of product density; and

j. An alternative method, subject to approval by the Administrator.

In accordance with 40 CFR 63.1385(b), each performance test shall consist of 3 runs. The permittee shall use the average of the three runs in the applicable equation for determining compliance.

A. State and Federally Enforceable Section (continued)

Test Methods and Procedures

In accordance with 40 CFR 63.1385(a), the permittee shall use the following methods to determine compliance with the applicable emission limits:

a. Method 1 (40 CFR part 60, appendix A) for the selection of the sampling port location and number of sampling ports;

b. Method 2 (40 CFR part 60, appendix A) for volumetric flow rate;

c. Method 3 or 3A (40 CFR part 60, appendix A) for O2 and CO2 for diluent measurements needed to correct the concentration measurements to a standard basis;

d. Method 4 (40 CFR part 60, appendix A) for moisture content of the stack gas;

e. Method 5 (40 CFR part 60, appendix A) for the concentration of PM. Each run shall consist of a minimum run time of 2 hours and a minimum sample volume of 60 dry standard cubic feet (dscf). The probe and filter holder heating system may be set to provide a gas temperature no greater than 177 +/- 14 degrees C (350+/-25 degrees F);

f. Method 316 or Method 318 (appendix A of Part 63) for the concentration of formaldehyde. Each run shall consist of a minimum run time of 1 hour;

g. Method contained in appendix A of Part 63 for the determination of product LOI;

h. Method contained in appendix B of Part 63 for the determination of the free-formaldehyde content of resin;

i. Method contained in appendix C of Part 63 for the determination of product density; and

j. An alternative method, subject to approval by the Administrator.

In accordance with 40 CFR 63.1385(b), each performance test shall consist of 3 runs. The permittee shall use the average of the three runs in the applicable equation for determining compliance.

9. Record keeping Requirements

In accordance with 40 CFR 63.1386(d)(1), as required by section 63.10(b) of Part 63, the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and Part 63:

(i) 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;

(ii) The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche; and

(iii) The owner or operator may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

In accordance with the particulate control device requirements for P004 and P005, in addition to the general records required by section 63.10(b)(2) of this part, the permittee shall maintain records of the following information:

A. State and Federally Enforceable Section (continued)

Record keeping Requirements

In accordance with 40 CFR 63.1386(d)(1), as required by section 63.10(b) of Part 63, the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and Part 63:

(i) 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;

(ii) The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche; and

(iii) The owner or operator may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

In accordance with the particulate control device requirements for P004 and P005, in addition to the general records required by section 63.10(b)(2) of this part, the permittee shall maintain records of the following information:

9.a Specific Record keeping Requirements for P001, P004, P005, P006 and P129

In accordance with 40 CFR 63.1386(d)(2)(i), any bag leak detection system alarms, including the date and time of the alarm, when corrective actions were initiated, the cause of the alarm, an explanation of the corrective actions taken, and when the cause of the alarm was corrected;

In accordance with 40 CFR 63.1386(d)(2)(ii), ESP parameter value(s) used to monitor ESP performance, including any period when the value(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; and

For batch wetting flow rates, (sources P004 and P005) the date and time of the deviation, when corrective actions were initiated, the cause of the exceedance, an explanation of the corrective actions taken, and when the cause of the exceedance was corrected;

In accordance with 40 CFR 63.1386(d)(2)(iv), uncontrolled glass-melting furnace (that is not a cold top electric furnace) parameter value(s) used to monitor furnace performance, including any period when the value(s) exceeded the established limit(s), the date and time of the exceedance, when corrective actions were initiated, the cause of the exceedance, an explanation of the corrective actions taken, and when the cause of the exceedance was corrected.

A. State and Federally Enforceable Section (continued)

Specific Record keeping Requirements for P001, P004, P005, P006 and P129

In accordance with 40 CFR 63.1386(d)(2)(i), any bag leak detection system alarms, including the date and time of the alarm, when corrective actions were initiated, the cause of the alarm, an explanation of the corrective actions taken, and when the cause of the alarm was corrected;

In accordance with 40 CFR 63.1386(d)(2)(ii), ESP parameter value(s) used to monitor ESP performance, including any period when the value(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; and

For batch wetting flow rates, (sources P004 and P005) the date and time of the deviation, when corrective actions were initiated, the cause of the exceedance, an explanation of the corrective actions taken, and when the cause of the exceedance was corrected;

In accordance with 40 CFR 63.1386(d)(2)(iv), uncontrolled glass-melting furnace (that is not a cold top electric furnace) parameter value(s) used to monitor furnace performance, including any period when the value(s) exceeded the established limit(s), the date and time of the exceedance, when corrective actions were initiated, the cause of the exceedance, an explanation of the corrective actions taken, and when the cause of the exceedance was corrected.

9.b Specific Record keeping Requirements for P026, P027, P028, P031, P055, P064, P066, P072, P073, P128, P140 and P176

In accordance with 40 CFR 63.1386(d)(2)(v), the formulation of each binder batch and the LOI and density for each product manufactured on a rotary spin (RS) 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;

In accordance with 40 CFR 63.1386(d)(2)(vi), process parameter level(s) for RS manufacturing lines that use process modifications to comply with the emission limits, including any period when the 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;

In accordance with 40 CFR 63.1386(d)(2)(vii), 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;

In accordance with 40 CFR 63.1386(d)(2)(viii), 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.

A. State and Federally Enforceable Section (continued)

Specific Record keeping Requirements for P026, P027, P028, P031, P055, P064, P066, P072, P073, P128, P140 and P176

In accordance with 40 CFR 63.1386(d)(2)(v), the formulation of each binder batch and the LOI and density for each product manufactured on a rotary spin (RS) 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;

In accordance with 40 CFR 63.1386(d)(2)(vi), process parameter level(s) for RS manufacturing lines that use process modifications to comply with the emission limits, including any period when the 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;

In accordance with 40 CFR 63.1386(d)(2)(vii), 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;

In accordance with 40 CFR 63.1386(d)(2)(viii), 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.

9.c In accordance with 40 CFR 63.1386(d)(ix), glass pull rate, including any period when the pull rate exceeded the average pull rate established during the most recent emission test that demonstrated compliance with the particulate emission limitation by more than 20 percent, the date and time of the exceedance, when corrective actions were initiated, the cause of the exceedance, an explanation of the corrective actions taken, and when the cause of the exceedance was corrected.

In accordance with 40 CFR 63.1386(d)(ix), glass pull rate, including any period when the pull rate exceeded the average pull rate established during the most recent emission test that demonstrated compliance with the particulate emission limitation by more than 20 percent, the date and time of the exceedance, when corrective actions were initiated, the cause of the exceedance, an explanation of the corrective actions taken, and when the cause of the exceedance was corrected.

10. Performance Test Report and Startup, Shutdown and Malfunction Plan and Reports

In accordance with 40 CFR 63.1386(c)(1), the permittee shall develop and implement a written plan as described in CFR 63.6(e)(3) of this part 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 section 63.6(e)(3), the plan shall include:

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

ii. 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

iii. 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.

In accordance with 63.1386(c)(2), the permittee shall also keep records of each event as required by CFR 63.10(b) of this part 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 CFR 63.10(e)(3)(iv).

A. State and Federally Enforceable Section (continued)

Performance Test Report and Startup, Shutdown and Malfunction Plan and Reports

In accordance with 40 CFR 63.1386(c)(1), the permittee shall develop and implement a written plan as described in CFR 63.6(e)(3) of this part 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 section 63.6(e)(3), the plan shall include:

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

ii. 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

iii. 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.

In accordance with 63.1386(c)(2), the permittee shall also keep records of each event as required by CFR 63.10(b) of this part 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 CFR 63.10(e)(3)(iv).

11. Excess Emission Reports

In accordance with 40 CFR 63.1386(e), as required by CFR 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of all applicable standards or monitored parameters deviate from the levels established during the performance test. The report shall contain the information specified in CFR 63.10(c) of this part as well as the additional records required by the record keeping requirements of paragraph (d) of 63.1386. When no deviations have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period.

Excess Emission Reports

In accordance with 40 CFR 63.1386(e), as required by CFR 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of all applicable standards or monitored parameters deviate from the levels established during the performance test. The report shall contain the information specified in CFR 63.10(c) of this part as well as the additional records required by the record keeping requirements of paragraph (d) of 63.1386. When no deviations have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period.

12. Referenced Sections of 40 CFR Part 63, Subpart A

Referenced Sections of 40 CFR Part 63, Subpart A

A. State and Federally Enforceable Section (continued)

12.a Operation and maintenance requirements

In accordance with 40 CFR 63.6(e)(1)(i), at all times, including periods of startup, shutdown, and malfunction, owners or operators shall operate and maintain any affected source, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards.

(ii) Malfunctions shall be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction plan required in paragraph (e)(3) of this section.

(iii) Operation and maintenance requirements established pursuant to section 112 of the Act are enforceable independent of emissions limitations or other requirements in relevant standards.

(2) Determination of whether acceptable operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures (including the startup, shutdown, and malfunction plan required in paragraph (e)(3) of this section), review of operation and maintenance records, and inspection of the source.

(3) Startup, shutdown, and malfunction plan. (i) The owner or operator of an affected source shall develop and implement a written startup, shutdown, and malfunction plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the relevant standard. As required under section 63.8(c)(1)(i), the plan shall identify all routine or otherwise predictable CMS malfunctions. This plan shall be developed by the owner or operator by the source's compliance date for that relevant standard. The plan shall be incorporated by reference into the source's Title V permit. The purpose of the startup, shutdown, and malfunction plan is to --

(A) Ensure that, at all times, owners or operators operate and maintain affected sources, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards;

(B) Ensure that owners or operators are prepared to correct malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of hazardous air pollutants; and

(C) Reduce the reporting burden associated with periods of startup, shutdown, and malfunction (including corrective action taken to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation).

(ii) During periods of startup, shutdown, and malfunction, the owner or operator of an affected source shall operate and maintain such source (including associated air pollution control equipment) in accordance with the procedures specified in the startup, shutdown, and malfunction plan developed under paragraph (e)(3)(i) of this section.

A. State and Federally Enforceable Section (continued)

(iii) When actions taken by the owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the owner or operator shall keep records for that event that demonstrate that the procedures specified in the plan were followed. These records may take the form of a "checklist," or other effective form of record keeping, that confirms conformance with the startup, shutdown, and malfunction plan for that event. In addition, the owner or operator shall keep records of these events as specified in section 63.10(b) (and elsewhere in this part), including records of the occurrence and duration of each startup, shutdown, or malfunction of operation and each malfunction of the air pollution control equipment. Furthermore, the owner or operator shall confirm that actions taken during the relevant reporting period during periods of startup, shutdown, and malfunction were consistent with the affected source's startup, shutdown and malfunction plan in the semiannual (or more frequent) startup, shutdown, and malfunction report required in section 63.10(d)(5).

(iv) If an action taken by the owner or operator during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the owner or operator shall record the actions taken for that event and shall report such actions within 2 working days after commencing actions inconsistent with the plan, followed by a letter within 7 working days after the end of the event, in accordance with section 63.10(d)(5) (unless the owner or operator makes alternative reporting arrangements, in advance, with the Administrator (see section 63.10(d)(5)(ii)).

(v) The owner or operator shall keep the written startup, shutdown, and malfunction plan on record after it is developed to be made available for inspection, upon request, by the Administrator for the life of the affected source or until the affected source is no longer subject to the provisions of this part. In addition, if the startup, shutdown, and malfunction plan is revised, the owner or operator shall keep previous (i.e., superseded) versions of the startup, shutdown, and malfunction plan on record, to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan.

(vi) To satisfy the requirements of this section to develop a startup, shutdown, and malfunction plan, the owner or operator may use the affected source's standard operating procedures (SOP) manual, or an Occupational Safety and Health Administration (OSHA) or other plan, provided the alternative plans meet all the requirements of this section and are made available for inspection when requested by the Administrator.

(vii) Based on the results of a determination made under paragraph (e)(2) of this section, the Administrator may require that an owner or operator of an affected source make changes to the startup, shutdown, and malfunction plan for that source. The Administrator may require reasonable revisions to a startup, shutdown, and malfunction plan, if the Administrator finds that the plan:

(A) Does not address a startup, shutdown, or malfunction event that has occurred;

(B) Fails to provide for the operation of the source (including associated air pollution control equipment) during a startup, shutdown, or malfunction event in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards; or

(C) Does not provide adequate procedures for correcting malfunctioning process and/or air pollution control equipment as quickly as practicable.

(viii) If the startup, shutdown, and malfunction plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the startup, shutdown, and malfunction plan at the time the owner or operator developed the plan, the owner or operator shall revise the startup, shutdown, and malfunction plan within 45 days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control equipment.

A. State and Federally Enforceable Section (continued)

Operation and maintenance requirements

In accordance with 40 CFR 63.6(e)(1)(i), at all times, including periods of startup, shutdown, and malfunction, owners or operators shall operate and maintain any affected source, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards.

(ii) Malfunctions shall be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction plan required in paragraph (e)(3) of this section.

(iii) Operation and maintenance requirements established pursuant to section 112 of the Act are enforceable independent of emissions limitations or other requirements in relevant standards.

(2) Determination of whether acceptable operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures (including the startup, shutdown, and malfunction plan required in paragraph (e)(3) of this section), review of operation and maintenance records, and inspection of the source.

(3) Startup, shutdown, and malfunction plan. (i) The owner or operator of an affected source shall develop and implement a written startup, shutdown, and malfunction plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the relevant standard. As required under section 63.8(c)(1)(i), the plan shall identify all routine or otherwise predictable CMS malfunctions. This plan shall be developed by the owner or operator by the source's compliance date for that relevant standard. The plan shall be incorporated by reference into the source's Title V permit. The purpose of the startup, shutdown, and malfunction plan is to --

(A) Ensure that, at all times, owners or operators operate and maintain affected sources, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards;

(B) Ensure that owners or operators are prepared to correct malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of hazardous air pollutants; and

(C) Reduce the reporting burden associated with periods of startup, shutdown, and malfunction (including corrective action taken to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation).

(ii) During periods of startup, shutdown, and malfunction, the owner or operator of an affected source shall operate and maintain such source (including associated air pollution control equipment) in accordance with the procedures specified in the startup, shutdown, and malfunction plan developed under paragraph (e)(3)(i) of this section.

A. State and Federally Enforceable Section (continued)

(iii) When actions taken by the owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the owner or operator shall keep records for that event that demonstrate that the procedures specified in the plan were followed. These records may take the form of a "checklist," or other effective form of record keeping, that confirms conformance with the startup, shutdown, and malfunction plan for that event. In addition, the owner or operator shall keep records of these events as specified in section 63.10(b) (and elsewhere in this part), including records of the occurrence and duration of each startup, shutdown, or malfunction of operation and each malfunction of the air pollution control equipment. Furthermore, the owner or operator shall confirm that actions taken during the relevant reporting period during periods of startup, shutdown, and malfunction were consistent with the affected source's startup, shutdown and malfunction plan in the semiannual (or more frequent) startup, shutdown, and malfunction report required in section 63.10(d)(5).

(iv) If an action taken by the owner or operator during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the owner or operator shall record the actions taken for that event and shall report such actions within 2 working days after commencing actions inconsistent with the plan, followed by a letter within 7 working days after the end of the event, in accordance with section 63.10(d)(5) (unless the owner or operator makes alternative reporting arrangements, in advance, with the Administrator (see section 63.10(d)(5)(ii)).

(v) The owner or operator shall keep the written startup, shutdown, and malfunction plan on record after it is developed to be made available for inspection, upon request, by the Administrator for the life of the affected source or until the affected source is no longer subject to the provisions of this part. In addition, if the startup, shutdown, and malfunction plan is revised, the owner or operator shall keep previous (i.e., superseded) versions of the startup, shutdown, and malfunction plan on record, to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan.

(vi) To satisfy the requirements of this section to develop a startup, shutdown, and malfunction plan, the owner or operator may use the affected source's standard operating procedures (SOP) manual, or an Occupational Safety and Health Administration (OSHA) or other plan, provided the alternative plans meet all the requirements of this section and are made available for inspection when requested by the Administrator.

(vii) Based on the results of a determination made under paragraph (e)(2) of this section, the Administrator may require that an owner or operator of an affected source make changes to the startup, shutdown, and malfunction plan for that source. The Administrator may require reasonable revisions to a startup, shutdown, and malfunction plan, if the Administrator finds that the plan:

(A) Does not address a startup, shutdown, or malfunction event that has occurred;

(B) Fails to provide for the operation of the source (including associated air pollution control equipment) during a startup, shutdown, or malfunction event in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards; or

(C) Does not provide adequate procedures for correcting malfunctioning process and/or air pollution control equipment as quickly as practicable.

(viii) If the startup, shutdown, and malfunction plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the startup, shutdown, and malfunction plan at the time the owner or operator developed the plan, the owner or operator shall revise the startup, shutdown, and malfunction plan within 45 days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control equipment.

A. State and Federally Enforceable Section (continued)

12.b Performance testing

In accordance with 40 CFR 63.7(a)(2), if required to do performance testing by a relevant standard, and unless a waiver of performance testing is obtained under this section or the conditions of paragraph (c)(3)(ii)(B) of this section apply, the owner or operator of the affected source shall perform such tests as follows:

(i) Within 180 days after the effective date of a relevant standard for a new source that has an initial startup date before the effective date; or

(ii) Within 180 days after initial startup for a new source that has an initial startup date after the effective date of a relevant standard; or

(iii) Within 180 days after the compliance date specified in an applicable subpart of this part for an existing source subject to an emission standard established pursuant to section 112(d) of the Act, or within 180 days after startup of an existing source if the source begins operation after the effective date of the relevant emission standard; or

(iv) Within 180 days after the compliance date for an existing source subject to an emission standard established pursuant to section 112(f) of the Act; or

(v) Within 180 days after the termination date of the source's extension of compliance for an existing source that obtains an extension of compliance under section 63.6(i).

Performance testing

In accordance with 40 CFR 63.7(a)(2), if required to do performance testing by a relevant standard, and unless a waiver of performance testing is obtained under this section or the conditions of paragraph (c)(3)(ii)(B) of this section apply, the owner or operator of the affected source shall perform such tests as follows:

(i) Within 180 days after the effective date of a relevant standard for a new source that has an initial startup date before the effective date; or

(ii) Within 180 days after initial startup for a new source that has an initial startup date after the effective date of a relevant standard; or

(iii) Within 180 days after the compliance date specified in an applicable subpart of this part for an existing source subject to an emission standard established pursuant to section 112(d) of the Act, or within 180 days after startup of an existing source if the source begins operation after the effective date of the relevant emission standard; or

(iv) Within 180 days after the compliance date for an existing source subject to an emission standard established pursuant to section 112(f) of the Act; or

(v) Within 180 days after the termination date of the source's extension of compliance for an existing source that obtains an extension of compliance under section 63.6(i).

A. State and Federally Enforceable Section (continued)

12.c Reconstruction

In accordance with 40 CFR 63.9(b)(4), the owner or operator of a new or reconstructed major affected source that has an initial startup after the effective date of a relevant standard under this part and for which an application for approval of construction or reconstruction is required under section 63.5(d) shall provide the following information in writing to the Administrator:

(i) A notification of intention to construct a new major affected source, reconstruct a major affected source, or reconstruct a major source such that the source becomes a major affected source with the application for approval of construction or reconstruction as specified in section 63.5(d)(1)(i);

(ii) A notification of the date when construction or reconstruction was commenced, submitted simultaneously with the application for approval of construction or reconstruction, if construction or reconstruction was commenced before the effective date of the relevant standard;

(iii) A notification of the date when construction or reconstruction was commenced, delivered or postmarked not later than 30 days after such date, if construction or reconstruction was commenced after the effective date of the relevant standard;

(iv) [Reserved]

(v) A notification of the actual date of startup of the source, delivered or postmarked within 15 calendar days after that date.

Reconstruction

In accordance with 40 CFR 63.9(b)(4), the owner or operator of a new or reconstructed major affected source that has an initial startup after the effective date of a relevant standard under this part and for which an application for approval of construction or reconstruction is required under section 63.5(d) shall provide the following information in writing to the Administrator:

(i) A notification of intention to construct a new major affected source, reconstruct a major affected source, or reconstruct a major source such that the source becomes a major affected source with the application for approval of construction or reconstruction as specified in section 63.5(d)(1)(i);

(ii) A notification of the date when construction or reconstruction was commenced, submitted simultaneously with the application for approval of construction or reconstruction, if construction or reconstruction was commenced before the effective date of the relevant standard;

(iii) A notification of the date when construction or reconstruction was commenced, delivered or postmarked not later than 30 days after such date, if construction or reconstruction was commenced after the effective date of the relevant standard;

(iv) [Reserved]

(v) A notification of the actual date of startup of the source, delivered or postmarked within 15 calendar days after that date.

A. State and Federally Enforceable Section (continued)

12.d General Record keeping

In accordance with 40 CFR 63.10(b) general record keeping requirements, (1) The owner or operator of an affected source subject to the provisions of this part shall maintain files of all information (including all reports and notifications) required by this part recorded in a form suitable and readily available for expeditious inspection and review. The files shall be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent 2 years of data shall be retained on site. The remaining 3 years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

(2) The owner or operator of an affected source subject to the provisions of this part shall maintain relevant records for such source of --

(i) The occurrence and duration of each startup, shutdown, or malfunction of operation (i.e., process equipment);

(ii) The occurrence and duration of each malfunction of the air pollution control equipment;

(iii) All maintenance performed on the air pollution control equipment;

(iv) Actions taken during periods of startup, shutdown, and malfunction (including corrective actions to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation) when such actions are different from the procedures specified in the affected source's startup, shutdown, and malfunction plan (see section 63.6(e)(3));

(v) All information necessary to demonstrate conformance with the affected source's startup, shutdown, and malfunction plan (see section 63.6(e)(3)) when all actions taken during periods of startup, shutdown, and malfunction (including corrective actions to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation) are consistent with the procedures specified in such plan. (The information needed to demonstrate conformance with the startup, shutdown, and malfunction plan may be recorded using a "checklist," or some other effective form of recordkeeping, in order to minimize the recordkeeping burden for conforming events);

(vi) Each period during which a CMS is malfunctioning or inoperative (including out-of-control periods);

(vii) All required measurements needed to demonstrate compliance with a relevant standard (including, but not limited to, 15-minute averages of CMS data, raw performance testing measurements, and raw performance evaluation measurements, that support data that the source is required to report);

(A) This paragraph applies to owners or operators required to install a continuous emissions monitoring system (CEMS) where the CEMS installed is automated, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. An automated CEMS records and reduces the measured data to the form of the pollutant emission standard through the use of a computerized data acquisition system. In lieu of maintaining a file of all CEMS subhourly measurements as required under paragraph (b)(2)(vii) of this section, the owner or operator shall retain the most recent consecutive three averaging periods of subhourly measurements and a file that contains a hard copy of the data acquisition system algorithm used to reduce the measured data into the reportable form of the standard.

A. State and Federally Enforceable Section (continued)

(B) This paragraph applies to owners or operators required to install a CEMS where the measured data is manually reduced to obtain the reportable form of the standard, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. In lieu of maintaining a file of all CEMS subhourly measurements as required under paragraph (b)(2)(vii) of this section, the owner or operator shall retain all subhourly measurements for the most recent reporting period.
The subhourly measurements shall be retained for 120 days from the date of the most recent summary or excess emission report submitted to the Administrator.

(C) The Administrator or delegated authority, upon notification to the source, may require the owner or operator to maintain all measurements as required by paragraph (b)(2)(vii), if the administrator or the delegated authority determines these records are required to more accurately assess the compliance status of the affected source.

(viii) All results of performance tests, CMS performance evaluations, and opacity and visible emission observations;

(ix) All measurements as may be necessary to determine the conditions of performance tests and performance evaluations;

(x) All CMS calibration checks;

(xi) All adjustments and maintenance performed on CMS;

(xii) Any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements under this part, if the source has been granted a waiver under paragraph (f) of this section;

(xiii) All emission levels relative to the criterion for obtaining permission to use an alternative to the relative accuracy test, if the source has been granted such permission under section 63.8(f)(6); and

(xiv) All documentation supporting initial notifications and notifications of compliance status under section 63.9.

(3) Record keeping requirement for applicability determinations. If an owner or operator determines that his or her stationary source that emits (or has the potential to emit, without considering controls) one or more hazardous air pollutants is not subject to a relevant standard or other requirement established under this part, the owner or operator shall keep a record of the applicability determination on site at the source for a period of 5 years after the determination, or until the source changes its operations to become an affected source, whichever comes first. The record of the applicability determination shall include an analysis (or other information) that demonstrates why the owner or operator believes the source is unaffected (e.g., because the source is an area source). The analysis (or other information) shall be sufficiently detailed to allow the Administrator to make a finding about the source's applicability status with regard to the relevant standard or other requirement. If relevant, the analysis shall be performed in accordance with requirements established in subparts of this part for this purpose for particular categories of stationary sources. If relevant, the analysis should be performed in accordance with EPA guidance materials published to assist sources in making applicability determinations under section 112, if any.

A. State and Federally Enforceable Section (continued)

General Record keeping

In accordance with 40 CFR 63.10(b) general record keeping requirements, (1) The owner or operator of an affected source subject to the provisions of this part shall maintain files of all information (including all reports and notifications) required by this part recorded in a form suitable and readily available for expeditious inspection and review. The files shall be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent 2 years of data shall be retained on site. The remaining 3 years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

(2) The owner or operator of an affected source subject to the provisions of this part shall maintain relevant records for such source of --

(i) The occurrence and duration of each startup, shutdown, or malfunction of operation (i.e., process equipment);

(ii) The occurrence and duration of each malfunction of the air pollution control equipment;

(iii) All maintenance performed on the air pollution control equipment;

(iv) Actions taken during periods of startup, shutdown, and malfunction (including corrective actions to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation) when such actions are different from the procedures specified in the affected source's startup, shutdown, and malfunction plan (see section 63.6(e)(3));

(v) All information necessary to demonstrate conformance with the affected source's startup, shutdown, and malfunction plan (see section 63.6(e)(3)) when all actions taken during periods of startup, shutdown, and malfunction (including corrective actions to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation) are consistent with the procedures specified in such plan. (The information needed to demonstrate conformance with the startup, shutdown, and malfunction plan may be recorded using a "checklist," or some other effective form of recordkeeping, in order to minimize the recordkeeping burden for conforming events);

(vi) Each period during which a CMS is malfunctioning or inoperative (including out-of-control periods);

(vii) All required measurements needed to demonstrate compliance with a relevant standard (including, but not limited to, 15-minute averages of CMS data, raw performance testing measurements, and raw performance evaluation measurements, that support data that the source is required to report);

(A) This paragraph applies to owners or operators required to install a continuous emissions monitoring system (CEMS) where the CEMS installed is automated, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. An automated CEMS records and reduces the measured data to the form of the pollutant emission standard through the use of a computerized data acquisition system. In lieu of maintaining a file of all CEMS subhourly measurements as required under paragraph (b)(2)(vii) of this section, the owner or operator shall retain the most recent consecutive three averaging periods of subhourly measurements and a file that contains a hard copy of the data acquisition system algorithm used to reduce the measured data into the reportable form of the standard.

A. State and Federally Enforceable Section (continued)

(B) This paragraph applies to owners or operators required to install a CEMS where the measured data is manually reduced to obtain the reportable form of the standard, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. In lieu of maintaining a file of all CEMS subhourly measurements as required under paragraph (b)(2)(vii) of this section, the owner or operator shall retain all subhourly measurements for the most recent reporting period.
The subhourly measurements shall be retained for 120 days from the date of the most recent summary or excess emission report submitted to the Administrator.

(C) The Administrator or delegated authority, upon notification to the source, may require the owner or operator to maintain all measurements as required by paragraph (b)(2)(vii), if the administrator or the delegated authority determines these records are required to more accurately assess the compliance status of the affected source.

(viii) All results of performance tests, CMS performance evaluations, and opacity and visible emission observations;

(ix) All measurements as may be necessary to determine the conditions of performance tests and performance evaluations;

(x) All CMS calibration checks;

(xi) All adjustments and maintenance performed on CMS;

(xii) Any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements under this part, if the source has been granted a waiver under paragraph (f) of this section;

(xiii) All emission levels relative to the criterion for obtaining permission to use an alternative to the relative accuracy test, if the source has been granted such permission under section 63.8(f)(6); and

(xiv) All documentation supporting initial notifications and notifications of compliance status under section 63.9.

(3) Record keeping requirement for applicability determinations. If an owner or operator determines that his or her stationary source that emits (or has the potential to emit, without considering controls) one or more hazardous air pollutants is not subject to a relevant standard or other requirement established under this part, the owner or operator shall keep a record of the applicability determination on site at the source for a period of 5 years after the determination, or until the source changes its operations to become an affected source, whichever comes first. The record of the applicability determination shall include an analysis (or other information) that demonstrates why the owner or operator believes the source is unaffected (e.g., because the source is an area source). The analysis (or other information) shall be sufficiently detailed to allow the Administrator to make a finding about the source's applicability status with regard to the relevant standard or other requirement. If relevant, the analysis shall be performed in accordance with requirements established in subparts of this part for this purpose for particular categories of stationary sources. If relevant, the analysis should be performed in accordance with EPA guidance materials published to assist sources in making applicability determinations under section 112, if any.

A. State and Federally Enforceable Section (continued)

12.e Additional Record keeping

In accordance with 40 CFR 63.10(c), additional record keeping requirements for sources with continuous monitoring systems. In addition to complying with the requirements specified in paragraphs (b)(1) and (b)(2) of this section, the owner or operator of an affected source required to install a CMS by a relevant standard shall maintain records for such source of --

(1) All required CMS measurements (including monitoring data recorded during unavoidable CMS breakdowns and out-of-control periods);

(2)-(4) [Reserved]

(5) The date and time identifying each period during which the CMS was inoperative except for zero (low-level) and high-level checks;

(6) The date and time identifying each period during which the CMS was out of control, as defined in section 63.8(c)(7);

(7) The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions and parameter monitoring exceedances, as defined in the relevant standard(s), that occurs during startups, shutdowns, and malfunctions of the affected source;

(8) The specific identification (i.e., the date and time of commencement and completion) of each time period of excess emissions and parameter monitoring exceedances, as defined in the relevant standard(s), that occurs during periods other than startups, shutdowns, and malfunctions of the affected source.

Additional Record keeping

In accordance with 40 CFR 63.10(c), additional record keeping requirements for sources with continuous monitoring systems. In addition to complying with the requirements specified in paragraphs (b)(1) and (b)(2) of this section, the owner or operator of an affected source required to install a CMS by a relevant standard shall maintain records for such source of --

(1) All required CMS measurements (including monitoring data recorded during unavoidable CMS breakdowns and out-of-control periods);

(2)-(4) [Reserved]

(5) The date and time identifying each period during which the CMS was inoperative except for zero (low-level) and high-level checks;

(6) The date and time identifying each period during which the CMS was out of control, as defined in section 63.8(c)(7);

(7) The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions and parameter monitoring exceedances, as defined in the relevant standard(s), that occurs during startups, shutdowns, and malfunctions of the affected source;

(8) The specific identification (i.e., the date and time of commencement and completion) of each time period of excess emissions and parameter monitoring exceedances, as defined in the relevant standard(s), that occurs during periods other than startups, shutdowns, and malfunctions of the affected source.

13. All asbestos renovation and demolition activities conducted at this facility shall be performed in accordance with the applicable requirements specified in 40 CFR Part 61 and OAC Chapter 3745-20.

All asbestos renovation and demolition activities conducted at this facility shall be performed in accordance with the applicable requirements specified in 40 CFR Part 61 and OAC Chapter 3745-20.

A. State and Federally Enforceable Section (continued)

14. This facility is subject to the applicable requirements specified in OAC Chapter 3745-25. In accordance with Ohio EPA Engineering Guide #64, the emission control action programs, as specified in OAC rule 3745-25-03, shall be developed and submitted within 60 days after receiving notification from the Ohio EPA.

This facility is subject to the applicable requirements specified in OAC Chapter 3745-25. In accordance with Ohio EPA Engineering Guide #64, the emission control action programs, as specified in OAC rule 3745-25-03, shall be developed and submitted within 60 days after receiving notification from the Ohio EPA.

15. The following insignificant emissions units are located at this facility:

B006 - B-4/C-4 fresh air heater (PTI 01-3080);
B008 - 1.25 MMBtu/hr make-up air heater (PTI 01-3831);
G002 - gasoline dispensing facility with 4,000-gallon gasoline storage tank (PTI 01-3080);
P025 - A-3 forehearth;
P088 - C-4 asphalt applicator (PTI 01-08329);
P095 - binder house mix tanks;
P117 - D-5 trim;
P144 - Aeroflex binder mix and run tanks (PTI 01-1088);
P148 - batch house bin #01;
P149 - batch house bin #02;
P150 - batch house bin #03;
P151 - batch house bin #04;
P152 - batch house bin #07;
P153 - batch house bin #08;
P154 - batch house bin #09;
P155 - batch house bin #10;
P156 - batch house bin #11;
P157 - batch house bin #12;
P158 - batch house bin #13;

P163 - maintenance welding (PTI 01-3129);
P164 - welding shop (PTI 01-3129);
P167 - D-5 mixed batch bin;
P168 - C-4 mixed batch bin;
P170 - B-4 mixed batch bin;
P172 - batch transfer raw materials;
P173 - F-6/5 batch charging operation;
P177 - pipe binder room (PTI 01-3483);
P178 - pipe washwater cycle (PTI 01-3483);
P179 - building 9 washwater recycle system (PTI 01-4629);
P181 - D-5 asphalt applicator;
P182 - F-6/5 asphalt applicator (PTI 01-08329);
P183 - pipe RSM thickness sanders (PTI 01-4937);
P184 - C-4 edge trim repack penclone (PTI 01-3287);
P185 - CMP #1 cutter/slitter (PTI 01-3363);
P186 - CMP #2 cutter/slitter (PTI 01-3363);
P187 - CMP #3 cutter/slitter (PTI 01-3363);
P188 - CMP#4 cutter/slitter (PTI 01-3363);
P189 - CMP and RSM end trim slitter;
P190 - B-4 cubers/rotary separator and penclone (PTI 01-5734);
P191 - Aeroflex 503 shredders (PTI 01-5734);
P192 - #1 - #2 Aeroflex rear hoppers (PTI 01-5734);
P193 - #1 - #2 Aeroflex pickers (PTI 01-5734);
P195 - CMP #5 cutter slitter (PTI 01-5682);
P196 - ammonia sulfate mix tank (PTI 01-6090);

A. State and Federally Enforceable Section (continued)

P197 - C4 rollup and penclone
P198 - F-6/5 edge trim;
R003 - C-4 overwrap adhesive;
T008 - 6,000-gallon silane storage tank (PTI 01-3287);
T015 - 15,000-gallon ammonia (k) storage tank;
Z003 - precard;
Z004 - mastercard;
Z007 - diesel dispensing;
Z012 - solvent cleaners - plantwide;
Z019 - F-6 rotary chopper;
Z021 - D-5 rotary chopper;
Z024 - AC-91 chopper (F-5 packaging);
Z025 - AC-91 chopper (C-4 packaging);
Z026 - C-4 baggers (6 units on north, 1 units on south);
Z029 - F-6 asphalt applicator;
Z034 - bad batch dumpster;
Z035 - east unloading grates;
Z043 - sandblasters plant-wide;

Z048 - test area;
Z052 - #2 repack and bagger penclone;
Z053 - B-4 cuber blasters;
Z054 - pipe skin cure A-4;
Z056 - PCS lab hoods;
Z057 - C4 belt roll-up and penclone;
Z059 - P026 batch system;
Z060 - Aeroflex print head cleaning system;
Z062 - west unloading grate;
Z065 - C-4 inkjet printer;
Z066 - D-5 inkjet printer;
Z067 - B-4 line inkjet printer;
Z068 - F-5 line inkjet printer;
Z070 - #1 repack rotary separator and penclone;
Z071 - #2 rotary separator and penclone;
Z073 - D-5 edge trim repack penclone;
Z074 - D-6 edge trim repack penclone;
Z075 - repack offware penclone;
Z076 - #3 rotary separator and penclone;
Z078 - truck oven exhaust; and
Z079 - Aeroflex washwater system.

Each insignificant emissions unit at this facility must comply with all applicable State and federal regulations, as well as any emission limitations and/or control requirements contained within the identified permit to install for the emissions unit. Insignificant emissions units listed above that are not subject to specific permit to install requirements are subject to one or more applicable requirements contained in the SIP-approved versions of OAC Chapters 3745-17, 3745-18, and 3745-21.

A. State and Federally Enforceable Section (continued)

The following insignificant emissions units are located at this facility:

B006 - B-4/C-4 fresh air heater (PTI 01-3080);
B007 - 3.8 MMBtu/hr CMP boiler (PTI 01-3752);
B008 - 1.25 MMBtu/hr make-up air heater (PTI 01-3831);
G002 - gasoline dispensing facility with 4,000-gallon gasoline storage tank (PTI 01-3080);
K002 - paint spray hood (PTI 01-4170);
P025 - A-3 forehearth;
P048 - Aeroflex coater oven;
P069 - Aeroflex cooling;
P088 - C-4 asphalt applicator (PTI 01-08329);
P095 - binder house mix tanks;
P117 - D-5 trim;
P118 - D-6 trim;
P144 - Aeroflex binder mix and run tanks (PTI 01-1088);
P145 - Aeromat trim and penclone (PTI 01-1157);
P148 - batch house bin #01;
P149 - batch house bin #02;
P150 - batch house bin #03;
P151 - batch house bin #04;
P152 - batch house bin #07;
P153 - batch house bin #08;
P154 - batch house bin #09;
P155 - batch house bin #10;
P156 - batch house bin #11;
P157 - batch house bin #12;
P158 - batch house bin #13;

P163 - maintenance welding (PTI 01-3129);
P164 - welding shop (PTI 01-3129);
P167 - D-5 mixed batch bin;
P168 - C-4 mixed batch bin;
P169 - lime slurry mix tank;
P170 - B-4 mixed batch bin;
P172 - batch transfer raw materials;
P173 - F-6/5 batch charging operation;
P177 - pipe binder room (PTI 01-3483);
P178 - pipe washwater cycle (PTI 01-3483);
P179 - building 9 washwater recycle system (PTI 01-4629);
P181 - D-5 asphalt applicator;
P182 - F-6/5 asphalt applicator (PTI 01-08329);
P183 - pipe RSM thickness sanders (PTI 01-4937);
P184 - C-4 edge trim repack penclone (PTI 01-3287);
P185 - CMP #1 cutter/slitter (PTI 01-3363);
P186 - CMP #2 cutter/slitter (PTI 01-3363);
P187 - CMP #3 cutter/slitter (PTI 01-3363);
P188 - CMP#4 cutter/slitter (PTI 01-3363);
P189 - CMP and RSM end trim slitter;
P190 - B-4 cubers/rotary separator and penclone (PTI 01-5734);
P191 - Aeroflex 503 shredders (PTI 01-5734);
P192 - #1 - #2 Aeroflex rear hoppers (PTI 01-5734);
P193 - #1 - #2 Aeroflex pickers (PTI 01-5734);
P195 - CMP #5 cutter slitter (PTI 01-5682);
P196 - ammonia sulfate mix tank (PTI 01-6090);

A. State and Federally Enforceable Section (continued)

P197 - C4 rollup and penclone
P198 - F-6/5 edge trim;
R002 - Aeroflex coater (PTI 01-3483);
R003 - C-4 overwrap adhesive;
T008 - 6,000-gallon silane storage tank (PTI 01-3287);
T015 - 15,000-gallon ammonia (k) storage tank;
Z003 - precard;
Z004 - mastercard;
Z005 - 3 foot circular saw;
Z006 - 1 foot circular saw;
Z007 - diesel dispensing;
Z008 - diesel generator;
Z012 - solvent cleaners - plantwide;
Z016 - lab bench exhaust booth;
Z019 - F-6 rotary chopper;
Z021 - D-5 rotary chopper;
Z024 - AC-91 chopper (F-5 packaging);
Z025 - AC-91 chopper (C-4 packaging);
Z026 - C-4 baggers (6 units on north, 1 units on south);
Z027 - parts washers plantwide;
Z029 - F-6 asphalt applicator;
Z030 - R&D project pilot offware thermal conditioner;
Z032 - F-5 basement mist;
Z034 - bad batch dumpster;
Z035 - east unloading grates;
Z037 - maintenance/welding/grinders/lathes/drilling facility-wide;
Z038 - maintenance welding;
Z039 - portable totes - plant-wide;
Z040 - waste solvent collection;
Z041 - solvent storage;
Z042 - flammable storage plant-wide;
Z043 - sandblasters plant-wide;

A. State and Federally Enforceable Section (continued)

Z044 - 700-gallon diesel tank;
Z045 - start-up fuel tank;
Z046 - 700-gallon above ground storage tank;
Z047 - 300-gallon Jordanol oil tank;
Z048 - test area;
Z049 - oil dispensers;
Z050 - Steaval B-165 tank;
Z051 - C-4 fuel tank;
Z052 - #2 repack and bagger penclone;
Z053 - B-4 cuber blasters;
Z054 - pipe skin cure A-4;
Z056 - PCS lab hoods;
Z057 - C4 belt roll-up and penclone;
Z059 - P026 batch system;
Z060 - Aeroflex print head cleaning system;
Z061 - Kolene spinner prep;
Z062 - west unloading grate;
Z063 - Kolene salt bath heater;
Z064 - Kolene rinse tank heater;
Z065 - C-4 inkjet printer;
Z066 - D-5 inkjet printer;
Z067 - B-4 line inkjet printer;
Z068 - F-5 line inkjet printer;
Z070 - #1 repack rotary separator and penclone;
Z071 - #2 rotary separator and penclone;
Z073 - D-5 edge trim repack penclone;
Z074 - D-6 edge trim repack penclone;
Z075 - repack offware penclone;
Z076 - #3 rotary separator and penclone;
Z077 - B-4 skin oven operation;
Z078 - truck oven exhaust;
Z079 - Aeroflex washwater system; and
Z080 - vapor wick fabrication.

Each insignificant emissions unit at this facility must comply with all applicable State and federal regulations, as well as any emission limitations and/or control requirements contained within the identified permit to install for the emissions unit. Insignificant emissions units listed above that are not subject to specific permit to install requirements are subject to one or more applicable requirements contained in the SIP-approved versions of OAC Chapters 3745-17, 3745-18, and 3745-21.

B. State Only Enforceable Section

1. The following insignificant emissions units located at this facility are exempt from permit requirements because they are not subject to any applicable requirements or because they meet the "de minimis" criteria established in OAC rule 3745-15-05:

P081 - resin reactor #2
P082 - resin reactor #1
P126 - resin mixing tank;
P171 - CMP batch hoppers/silos;
T001 - 630,000-gallon south wasterwater tank;
T002 - 650,000-gallon north wastewater tank;
T005 - ammonia surge tank;
T013 - 15,000-gallon phenol resin (g) tank;
T014 - 15,000-gallon phenol resin (h) storage tank;
T020 - 6,000-gallon phosphoric (p) storage tank;
T022 - 15,000-gallon formaldehyde storage tank;
T025 - 120,000-gallon asphalt storage tank;
Z001 - solvent clean-up;
Z002 - waste baler;
Z011 - cullet pads (east of building 7);
Z013 - oil water separator;
Z014 - 2 admix stations at south ramp;
Z015 - 2 admix hoppers (east and west);
Z018 - F-6 bagger;
Z020 - D-5 roller/bagger; and
Z023 - D-5 baggers.

The following insignificant emissions units located at this facility are exempt from permit requirements because they are not subject to any applicable requirements or because they meet the "de minimis" criteria established in OAC rule 3745-15-05:

P081 - resin reactor #2
P082 - resin reactor #1
P126 - resin mixing tank;
P171 - CMP batch hoppers/silos;
T001 - 630,000-gallon south wasterwater tank;
T002 - 650,000-gallon north wastewater tank;
T005 - ammonia surge tank;
T013 - 15,000-gallon phenol resin (g) tank;
T014 - 15,000-gallon phenol resin (h) storage tank;
T020 - 6,000-gallon phosphoric (p) storage tank;
T022 - 15,000-gallon formaldehyde storage tank;
T025 - 120,000-gallon asphalt storage tank;
Z001 - solvent clean-up;
Z002 - waste baler;
Z011 - cullet pads (east of building 7);
Z014 - 2 admix stations at south ramp;
Z015 - 2 admix hoppers (east and west);
Z020 - D-5 roller/bagger; and
Z023 - D-5 baggers.

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Plant Roadways & Parking Areas (F001)

Activity Description: Plant Roadways & Parking Areas

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
plant roadways and parking areas -	OAC rule 3745-31-05(A)(3) (PTI 01-5102)	Particulate emissions shall not exceed 6 tons per year.
paved roadways and parking areas		no visible particulate emissions from any paved roadway or parking area except for a period of time not to exceed one minute during any 60-minute period. best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see A.I.2.c and A.I.2.e through A.I.2.i).
unpaved roadways and parking areas		no visible particulate emissions from any unpaved roadway or parking area except for a period of time not to exceed three minutes during any sixty-minute period. best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see A.I.2.d through A.I.2.i).

2. Additional Terms and Conditions

2.a The paved roadways and parking areas that are covered by this permit and subject to the above-mentioned requirements are listed below:

plant paved roadways for manufacturing/production/hauling -
asphalt roadway covering an area of 289,600 sq.ft. and 1.8 miles in length

plant paved parking areas for manufacturing/production/hauling/employee parking -
asphalt parking area of 642,400 sq.ft.

2. Additional Terms and Conditions (continued)

2.b The unpaved parking areas that are covered by this permit and subject to the above-mentioned requirements are listed below:

plant unpaved parking areas for manufacturing/production/hauling -
gravel parking area of 214,400 sq.ft.

2.c The permittee shall employ best available control measures on all paved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat the paved roadways and parking areas by self-propelled sweeping with flusher at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other, equally effective control measures to ensure compliance.

2.d The permittee shall employ best available control measures on all unpaved parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat the unpaved roadways and parking areas with watering and surface improvements at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other, equally effective control measures to ensure compliance.

2.e The needed frequencies of implementation of the control measures shall be determined by the permittee's inspections pursuant to the monitoring section of this permit. Implementation of the control measures shall not be necessary for a paved or unpaved roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Implementation of any control measure may be suspended if unsafe or hazardous driving conditions would be created by its use.

2.f Any unpaved roadway or parking area, which during the term of this permit is paved or takes the characteristics of a paved surface due to the application of certain types of dust suppressants, may be controlled with the control measure(s) specified above for paved surfaces. Any unpaved roadway or parking area that takes the characteristics of a paved roadway or parking area due to the application of certain types of dust suppressants shall remain subject to the visible emission limitation for unpaved roadways and parking areas. Any unpaved roadway and parking area that is paved shall be subject to the visible emission limitation for paved roadways and parking areas.

2.g The permittee shall promptly remove, in such a manner as to minimize or prevent resuspension, earth and/or other material from paved streets onto which such material has been deposited by trucking or earth moving equipment or erosion by water or other means.

2.h Open-bodied vehicles transporting materials likely to become airborne shall have such materials covered at all times if the control measure is necessary for the materials being transported.

2.i Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the best available technology requirements of OAC rule 3745-31-05.

2.j This emissions unit is not located in an Appendix A area of OAC rule 3745-17-08; therefore, the requirements of OAC rules 3745-17-07(B) and 3745-17-08(B) do not apply.

II. Operational Restrictions

1. A maximum speed limit of 15 miles per hour shall be posted and enforced on the property.

III. Monitoring and/or Record Keeping Requirements

1. Except as otherwise provided in this section, the permittee, at a minimum, shall perform daily inspections on Monday through Friday of each week of the roadways and parking areas.

III. Monitoring and/or Record Keeping Requirements (continued)

2. The purpose of the inspections is to determine the need for implementing the above-mentioned control measures. The inspections shall be performed during representative, normal traffic conditions. No inspection shall be necessary for a roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above-identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.

3. The permittee shall maintain records of the following information:

a. the date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;

b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;

c. the dates the control measures were implemented; and

d. on a calendar quarter basis, the total number of days the control measures were implemented and the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measures.

The information required in 4.d. shall be kept separately for (i) the paved roadways and parking areas and (ii) the unpaved parking areas, and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

IV. Reporting Requirements

1. The permittee shall submit deviation reports that identify any of the following occurrences:

a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and

b. each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.

2. The deviation reports shall be submitted in accordance with the reporting requirements of General Term and Condition, A.1.c.ii, of this permit.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I of these terms and conditions shall be determined in accordance with the following method(s):

1.a Emission Limitations:
No visible particulate emissions from any paved roadway or parking area except for a period of time not to exceed one minute during any 60-minute period.

No visible particulate emissions from any unpaved roadway and parking area except for a period of time not to exceed three minutes during any sixty-minute period.

Applicable Compliance Method:
Compliance with the emission limitation for the paved and unpaved roadways and parking areas identified above shall be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources," as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03.

V. Testing Requirements (continued)

1.b Emission Limitation:
Particulate emissions shall not exceed 6 tons per year.

Applicable Compliance Method:
Compliance with the annual emission limitation may be demonstrated by using the AP-42 emission factor equations for dust emissions from paved roadways (13.2.1.3), 10/97 and unpaved roadways and parking areas (13.2.2.2), 9/98.

Emissions from paved roadways shall be quantified using the method:
E1 = k x (sL/2)^0.65 x (W/3)^1.5, where
E1 = particulate emission factor for paved roadways (lb/VMT) = 0.39
k = particulate size multiplier (0.082)
sL = road surface silt loading = 0.4 g/sm* or 0.572 gr/sf
W = average weight of the vehicles traveling the road = 4.2 tons
(99% use of 4 ton vehicles and 1% use of 22 ton vehicles)
*for annual conditions, the median sL value used for high-ADT roads for public paved roadways in the absence of site-specific sL data

Maximum, uncontrolled particulate emissions from paved roadways are quantified by multiplying E1 by the maximum annual vehicle miles traveled (VMT) of 1,718,221 then dividing by 2000 to convert to tons. Multiply the uncontrolled emissions by [(1-0.75) and (1-0.8), control efficiency for sweeping and speed reduction, respectively, from Reasonably Available Control Measures (RACM)].

Emissions from unpaved roadways and parking areas shall be quantified for dirt and gravel roadways, respectively, using the following method:
E2 = [k x (s/12)^a x (W/3)^b]/[(M/0.2)^c] x [S/15] x [(365-p)/365], where
E2 = size-specific emission factor for unpaved roadways (lb/VMT)
k = particulate size multiplier (10)
s = surface material silt content (6.4%)
W = mean vehicle weight (tons) for 18-wheeled, heavy-duty diesel
M = surface material moisture content (0.2%)
S = mean vehicle speed (maximum 15 mph - see A.II.5)
p = number of days with at least 0.01 in of precipitation per year (140)
a = empirical constant (0.8)
b = empirical constant (0.5)
c = empirical constant (0.4)

Maximum, uncontrolled particulate emissions from unpaved, dirt roadways are quantified by multiplying the E2 for dirt roads (15.6 lbs/VMT) by the maximum annual VMT of 2912 and then dividing by 2000 to convert to tons. Maximum, uncontrolled particulate emissions from unpaved, gravel roadways are quantified by multiplying the E2 for gravel roads (10.11 lbs/VMT) by the maximum permitted, annual VMT of 1456 and then dividing by 2000 to convert to tons. Sum the two values and multiply the uncontrolled emissions by [(1-0.5), (1-0.3) and (1-0.8), control efficiencies for watering, surface improvements with at least gravel and speed reduction, respectively, from Reasonably Available Control Measures (RACM)].

Compliance with the annual particulate emission limitation shall be the sum of the calculated particulate emissions from paved and unpaved roadways.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Landfill Fugitive Dust (F002)

Activity Description: Landfill Fugitive Dust

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
landfill and related unpaved roadway	OAC rule 3745-31-05(A)(3) (PTI 01-5102)	Particulate emissions shall not exceed 3.3 tons per year. See A.I.2.a and A.II.1.
	OAC rules 3745-17-07(B) and 3745-17-08(B)	This emissions unit is not located in an Appendix A area of OAC rule 3745-17-08; therefore, the requirements of OAC rules 3745-17-07(B) and 3745-17-08(B) do not apply.

2. Additional Terms and Conditions

2.a There shall be no visible particulate emissions from any unpaved roadway or parking area except for a period of time not to exceed three minutes during any sixty-minute observation period.

II. Operational Restrictions

1. The permittee shall apply dust suppressants to the unpaved roadway and parking area to minimize or eliminate, at all times, visible emissions of fugitive dust generated by vehicular traffic. Water or a suitable dust suppression chemical shall be used as the dust suppressant, and the following equipment shall be used for the periodic applications: truck-mounted spray system. The dust suppressant shall be applied to the unpaved surfaces, at a minimum, every week. This term and condition shall be waived during wet conditions when there is sufficient moisture to prevent visible emissions of fugitive dust.

Any material carried off of the permittee's property and deposited onto public streets by vehicular traffic or by erosion by water, etc., shall be promptly removed and disposed of properly to minimize or prevent resuspension.

A maximum speed limit of 10 miles per hour shall be posted and enforced on the property.

A maximum speed limit of 5 miles per hour shall be posted and enforced in the bulldozer/compactor area of the landfill.

Open-bodied vehicles transporting materials likely to become airborne shall be covered at all times.

III. Monitoring and/or Record Keeping Requirements

1. Except as otherwise provided in this section, the permittee shall perform inspections of the unpaved roadways and parking areas in accordance with the following frequencies:

unpaved roadways minimum inspection frequency
landfill and related unpaved roadways: daily on Monday through Friday of each week

unpaved parking areas minimum inspection frequency
landfill and related parking areas: daily on Monday through Friday of each week

2. The purpose of the inspections is to determine the need for implementing the above-mentioned control measures. The inspections shall be performed during representative, normal traffic conditions. No inspection shall be necessary for a roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above-identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.

3. The permittee shall maintain records of the following information:

a. the date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;

b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;

c. the dates the control measures were implemented; and

d. on a calendar quarter basis, the total number of days the control measures were implemented and the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measures.

The information required in 4.d. shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

IV. Reporting Requirements

1. The permittee shall submit deviation reports that identify any of the following occurrences:

a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and

b. each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.

2. The deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I of these terms and conditions shall be determined in accordance with the following method(s):

V. Testing Requirements (continued)

1.a Emission Limitation:
There shall be no visible particulate emissions from any unpaved road or parking area except for a period of time not to exceed three minutes during any sixty-minute observation period.

Applicable Compliance Method:
Compliance with the emission limitation for the paved and unpaved roadway and parking area identified above shall be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources," as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03.

1.b Emission Limitation:
Particulate emissions shall not exceed 3.3 tons per year.

Applicable Compliance Method:
Compliance with the annual emission limitation may be demonstrated by using the AP-42 emission factor equation for dust emissions from unpaved roadway (13.2.2.2), 9/98.

Emissions from unpaved roadway and parking area shall be quantified for three areas - dirt area, stone area and dozer/compaction area, using the following method:
E = [k x (s/12)^a x (W/3)^b]/[(M/0.2)^c] x [S/15] x [(365-p)/365], where
E = size-specific emission factor for unpaved roadway (lb/VMT)
k = particulate size multiplier (10)
M = surface material moisture content (0.2%)
S = mean vehicle speed (maximum 7.5 mph - see A.II.3)
p = number of days with at least 0.01 in of precipitation per year (140)
a = empirical constant (0.8)
b = empirical constant (0.5)
c = empirical constant (0.4), and
W = mean vehicle weight (tons)
for the dirt and crushed limestone areas, W = 4 tons
for the bull dozer/compactor area, W = 22 tons
s = surface material silt content (%)
for the dirt area, s = 11%
for the crushed limestone area, s = 6.4%
and for the bull dozer/compactor area, s = 8.5%

This equation will yield
E1 = 3.32 = emission factor for the dirt area,
E2 = 2.15 = emission factor for the crushed limestone area, and
E3 = 4.22 = emission factor for the bull dozer/compactor area.

Maximum, uncontrolled particulate emissions from the landfill and its unpaved roadways will be quantified by multiplying E1 by the maximum annual vehicle miles traveled (VMT) on the dirt area of 2,920, multiplying E2 by the maximum annual VMT on the crushed limestone area of 1460, and multiplying E3 by the maximum annual VMT on the bull dozer/compaction area of 2,920 and then summing the uncontrolled particulate emissions and dividing by 2000 to convert to tons.

Compliance with the annual particulate emission limitation may be calculated by multiplying the uncontrolled emissions by 0.5 (Reasonably Available Control Measures (RACM) control efficiency for water as a dust suppressant) and [1-0.8 (RACM control efficiency for speed reduction)].

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Binks Paint Booth (K003)

Activity Description: Spray Booth (Spray Guns)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
paint spray booth	OAC rule 3745-31-05(A)(3) (PTI 01-4170)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-11(B) and 3745-21-09(U)(2)(e). Volatile organic compound emissions shall not exceed 6.0 pounds per hour, excluding cleanup material. There shall be no visible emissions from the emissions unit during operation. See A.II.1 - A.II.2 below.
	OAC rule 3745-17-07(A)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-21-09(U)(2)(e)	See A.II.1 below.
	OAC rule 3745-17-11(B)	Particulate emissions shall not exceed 0.551 pound per hour based on Table I.

2. Additional Terms and Conditions

None

II. Operational Restrictions

1. The permittee shall not employ greater than 10 gallons of coating per day.

2. The permittee shall operate a filter system whenever this emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain daily records of the following information:

a. the company identification for each coating;
b. the number of gallons of each coating employed;
c. the total volume, in gallons, of all coatings employed;
d. the number of hours of operation;
e. the OC content (lbs/gal) for each coating employed; and
f. the hourly emission rate, calculated using the following formula:
i. for each coating, multiply the number of gallons of each coating (identified in A.III.1.b) by the OC content of the coating (A.III.1.e);
ii. sum A.III.1.f.i for all coatings; and
iii. divide A.III.1.f.ii by A.III.1.d.

2. The permittee shall perform weekly 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. the total duration of any visible emission incident; and
c. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall notify the Director (the Ohio EPA, Central District Office) in writing of any daily record showing that the coating line employs more than the applicable maximum daily coating usage limit. The notification shall include a copy of such record and shall be sent to the Director (the Ohio EPA, Central District Office) within 45 days after the exceedance occurs.

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Central District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

3. The permittee shall notify the Director (the Ohio EPA, Central District Office) in writing of any record showing that the filter system was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Director (the Ohio EPA, Central District Office) within 30 days after the event occurs.

V. Testing Requirements

1. Compliance with the emissions limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

1.a Emission Limitation:
Volatile organic compound emissions shall not exceed 6.0 pounds per hour.

Applicable Compliance Method:
Compliance with the hourly limitation may be demonstrated based on the record keeping in term A.III.1.f.

If required, the permittee shall demonstrate compliance with this emission limitation through emissions tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 25 or 25A.

Formulation data from the manufacturer or US EPA Method 24 shall be used to determine the organic compound content of each coating material used (lbs organic compound/gallon of material).

V. Testing Requirements (continued)

1.b Emission Limitation:
There shall be no visible emissions from the emissions unit during operation.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Method 22. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.c Emission Limitation:
Particulate emissions shall not exceed 0.551 pound per hour, based on Table I.

Applicable Compliance Method:
To determine the worst case emission rate for particulate emissions, the following equation shall be used:

E = maximum coating solids usage rate (in pounds per hour) x (1-TE) x (1-CE), where

maximum coating solids usage rate (4.4 pounds per hour)

TE = transfer efficiency,which is the ratio of the amount of coating solids deposited in the coated part to the amount of coatings solids used (25% per 40 CFR 60.313, Table 1)

CE = control efficiency of the control equipment (98% for filters).

If required, the permittee shall demonstrate compliance with this emission limitation through emissions tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 5 and the procedures specified in OAC rule 3745-17-03(B).

1.d Emission Limitation:
The permittee shall not employ greater than 10 gallons of coating per day.

Applicable Compliance Method:
Compliance with the daily coating limitation shall be demonstrated based on the record keeping in term A.III.1.c.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: F-6 Furnace (P001)

Activity Description: F-6 Furnace

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
176 tons per day, F-6/5 natural gas-fired, glass melt furnace (by-pass stack number 08-90 and baghouse modules 0-5, 0-6, 0-7 and 0-8)	OAC rule 3745-31-05(A)(3) (PTI 01-08329)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-31-05(D) and 40 CFR 63, Subpart NNN. Nitrogen oxides emissions shall not exceed 97.5 pounds per hour from niter usage and natural gas combustion. Nitrogen oxides emissions from natural gas combustion shall not exceed 8.8 tons per year. Filterable and condensable particulate emissions shall not exceed 3.24 pounds per hour and 14.2 tons per year. Sulfur dioxide emissions shall not exceed 2.2 pounds per hour and 9.5 tons per year. Chlorides emissions shall not exceed 0.4 pound per hour and 1.76 tons per year. Carbon monoxide emissions shall not exceed 1.68 pounds per hour and 7.4 tons per year. See A.II.1 and A.II.3 below.
	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
	OAC rule 3745-17-11(B)(1)	The particulate emission limitation specified in this rule is less stringent than the particulate emission limitation specified in 40 CFR 63, Subpart NNN.
	OAC rule 3745-21-08(B) and 3745-23-06(B)	See A.I.2.a-b below.
	40 CFR 63, Subpart NNN	See A.I.2.c-d and Part II, A.1-14 above.
	OAC rule 3745-18-06(E)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-31-05(D) (PTI 01-08329)	Nitrogen oxides emissions from niter usage shall not exceed 208.3 tons per rolling 12-month summation. See A.I.2.e and A.II.2 below.

2. Additional Terms and Conditions

2.a The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-08329.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.b The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-08329.

2.c The permittee shall demonstrate compliance with 40 CFR 63, Subpart NNN as described in the operating, monitoring, record keeping, reporting and testing requirements included in Part II - Specific Facility Terms and Conditions.

2.d In accordance with 40 CFR 63.1382(a)(1), the permittee shall not discharge or cause to be discharged into the atmosphere in excess of 0.5 pound of particulate per ton of glass pulled for P001.

(The maximum hourly allowable particulate emission rate of 3.13 pounds per hour is calculated by multiplying the maximum glass throughput of 6.25 tons per hour by 0.5 pound of particulate per ton of glass pulled.)

2.e The permittee shall vent all the particulate emissions from this emissions unit to the baghouses.

2.f Niter (sodium nitrate) is used in P001 to facilitate the melting process. The use of niter in glass furnaces is often increased as the furnaces get older and are less efficient at melting the raw materials. It is an oxidant ingredient that thermally decomposes to nitrogen oxides.

II. Operational Restrictions

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

2. The maximum annual niter usage for P001 shall not exceed 385 tons, based upon a rolling, 12-month summation of the niter usages.

3. The pressure drop across each baghouse shall be maintained within the range of 3 - 18 inches water column while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain monthly records of the following information:

a. the amount of niter used (tons);

b. the total nitrogen oxides emissions from niter usage, in tons, using the following formula: {tons of niter used per month} x 0.541 pound of nitrogen oxides formed per pound of niter used;

c. the rolling, 12-month summation of nitrogen oxides emissions from niter usage and the rolling, 12-month summation of niter usage (tons);

d. the hours of operation for this emissions unit; and

e. the average hourly nitrogen oxides emissions rate in pounds per hour (b/d).

0.541 is derived from the percent of complete dissociation from niter (sodium nitrate) to nitrogen dioxide which is 54.1%.

2. 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.

3. The permittee shall properly operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a daily basis.

4. The permittee shall perform weekly 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 emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the cumulative rolling, 12-month niter usage rate limitation.

2. The permittee shall submit annual reports which specify the total nitrogen oxides emissions from niter usage from emissions unit P001. These reports shall be submitted by January 31 of each year.

3. 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.

4. The permittee shall submit quarterly pressure drop deviation (excursion) reports that identify that all periods of time during which the pressure drop across each baghouse did not comply with the allowable range specified above.

IV. Reporting Requirements (continued)

5. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

6. The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I - General Term and Condition A.1.c.ii.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

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

Emissions testing was conducted for this emissions unit on November 19, 2002. This emissions test demonstrated compliance with the visible emission limitation for this emissions unit.

1.b Emission Limitation:
0.5 pound of particulate per ton of glass pulled.

Applicable Compliance Method:
The permittee shall conduct emission testing for P001 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months prior to permit expiration.

ii. The emission testing shall be conducted to demonstrate compliance with the emission standard for particulate from 40 CFR 63, Subpart NNN.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission factor: 40 CFR Part 60, Appendix A, Methods 1 through 5. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

Emissions testing was conducted for this emissions unit on November 19, 2002. This emissions test demonstrated compliance with the emission standard for particulate from 40 CFR Part 63, Subpart NNN.

1.c Emission Limitation:
Sulfur dioxide emissions shall not exceed 2.2 pounds per hour.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with the allowable emission rate for sulfur dioxide through emissions testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

Emissions testing was conducted for this emissions unit on November 25, 2002. This emissions test demonstrated compliance with the emission limitation for sulfur dioxide emissions.

V. Testing Requirements (continued)

1.d Emission Limitation:
Sulfur dioxide emissions shall not exceed 9.5 tons per year.

Applicable Compliance Method:
The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.e Emission Limitation:
Filterable and condensable particulate emissions shall not exceed 3.24 pounds per hour.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with the allowable mass emission rate for filterable and condensable particulates through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and 40 CFR 51, Appendix M, Method 202. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

Emission testing was conducted for this emissions unit on November 25, 2002. This emissions test demonstrated compliance with the emission limitation for filterable and condensable particulate emissions.

1.f Emission Limitation:
Filterable and condensable particulate emissions shall not exceed 14.2 tons per year.

Applicable Compliance Method:
The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.g Emission Limitation:
Nitrogen oxides emissions shall not exceed 97.5 pounds per hour.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P001 in accordance with the following requirements:

i. The emission testing shall be conducted within 36 months of permit issuance.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for nitrogen oxide.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

1.h Emission Limitation:
Nitrogen oxides emissions from natural gas combustion shall not exceed 8.8 tons per year.

Applicable Compliance Method:
Compliance shall be demonstrated by multiplying the maximum annual MMcf usage of the natural gas burners (175.2) by the AP-42 emission factor for natural gas combustion (100 lbs nitrogen oxides/MMcf) from Table 1.4-1, 7/98 and dividing by 2000 to convert to ton(s).

V. Testing Requirements (continued)

1.i Emission Limitation:
Nitrogen oxides emissions from niter usage shall not exceed 208.3 tons per cumulative, rolling 12-month summation.

Applicable Compliance Method:
Compliance shall be based on the record keeping in section A.III.c.

1.j Emission Limitations:
Chlorides emissions shall not exceed 0.4 pound per hour and 1.76 tons per year.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P001 in accordance with the following requirements:

i. The emission testing shall be conducted within 36 months of permit issuance.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for chlorides.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 26. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.k Emission Limitation:
Carbon monoxide emissions shall not exceed 1.68 pounds per hour.

Emission Limitation:
Compliance with the hourly limitation may be demonstrated by multiplying the maximum annual MMcf usage of the natural gas burners (175.2) by the AP-42 emission factor for natural gas combustion (84.0 lbs carbon monoxide/MMcf) from Table 1.4-1, 7/98, and then dividing by the actual hours per year.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 - 4 and Method 10.

1.l Emission Limitation:
Carbon monoxide emissions shall not exceed 7.4 tons per year.

Applicable Compliance Method:
Compliance with the annual limitation may be demonstrated by multiplying the maximum annual MMcf usage of the natural gas burners (175.2) by the AP-42 emission factor for natural gas combustion (84.0 lbs carbon monoxide/MMcf) from Table 1.4-1, 7/98, and then dividing by 2000 to convert to tons per year.

V. Testing Requirements (continued)

2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Central District 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 the performance of the control equipment.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: B-4 Electric Melt Furnace (P004)

Activity Description: B-4 Electric Melt Furnace

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
7.35 tons per hour, B-4 "cold-top" electric glass melt furnace, (stack numbers 08-101 and 08-102)	OAC rule 3745-31-05(A)(3) (PTI 01-010)	The requirements established pursuant to this rule are equivalent to the requirements of OAC rules 3745-17-07(A), 3745-18-06(E)(2), 3745-21-08(B), 3745-23-06(B) and 40 CFR 63, Subpart NNN.
	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to 40 CFR 63, Subpart NNN.
	OAC rule 3745-21-08(B) and 3745-23-06(B)	See A.I.2.a-b below.
	40 CFR 63, Subpart NNN	See A.I.2.c-d, A.III.1.a and Part II, A.1-14 above.
	OAC rule 3745-18-06(E)(2)	Sulfur dioxide emissions shall not exceed 114.2 pounds per hour.

2. Additional Terms and Conditions

2.a The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-010.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2. Additional Terms and Conditions (continued)

2.b The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-010.

2.c The permittee shall demonstrate compliance with 40 CFR 63, Subpart NNN as described in the operating, monitoring, record keeping, reporting and testing requirements included in Part II - Specific Facility Terms and Conditions.

2.d In accordance with 40 CFR 63.1382(a)(1), the permittee shall not discharge or cause to be discharged into the atmosphere in excess of 0.5 pound of particulate per ton of glass pulled for P004.

(The maximum hourly allowable particulate emission rate of 3.13 pounds per hour is calculated by multiplying the maximum glass throughput of 6.25 tons per hour by 0.5 pound of particulate per ton of glass throughput.)

II. Operational Restrictions

1. In accordance with 40 CFR 63.1382(b)(5)(i), the permittee must initiate corrective action within 1 hour when the average glass pull rate of any 4-hour block period for glass melting furnaces equipped with continuous glass pull rate monitors, or daily glass pull rate for glass melting furnaces not so equipped, exceeds the average glass pull rate established during the performance test as specified in section 63.1384, by greater than 20 percent and complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan.

In accordance with 40 CFR 63.1382(b)(5)(ii), the permittee must implement a QIP consistent with the compliance assurance monitoring provisions of 40 CFR part 64, subpart D when the glass pull rate exceeds, by more than 20 percent, the average glass pull rate established during the performance test as specified in section 63.1384 for more than 5 percent of the total operating time in a 6-month block reporting period.

In accordance with 40 CFR 63.1382(b)(5)(iii), the permittee must operate each glass-melting furnace such that the glass pull rate does not exceed, by more than 20 percent, the average glass pull rate established during the performance test as specified in section 63.1384 for more than 10 percent of the total operating time in a 6-month block reporting period.

2. The permittee shall employ a "batch boom spray" or other equivalent batch wetting device for the control of particulate emissions for all batches processed in this emissions unit.

3. The permittee shall maintain a minimum batch wetting water flow rate of 1.1 gpm (this flow rate was established during the most recent stack test). The permittee shall record the batch wetting water flow rate once per shift.

III. Monitoring and/or Record Keeping Requirements

1.a Because the facility employs add-on controls (batch wetting to control particulate emissions) for this cold top electric furnace, the permittee is not required to measure and record the air temperature above the molten glass.

1.b In accordance with 40 CFR 63.1386(d)(2)(iv), the permittee of an existing glass-melting furnace equipped with continuous glass pull rate monitors must monitor and record the glass pull rate on an hourly basis. For glass-melting furnaces that are not equipped with continuous glass pull rate monitors, the glass pull rate must be monitored and recorded once per day.

In accordance with 40 CFR 63.1383(f)(2), the permittee, on any new glass-melting furnace, must install, calibrate, and maintain a continuous glass pull rate monitor that monitors and records on an hourly basis the glass pull rate.

1.c The permittee shall record the glass pull rate, including any period when the pull rate exceeded the average pull rate established during the most recent emission test that demonstrated compliance with the particulate emission limitation by more than 20 percent, the date and time of the exceedance, when corrective actions were initiated, the cause of the exceedance, an explanation of the corrective actions taken, and when the cause of the exceedance was corrected.

III. Monitoring and/or Record Keeping Requirements (continued)

1.d In accordance with 40 CFR 63.1383, on and after the date on which the performance test required to be conducted by sections 63.7 and 63.1384 is completed, the permittee must monitor all affected control equipment and processes according to the following requirements:

a. The permittee of each wool fiberglass manufacturing facility must prepare for each glass-melting furnace and rotary spin manufacturing line subject to the provisions of this subpart, a written operations, maintenance, and monitoring plan. The plan must be submitted to the Administrator for review and approval as part of the application for a part 70 permit. The plan must include the following information:

i. Procedures for the proper operation and maintenance of process modifications and add-on control devices used to meet the emission limits in section 63.1382;

ii. Procedures for the proper operation and maintenance of monitoring devices used to determine compliance, including quarterly calibration and certification of accuracy of each monitoring device according to the manufacturers's instructions; and

iii. Corrective actions to be taken when process parameters or add-on control device parameters deviate from the limit(s) established during initial performance tests.

In accordance with 40 CFR 63.1383(m), for all control device and process operating parameters measured during the initial performance tests, the permittee of the identified glass-melting furnaces and rotary spin manufacturing lines subject to this subpart 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 section 63.1382. The permittee shall conduct all additional performance tests according to the procedures in this part 63, subpart A and in section 63.1384.

2. The permittee shall perform weekly 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 emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

3. The permittee shall maintain daily records that document any time periods when the "batch boom spray" or other equivalent batch wetting device for the control of particulate emissions was not in service when the emissions unit was in operation.

IV. Reporting Requirements

1. In accordance with 40 CFR 63.1386(e), the permittee shall submit semiannual reports if measured emissions are in excess of all applicable standards or monitored parameters deviate from the levels established during the performance test. Each report shall contain the information specified in CFR 63.10(c) of this part as well as the additional records required by the record keeping requirements of paragraph (d) of 63.1386, as described in Part II.A.9 of this permit. When no deviations have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period.

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

IV. Reporting Requirements (continued)

3. The permittee shall submit quarterly deviation (excusion) reports that identify all batch wetting water flow rates below the minimum batch wetting water flow rate of 1.1 gpm.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I - General Term and Condition A.1.c.ii.

4. The permittee shall notify the Ohio EPA, Central District Office in writing of any daily record showing that the "batch boom spray" or other equivalent batch wetting device was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Ohio EPA, Central District Office within 30 days after the event occurs.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following method:

1.a Emission Limitation:
Visible emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:
If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Method 9 and the procedures in OAC rule 3745-17-03(B)(1).

1.b Emission Limitation:
0.5 pound of particulate per ton of glass pulled.

Applicable Compliance Method:
The permittee shall conduct emission testing for P004 in accordance with the following requirements:

i. The emission testing shall be conducted 6 months prior to permit expiration.

ii. The emission testing shall be conducted to demonstrate compliance with the emission standard for particulate from 40 CFR 63, Subpart NNN.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission factor: 40 CFR Part 60, Appendix A, Methods 1 through 5. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

Emissions testing was conducted for this emissions unit on August 8, 2002. This emissions test demonstrated compliance with the emission standard for particulate from 40 CFR Part 63, Subpart NNN.

1.c Emission Limitation:
Sulfur dioxide emissions shall not exceed 114.2 pounds per hour.

Applicable Compliance Method:
Compliance with this emission limitation will be assumed due to the high allowable emission limitation and the relatively low amount of sulfur dioxide emitted from the process.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR, Part 60, Appendix A, Methods 1 through 4 and 6. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

V. Testing Requirements (continued)

2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Central District 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 the performance of the control equipment.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: C-4 Electric Melt Furnace (P005)

Activity Description: C-4 Electric Melt Furnace

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
8.33 tons of batch per hour, 170 tons of glass per day, C-4 cold-top electric glass melt furnace, (stack nos. 08-99 and 08-100).	OAC rule 3745-31-05(A)(3) (PTI 01-08902)	Nitrogen oxides (NOx) emissions shall not exceed 90.10 pounds per hour. Filterable and condensable particulate emissions (PE) shall not exceed 3.54 pounds per hour and 15.6 tons per year. Sulfur dioxide (SO2) emissions shall not exceed 1.75 pounds per hour and 7.7 tons per year. Hydrogen chloride (HCl) emissions shall not exceed 0.60 pound per hour and 2.7 tons per year. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-21-08(B), 3745-23-06(B) and 40 CFR Part 63, Subpart NNN. See A.I.2.e below.
	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to 40 CFR Part 63, Subpart NNN.
	OAC rules 3745-21-08(B) and 3745-23-06(B)	See A.I.2.a-b below.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
	40 CFR Part 63, Subpart NNN	See A.I.2.c-d, A.II.1, A.III.1 and A.IV.1.
	OAC rule 3745-18-06(E)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-31-05(C) (PTI 01-08902) (synthetic minor to avoid non-attainment NSR)	Nitrogen oxides emissions from niter usage shall not exceed 288.3 tons per rolling, 12-month summation. See A.II.4 below.

2. Additional Terms and Conditions

2.a The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-08902.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.b The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-08902.

2.c The permittee shall demonstrate compliance with 40 CFR Part 63, Subpart NNN as described in the operating, monitoring, record keeping, reporting and testing requirements included in Part II - Specific Facility Terms and Conditions of this permit.

2.d In accordance with 40 CFR Part 63.1382(a)(1), the permittee shall not discharge or cause to be discharged into the atmosphere in excess of 0.5 pound of particulate per ton of glass pulled for P005.

(The maximum hourly allowable particulate emission rate of 3.54 pounds per hour is calculated by multiplying the maximum glass pull rate of 7.08 tons per hour by 0.5 pound of particulate per ton of glass throughput.)

2.e The hourly NOx, SO2 and HCl emission limitations and annual SO2 and HCl emission limitations for this emissions unit were established to reflect the potentials to emit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these emission limitations.

II. Operational Restrictions

1. In accordance with 40 CFR Part 63.1382(b)(5)(i), the permittee must initiate corrective action within 1 hour when the average glass pull rate of any 4-hour block period for glass melting furnaces equipped with continuous glass pull rate monitors, or daily glass pull rate for glass melting furnaces not so equipped, exceeds the average glass pull rate established during the performance test as specified in section 63.1384, by greater than 20 percent and complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan.

In accordance with 40 CFR Part 63.1382(b)(5)(ii), the permittee must implement a QIP consistent with the compliance assurance monitoring provisions of 40 CFR part 64, subpart D when the glass pull rate exceeds, by more than 20 percent, the average glass pull rate established during the performance test as specified in section 63.1384 for more than 5 percent of the total operating time in a 6-month block reporting period.

In accordance with 40 CFR Part 63.1382(b)(5)(iii), the permittee must operate each glass-melting furnace such that the glass pull rate does not exceed, by more than 20 percent, the average glass pull rate established during the performance test as specified in section 63.1384 for more than 10 percent of the total operating time in a 6-month block reporting period.

2. The permittee shall employ a "batch boom spray" or other equivalent batch wetting device for the control of particulate emissions for all batches processed in this emissions unit.

3. The permittee shall maintain a minimum batch wetting water flow rate of 0.6 gpm or other flow rate established during the most recent emission test that demonstrated compliance with the particulate emission limitation. The permittee shall record the batch wetting flow rate once per shift.

4. The maximum annual niter usage for P005 shall not exceed 533 tons, based upon a rolling, 12-month summation of the niter usage. A table delineating the niter usage during the first 12-months is not necessary because the permittee has maintained records which demonstrate past compliance with this limitation.

III. Monitoring and/or Record Keeping Requirements

1.a Because the facility employs add-on controls (batch wetting to control particulate emissions) for this cold top electric furnace, the permittee is not required to measure and record the air temperature above the molten glass.

1.b In accordance with 40 CFR Part 63.1383(f)(1), the permittee of an existing glass-melting furnace equipped with continuous glass pull rate monitors must monitor and record the glass pull rate on an hourly basis. For glass-melting furnaces that are not equipped with continuous glass pull rate monitors, the glass pull rate must be monitored and recorded once per day.

In accordance with 40 CFR Part 63.1383(f)(2), the permittee, on any new glass-melting furnace, must install, calibrate, and maintain a continuous glass pull rate monitor that monitors and records on an hourly basis the glass pull rate.

1.c In accordance with 40 CFR Part 63.1386(d)(ix), the permittee shall record the glass pull rate, including any period when the pull rate exceeded the average pull rate established during the most recent emission test that demonstrated compliance with the particulate emission limitation by more than 20 percent, the date and time of the exceedance, when corrective actions were initiated, the cause of the exceedance, an explanation of the corrective actions taken, and when the cause of the exceedance was corrected.

III. Monitoring and/or Record Keeping Requirements (continued)

1.d In accordance with 40 CFR Part 63.1383, on and after the date on which the performance test required to be conducted by sections 63.7 and 63.1384 is completed, the permittee must monitor all affected control equipment and processes according to the following requirements:

a. The permittee of each wool fiberglass manufacturing facility must prepare for each glass-melting furnace and rotary spin manufacturing line subject to the provisions of this subpart, a written operations, maintenance, and monitoring plan. The plan must be submitted to the Administrator for review and approval as part of the application for a part 70 permit. The plan must include the following information:

i. Procedures for the proper operation and maintenance of process modifications and add-on control devices used to meet the emission limits in section 63.1382;

ii. Procedures for the proper operation and maintenance of monitoring devices used to determine compliance, including quarterly calibration and certification of accuracy of each monitoring device according to the manufacturers's instructions; and

iii. Corrective actions to be taken when process parameters or add-on control device parameters deviate from the limit(s) established during initial performance tests.

1.e In accordance with 40 CFR Part 63.1383(m), for all control device and process operating parameters measured during the initial performance tests, the permittee of the identified glass-melting furnaces and rotary spin manufacturing lines subject to this subpart 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 section 63.1382. The permittee shall conduct all additional performance tests according to the procedures in this part 63, subpart A and in section 63.1384.

2. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from either 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 emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission 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.

3. The permittee shall maintain daily records that document any time periods when the "batch boom spray" is not maintained at the minimum batch wetting flow rate specified in Section A.II.3 above.

III. Monitoring and/or Record Keeping Requirements (continued)

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

a. the amount of niter used (tons);

b. the total Nitrogen oxides emissions from niter usage, in tons, using the following formula: {tons of niter used per month} x 0.541 pound of Nitrogen oxides formed per pound of niter used; and

c. the rolling, 12-month summation of Nitrogen oxides emissions from niter usage (tons) and the rolling, 12-month summation of niter usage (tons).

0.541 is derived from the percent of complete dissociation from niter (sodium nitrate) to nitrogen dioxide which is 54.1%.

IV. Reporting Requirements

1. In accordance with 40 CFR Part 63.1386(e), the permittee shall submit semiannual reports if measured emissions are in excess of all applicable standards or monitored parameters deviate from the levels established during the performance test. Each report shall contain the information specified in CFR 63.10(c) of this part as well as the additional records required by the record keeping requirements of paragraph (d) of 63.1386, as described in Part II.A.9 of this permit. When no deviations have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period.

2. The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from either stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

3. The permittee shall submit quarterly deviation (excusion) reports that identify all exceedances of the batch wetting flow rate restriction.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I - General Term and Condition A.1.c.ii.

4. The permittee shall notify the Ohio EPA, Central District Office in writing of any daily record showing that the "batch boom spray" or other equivalent batch wetting device was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Ohio EPA, Central District Office within 30 days after the event occurs.

5. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month niter usage rate limitation and all exceedances of the rolling, 12-month nitrogen oxides emission limitation.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I - General Term and Condition A.1.c.ii.

6. The permittee shall also submit annual reports that specify nitrogen oxides emissions from niter usage from emissions unit P005 for the previous calendar year. The reports shall be submitted by April 15th of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

V. Testing Requirements (continued)

1.a Emission Limitation:
NOx emissions shall not exceed 90.10 pounds per hour.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for emission unit P005 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months of startup.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for nitrogen oxides.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

1.b Emission Limitation:
NOx emissions from niter usage shall not exceed 288.3 tons per rolling, 12-month summation.

Applicable Compliance Method:
Compliance may be demonstrated by the record keeping specified in Section A.III.4 above.

1.c Emission Limitations:
Filterable and condensable particulate emissions shall not exceed 3.54 pounds per hour.
0.5 pound of particulates per ton of glass pulled.

Applicable Compliance Method:
The permittee shall conduct emission testing for emission unit P005 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months of startup.

ii. The emission testing shall be conducted to demonstrate compliance with the lb/hr particulate emission limitation and emission standard for particulate from 40 CFR Part 63, Subpart NNN.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rates: 40 CFR Part 60, Appendix A, Methods 1 through 5. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

1.d Emission Limitation:
Filterable and condensable particulate emissions (PE) shall not exceed 15.6 tons per year.

Applicable Compliance Method:
Compliance may be established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

V. Testing Requirements (continued)

1.e Emission Limitation:
SO2 emissions shall not exceed 1.75 pounds per hour.

Applicable Compliance Method:
This emission limitation was established as the emission units' potential to emit using the worst case batch formulation supplied by the company (PTI application submitted 09/29/04).

If required, the permittee shall demonstrate compliance with the allowable mass emission rate for SO2 in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.f Emission Limitation:
SO2 emissions shall not exceed 7.7 tons per year.

Applicable Compliance Method:
Compliance may be established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.g Emission Limitation:
Hydrogen chloride emissions shall not exceed 0.60 pounds per hour.

Applicable Compliance Method:
This emission limitation was established as the emission units' potential to emit using the worst case batch formulation supplied by the company (PTI application submitted 09/29/04).

If required, the permittee shall demonstrate compliance with the allowable mass emission rate for HCl in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 26. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.h Emission Limitation:
Hydrogen chloride emissions shall not exceed 2.7 tons per year.

Applicable Compliance Method:
Compliance may be established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Central District 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 the performance of the control equipment.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: D-5 Furnace (P006)

Activity Description: D-5 Furnace

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
5.15 tons per hour, D-5 natural gas-fired, recuperative glass melt furnace, with baghouse (stack numbers 00-1, 00-2, 00-3 and 00-4)	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to 40 CFR 63, Subpart NNN.
	40 CFR 63, Subpart NNN	See A.I.2.a-b, A.II.1-3 and Part II, A.1-14 above.
	OAC rule 3745-18-51(D)(1)	Sulfur dioxide emissions shall not exceed 1.4 pounds per ton of process weight.

2. Additional Terms and Conditions

2.a The permittee shall demonstrate compliance with 40 CFR 63, Subpart NNN as described in the operating, monitoring, record keeeping, reporting and testing requirements included in Part II - Specific Facility Terms and Conditions.

2.c In accordance with 40 CFR 63.1382(a)(1), the permittee shall not discharge or cause to be discharged into the atmosphere in excess of 0.5 pound of particulate per ton of glass pulled for P005.

(The maximum hourly allowable particulate emission rate of 2.6 pounds per hour is calculated by multiplying the maximum glass throughput of 5.15 tons per hour by 0.5 pound of particulate per ton of glass throughput.)

II. Operational Restrictions

1. The permittee shall vent all the particulate emissions to and shall operate the baghouse while operating this emissions unit.

2. The pressure drop across the baghouse shall be maintained within the range of 3 - 18 inches of water column while the emissions unit is in operation or within the range established during the most recent emission test that demonstrates this emissions unit was in compliance.

3. The permittee shall only burn natural gas in this emissions unit.

III. Monitoring and/or Record Keeping 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 monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a per shift basis.

3. The permittee shall perform weekly 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 emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

IV. 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 that all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I - General Term and Condition A.1.c.ii.

3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. If required, compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

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

V. Testing Requirements (continued)

1.b Emission Limitation:
0.5 pound of particulate per ton of glass pulled

Applicable Compliance Method:
The permittee shall conduct emission testing for P006 in accordance with the following requirements:

i. The emission testing shall be conducted 6 months prior to permit expiration.

ii. The emission testing shall be conducted to demonstrate compliance with the emission standard for particulate from 40 CFR 63, Subpart NNN.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission factor: 40 CFR Part 60, Appendix A, Methods 1 through 5. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

v. The process weight rate during the test(s) shall also be recorded.

Emissions testing was conducted for this emissions unit on August 8, 2002. This emissions test demonstrated compliance with the emission standard for particulate from 40 CFR Part 63, Subpart NNN.

1.c Emission Limitation:
Sulfur dioxide emissions shall not exceed 1.4 pounds per ton of glass pulled.

Applicable Compliance Method:
The permittee shall conduct emission testing for P006 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months prior to permit expiration.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for sulfur dioxide.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

v. The process weight rate during the test(s) shall also be recorded.

2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Central District 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 the performance of the control equipment.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: C-4 Forehearth\ Conditioner (P020)

Activity Description: C-4 Forehearth\Conditioner

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
7.08 tons of glass per hour, C-4 forehearth, with 5.6 MMCF/hr natural gas-fired burner (stack no. 08-136)	OAC rule 3745-31-05(A)(3) (PTI 01-08902)	Particulate emissions (PE) shall not exceed 7.76 pounds per hour and 34.0 tons per year. Nitrogen oxides (NOx) emissions shall not exceed 0.56 pound per hour and 2.46 tons per year. Carbon monoxide (CO) emission shall not exceed 0.47 pound per hour and 2.1 tons per year. Visible particulate emissions shall not exceed 20% opacity, as a three-minute average. See A.I.2.a below.
	OAC rules 3745-17-07(B) and 3745-17-08(B)	This facility is not located in an Appendix A area as described in OAC rule 3745-17-08; therefore, OAC rules 3745-17-07 and 3745-17-08 do not apply to this fugitive emissions unit.
	OAC rules 3745-21-08(B) and 3745-23-06(B)	See A.I.2.b below.

2. Additional Terms and Conditions

2.a The hourly and annual emission limitations for this emissions unit were established to reflect the potentials to emit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limits.

2. Additional Terms and Conditions (continued)

2.b The permittee has satisfied the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-08902.

The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-08902.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from 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 location and 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 emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission 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.

2. 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.

IV. 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 semiannual written reports that (a) identify all days during which any visible fugitive particulate emissions were observed from this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
PE emissions shall not exceed 7.76 pounds per hour.

Applicable Compliance Method:
The hourly emission limitation was established by multiplying the maximum tons of molten glass per hour (7.08 tons) by an emission factor of 1.095 lbs/ton based on testing 08/08/02 and an adjustment for throughput.

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

1.b Emission Limitation:
PE shall not exceed 34.0 tons per year.

Applicable Compliance Method:
Compliance may be established by multiplying the emission factor of 1.095 lbs/ton (testing 08/08/02 and adjustment for throughput) by the maximum glass pull rate of 62,050 tons per year and dividing by 2000 pounds per ton.

1.c Emission Limitation:
NOx emissions shall not exceed 0.56 pound per hour.

Applicable Compliance Method:
Compliance may be demonstrated by multiplying the rated input capacity of 5.6 MMBtu per hour by the AP-42 emission factor for natural gas combustion (100 lbs Nitrogen oxides/MMCF) from Table 1.4-1, 7/98, and then dividing by the conversion factor of 1000 MMBtu per MMCF.

If required, the permittee shall demonstrate compliance with the allowable mass emission rate for NOx in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.d Emission Limitation:
NOx emissions shall not exceed 2.46 tons per year.

Applicable Compliance Method:
Compliance may be established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.e Emission Limitation:
CO emissions shall not exceed 0.47 pound per hour.

Applicable Compliance Method:
Compliance may be demonstrated by multiplying the rated input capacity of 5.6 MMBtu per hour by the AP-42 emission factor for natural gas (84 lbs carbon monoxide/MMCF) from Table 1.4-1, 7/98, and then divide by the conversion factor of 1000 MMBtu per MMCF.

If required, the permittee shall demonstrate compliance with the allowable mass emission rate for CO in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

V. Testing Requirements (continued)

1.f Emission Limitation:
CO emissions shall not exceed 2.1 tons per year.

Applicable Compliance Method:
Compliance may be established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.g Emission Limitation:
Visible emissions shall not exceed 20% opacity, as a three-minute average, except as provided by rule.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Method 22 and the procedures in OAC rule 3745-17-03(B)(3).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: F-5 Forehearth\ Conditioner (P021)

Activity Description: F-5 Forehearth\Conditioner

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
150 tons per day, F-6/5 glass forehearth, with 62 MMCF/yr natural gas-fired burner (stack number 08-93)	OAC rule 3745-31-05(A)(3) (PTI 01-08329)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A). Filterable and condensable particulate emissions shall not exceed 1.43 pounds per hour and 6.4 tons per year. Nitrogen oxides emissions shall not exceed 0.71 pound per hour and 3.1 tons per year. Carbon monoxide emissions shall not exceed 0.6 pound per hour and 2.6 tons per year. See A.I.2.a and A.II.1 below.
	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rules 3745-21-08(B) and 3745-23-06(B)	See A.I.2.b below.

2. Additional Terms and Conditions

2.a The hourly and annual emission limitations for this emissions unit were established to reflect the emissions units potentials to emit. Therefore, no additional monitoring, record keeping or reporting requirements are necessary to ensure compliance with these emission limitations.

2. Additional Terms and Conditions (continued)

2.b The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-08329.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-08329.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping 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 perform weekly 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 emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

IV. 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 semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

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

Visible emission testing was conducted for this emissions unit on November 23, 2002. This emissions test demonstrated compliance with the visible emission limitation for this emissions unit.

V. Testing Requirements (continued)

1.b Emission Limitations:
Filterable and condensable particulate emissions shall not exceed 1.43 pounds per hour and 6.4 tons per year.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with the allowable mass emission rate for filterable and condensable particulates through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and 40 CFR 51, Appendix M, Method 202. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

Emission testing was conducted for this emissions unit on November 23, 2002. This emissions test demonstrated compliance with the emission limitations for filterable and condensable particulate emissions.

The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.c Emission Limitations:
Nitrogen oxides emissions shall not exceed 0.71 pound per hour and 3.1 tons per year.

Applicable Compliance Method:
The annual emission limitation was established by multiplying the maximum natural gas usage for the natural gas burners (62 MMcf) by the AP-42 emission factor for natural gas (100 lbs nitrogen oxide/MMcf) from Table 1.4-1, 7/98, and then dividing by 2000 to convert to ton(s).

The hourly emission limitation was established by dividing the annual emission rate (calculated above) by 8760.

If required, the permittee shall demonstrate compliance with the hourly emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7E.

1.d Emission Limitations:
Carbon monoxide emissions shall not exceed 0.6 pound per hour and 2.6 tons per year.

Applicable Compliance Method:
The annual emission limitation was established by multiplying the maximum annual natural gas usage for the natural gas burners (62 MMcf) by the AP-42 emission factor for natural gas combustion (84 lbs carbon monoxide/MMcf) from Table 1.4-1, 7/98, and then dividing by 2000 to convert to ton(s).

The hourly emission limitation was established by dividing the annual emission rate (calculated above) by 8760.

If required, the permittee shall demonstrate compliance with the hourly emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: F-6 Forehearth\ Conditioner (P022)

Activity Description: F-6 Forehearth\Conditioner

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
150 tons per day, F-6/5 glass channel, with 51 MMCF/yr natural gas-fired burner	OAC rule 3745-31-05(A)(3) (PTI 01-08329)	Filterable and condensable particulate emissions shall not exceed 5.5 pounds per hour and 24.0 tons per year. Nitrogen oxides emissions shall not exceed 0.6 pound per hour and 2.5 tons per year. Carbon monoxide emissions shall not exceed 0.5 pound per hour and 2.1 tons per year. Visible particulate emissions shall not exceed 20% opacity, as a three-minute average. See A.I.2.a and A.II.1 below.
	OAC rules 3745-17-07(B) and 3745-17-08(B)	This facility is not located in an Appendix A area as described in OAC rule 3745-17-08; therefore, OAC rules 3745-17-07 and 3745-17-08 do not apply to this fugitive emissions unit.
	OAC rules 3745-21-08(B) and 3745-23-06(B)	See A.I.2.b below.

2. Additional Terms and Conditions

2.a The hourly and annual emission limitations for this emissions unit were established to reflect the emissions units potentials to emit. Therefore, no additional monitoring, record keeping or reporting requirements are necessary to ensure compliance with these emission limitations.

2.b The permittee has satisfied the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-08 and 3745-23-06, respectively by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-08329.

2. Additional Terms and Conditions (continued)

The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-08329.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping 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 perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from 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 location and 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 emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the monthly check until the incident has ended. The observer may indicate that the visible emission 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.

IV. 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 semiannual written reports that (a) identify all days during which any visible fugitive particulate emissions were observed from this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

V. Testing Requirements (continued)

1.a Emission Limitation:
Visible particulate emissions shall not exceed 20% opacity, as a three-minute average, except as provided by rule.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Method 22 and the procedures in OAC rule 3745-17-03(B)(3).

1.b Emission Limitations:
Filterable and condensable particulate emissions shall not exceed 5.5 pounds per hour and 24.0 tons per year.

Applicable Compliance Method:
The hourly emission limitation was established by multiplying the maximum tons of molten glass per hour (6.25 tons) by an emission factor that was determined by testing a similar source (C-4 Channel - 0.143 lb/ton).

If required, the permittee shall demonstrate compliance with the hourly emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and 40 CFR 51, Appendix M, Method 202. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.c Emission Limitations:
Nitrogen oxides emissions shall not exceed 0.6 pound per hour and 2.5 tons per year.

Applicable Compliance Method:
The annual emission limitation was established by multiplying the maximum natural gas usage for the natural gas burners (51 MMcf) by the AP-42 emission factor for natural gas (100 lbs nitrogen oxide/MMcf) from Table 1.4-1, 7/98, and then dividing by 2000 to convert to ton(s).

The hourly emission limitation was established by dividing the annual emission rate (calculated above) by 8760.

If required, the permittee shall demonstrate compliance with the hourly emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7E.

1.d Emission Limitations:
Carbon monoxide emissions shall not exceed 0.5 pound per hour and 2.1 tons per year.

Applicable Compliance Method:
The annual emission limitation was established by multiplying the maximum annual natural gas usage for the natural gas burners (51 MMcf) by the AP-42 emission factor for natural gas combustion (84 lbs carbon monoxide/MMcf) from Table 1.4-1, 7/98, and then dividing by 2000 to convert to ton(s).

The hourly emission limitation was established by dividing the annual emission rate (calculated above) by 8760.

If required, the permittee shall demonstrate compliance with the hourly emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: D-5 Forehearth\ Conditioner (P024)

Activity Description: D-5 Forehearth\Conditioner

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
4.28 tons per hour, D-5 forehearth, with 5.9 MMCF/hr, natural gas-fired burner (stack number 08-119)	OAC rules 3745-17-07(B) and 3745-17-08(B)	This facility is not located in an Appendix A area as described in OAC rule 3745-17-08; therefore, OAC rule 3745-17-07 and 3745-17-08 do not apply to this fugitive emissions unit.
	OAC rule 3745-18-06(E)(2)	Sulfur dioxide emissions shall not exceed 79.4 pounds per hour.

2. Additional Terms and Conditions

None

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping 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.

IV. 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.

V. Testing Requirements

1. Emission Limitation:
Sulfur dioxide emissions shall not exceed 79.4 pounds per hour.

Applicable Compliance Method:
Compliance with this emission limitation will be assumed due to the high allowable emission limitation and the relatively low amount of sulfur dioxide emitted from the process. The relatively low amount of sulfur dioxide emissions from this emissions unit is due to the combustion of only natural gas.

If required, the permittee shall demonstrate compliance with this emissions limitation through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: B-4 Forming (P026)

Activity Description: B-4 Forming

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
10.13 tons per hour, natural gas-fired, B-4 fiber and pack forming, with penthouse (stack number 08-131)	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions shall not exceed 18.6 pounds per hour based on Table I. See A.I.2.d below.
	OAC rule 3745-21-07(G)(2)	Exempt, see A.II.2 below.
	40 CFR 63, Subpart NNN	Formaldehyde emissions shall not exceed 1.2 pounds per ton of glass pulled for P026, P140 and P176, combined. See A.I.2.a-b below and Part II, A.1-14 above.
	OAC rule 3745-18-06(E)(2)	Sulfur dioxide emissions shall not exceed 141.5 pounds per hour. See A.I.2.c below.

2. Additional Terms and Conditions

2.a The permittee shall demonstrate compliance with 40 CFR 63, Subpart NNN as described in the operating, monitoring, record keeeping, reporting and testing requirements included in Part II - Specific Facility Terms and Conditions.

2.b In accordance with 40 CFR 63.1382(a)(2)(i), the permittee shall not discharge or cause to be discharged into the atmosphere in excess of a total of 1.2 pounds of formaldehyde per ton of glass pulled for the B-4 rotary spin manufacturing line, which consists of P026, P140 and P176.

(The maximum hourly allowable formaldehyde emission rate of 7.5 pounds per hour from P026, P140 and P176, combined, is calculated by multiplying the maximum glass throughput of 6.25 tons per hour by 1.2 pounds of formaldehyde per ton of glass pulled.)

2. Additional Terms and Conditions (continued)

2.c The combustion of natural gas is the only source of sulfur dioxide emissions from this emissions unit. Due to the combustion of only natural gas in this emissions unit and the resulting low sulfur dioxide emissions, no monitoring, record keeping, or reporting requirements are necessary to ensure ongoing compliance with the sulfur dioxide emission limitation.

2.d Filterable particulate emissions shall not exceed 18.6 lbs/hr per the 1980 Consent Decree, State of Ohio versus the Owens-Corning Fiberglass Corporation.

II. Operational Restrictions

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

2. To avoid the emission limitations/control requirements contained in OAC rule 3745-21-07(G)(2), no photochemically reactive materials (i.e., as raw materials or cleanup materials) shall be employed in this emissions unit.

Note: The definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).

3. The permittee shall vent all the emissions from this emissions unit to the penthouse. The penthouse is a baffle system designed to reduce air flow velocity and entrained moisture.

III. Monitoring and/or Record Keeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

2. The permittee shall maintain records for each material employed in this emissions unit that indicate whether or not the material is a photochemically reactive material.

3. The permittee shall perform weekly 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 emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the weekly check until the incident has ended. The observer may indicate that the visible emission 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.

IV. 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 deviation (excursion) reports that identify all periods of time when a photochemically reactive material was employed in this emissions unit. These reports shall be submitted within 30 days after the occurrence.

IV. Reporting Requirements (continued)

3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

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

1.b Emission Limitation:
Particulate emissions shall not exceed 18.6 pounds per hour based on Table I.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P026 in accordance with the following requirements:

i. The emission testing shall be conducted within 24 months after permit issuance.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulates.

iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 6-, Appendix A, Methods 1 through 4 and 5E. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

1.c Emission Limitation:
Sulfur dioxide emissions shall not exceed 141.5 pounds per hour.

Applicable Compliance Method:
Compliance with this emission limitation will be assumed due to the high allowable emission limitation and the relatively low amount of sulfur dioxide emitted from the process.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR, Part 60, Appendix A, Methods 1 through 4 and 6. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

1.d Emission Limitation:
1.2 pounds of formaldehyde per ton of glass pulled for the B-4 rotary spin manufacturing line.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance through emission testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 40 CFR 63, Appendix A, Methods 316 or 318 while emissions units P026, P140 and P176 are in operation. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

Emission testing was conducted for this emissions unit on August 6, 2002. This emissions test demonstrated compliance with the emission standard for formaldehyde from 40 CFR Part 63, Subpart NNN.

V. Testing Requirements (continued)

2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Central District 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 the performance of the control equipment.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: C-4 Forming (P027)

Activity Description: C-4 Forming

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
13.97 tons per hour, C-4 fiber and pack forming with cyclonic separators and penthouse (stack no. 08-125)	OAC rule 3745-31-05(A)(3) (PTI 01-08902)	Filterable and condensable particulate emissions (PE) shall not exceed 28.00 pounds per hour and 122.7 tons per year. Nitrogen oxides (NOx) emissions shall not exceed 4.37 pounds per hour and 19.2 tons per year. Sulfur dioxide (SO2) emissions shall not exceed 5.63 pounds per hour and 24.7 tons per year. Carbon monoxide (CO) emissions shall not exceed 15.29 pounds per hour and 67.0 tons per year. Volatile organic compound (VOC) emissions shall not exceed 30.11 pounds per hour. Formaldehyde emissions shall not exceed 4.0 pounds per hour and 17.6 tons per year. Methanol emissions shall not exceed 13.0 pounds per hour. Phenol emissions shall not exceed 13.0 pounds per hour. See A.I.2.e, A.II.1-2 and A.II.5 below.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
		The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-21-07(G)(2), 3745-21-08(B), 3745-23-06(B), 3745-31-05(C), 40 CFR Part 63, Subpart NNN and 40 CFR 60, Subpart PPP. See A.I.2.e and A.II.1-2 and 5 below.
	OAC rule 3745-31-05(C) (PTI 01-08902) (synthetic minor to avoid non-attainment NSR)	Methanol emissions from P027, P055 and P073 shall not exceed 26.34 tons per rolling 12-month summation. Phenol emissions from P027, P055 and P073 shall not exceed 26.46 tons per rolling 12-month summation. Volatile organic compound emissions from P027, P055 and P073 shall not exceed 74.67 tons per rolling 12-month summation. Ammonia emissions shall not exceed 33 pounds per hour and 144.6 tons per year. See A.I.2.a, A.II.4 and A.II.6 below.
	OAC rule 3745-17-11(B)(1)	See A.I.2.e below.
	See OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	40 CFR Part 63, Subpart NNN	Formaldehyde emissions shall not exceed 1.2 pounds per ton of glass pulled for P027, P055 and P073, combined. See A.I.2.c-d below.
	OAC rule 3745-21-07(G)(2)	Exempt, see A.II.3 below.
	OAC rules 3745-21-08(B) and OAC rule 3745-23-06(B)	See A.I.2.b below.
	OAC rule 3745-18-06(E)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	40 CFR Part 60, Subpart PPP	See A.I.2.f below.
	40 CFR Part 64	See Sections A.III.1, A.III.5, A.IV.1 and A.IV.8 below.

2. Additional Terms and Conditions

2.a The hourly emission limitation for ammonia is established and permitted under OAC rule 3745-31-05(C) in PTI 01-08902. Ammonia is an air toxic, and the hourly emission limitation is established to reflect the status quo ammonia emission rate for this emissions unit for future air toxics evaluations that may involve this emissions unit.

2.b The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-08902.

The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-08902.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.c In accordance with 40 CFR Part 63.1382(a)(2)(i), the permittee shall not discharge or cause to be discharged into the atmosphere in excess of a total of 1.2 pounds of formaldehyde per ton of glass pulled for the C-4 rotary spin manufacturing line which, consists of P027, P055 and P073.

2.d The permittee shall demonstrate compliance with 40 CFR Part 63, Subpart NNN as described in the operating, monitoring, record keeeping, reporting and testing requirements included in Part II - Specific Facility Terms and Conditions of this permit.

2.e Filterable particulate emissions shall not exceed 21.7 lbs/hr per the 1980 Consent Decree, State of Ohio versus the Owens-Corning Fiberglass Corporation.

2.f In accordance with 40 CFR 60.682, on and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which contain particulate matter in excess of 5.5 kg/Mg (11.0 lb/ton) of glass pulled.

In accordance with 40 CFR 60.681, "Manufacturing line" means the manufacturing equipment comprising the forming section, where molten glass is fiberized and a fiberglass mat is formed; the curing section, where the binder resin in the mat is thermally "set"; and the cooling section, where the mat is cooled.

II. Operational Restrictions

1. The phenol formaldehyde resin delivered to this emissions unit shall not exceed a free methanol content of 1%, by weight.

2. The permittee shall only burn natural gas in this emissions unit.

3. To avoid the emission limitations/control requirements contained in OAC rule 3745-21-07(G)(2), no photochemically reactive materials (i.e., as raw materials or cleanup materials) shall be employed in this emissions unit.

Note: The definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).

4. The combined maximum amount of methanol and phenol in the resin delivered to P027 and P031 shall not exceed 156 tons, based upon a rolling, 12-month summation of the resin delivered. A table delineating the methanol and phenol in resin delivered during the first 12-months is not necessary because the permittee has maintained records which demonstrate past compliance with this limitation.

5. The permittee shall vent all the emissions from this emissions unit through the following particulate control units: cyclonic separators and a penthouse for the elimination of moisture and mixing chamber.

II. Operational Restrictions (continued)

6. The maximum amount of methanol and phenol in the resin delivered to P027 shall not exceed 60.7 tons, based upon a rolling, 12-month summation of the resin delivered. A table delineating the methanol and phenol in resin delivered during the first 12-months is not necessary because the permittee has maintained records which demonstrate past compliance with this limitation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall perform weekly 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 emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission 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.

NOTE: The visible emission checks for "any visible particulate emissions" as specified in this term and condition are necessary and appropriate in order to satisfy the "gap filling" requirements of OAC rule 3745-77-07(A)(3)(a)(ii) where the applicable requirement (in this case, OAC rule 3745-17-07(A)) does not require "...periodic monitoring sufficient to yield reliable data for the relevant time period that are representative of the source's compliance with the permit." The monitoring and record keeping for "abnormal emissions" in term and condition (c) above also satisfies the monitoring and record keeping requirement for "abnormal visible particulate emissions" for CAM purposes as specified in Section A.III.5.

2. 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.

III. Monitoring and/or Record Keeping Requirements (continued)

3. The permittee shall maintain monthly records of the following information:

a. the tons of resin delivered to P027;

b. the methanol concentration in each batch of resin delivered to P027 (as a weighted average of the methanol contents of all the resins employed, as taken from the resin delivery certificates received during the month);

c. the phenol concentration in each batch of resin delivered to P027 (as a weighted average of the phenol contents of all the resins employed, as taken from the resin delivery certificates received during the month);

d. total monthly methanol delivered to P027, in tons, calculated as (a)x(b);

e. total monthly phenol delivered to P027, in tons, calculated as (a)x(c);

f. total monthly methanol and phenol delivered to P027;

g. total monthly methanol and phenol delivered to P027 and P031, combined, in tons;

h. the rolling, 12-month summation of the tons of methanol and phenol in the resin delivered to P027 and P031, combined;

i. monthly methanol emitted from P027, P055 and P073, calculated as follows: (d)x[0.87(fraction of delivered methanol estimated to be emitted over the entire C-4 manufacturing line)];

j. monthly phenol emitted from P027, P055 and P073, calculated as follows: (e)x[0.87(fraction of delivered phenol estimated to be emitted over the entire C-4 manufacturing line)];

k. total monthly hours of operations for P027;

l. monthly formaldehyde emissions from P027, calculated as follows: 4 lbs/hr (hourly maximum)x(k)/2000;

m. total monthly VOC emissions from natural gas combustion from P027 (tons), calculated as follows: [(175.2 MMCF/yr) x (5.5 lbs VOC/MMCF) x (k) / (8760 x 2000)];

n. the rolling, 12-month summation of the total VOC emissions from P027, P055 and P073, combined, calculated as follows: i + j + l + m + NGP055 + FP055 + FP073, where NG equals natural gas combustion and F equals formaldehyde;

o. the rolling, 12-month summation of the tons of methanol and phenol in the resin delivered to P027;

p. the rolling, 12-month summation of the total methanol emissions from P027, P055 and P073, combined; and

q. the rolling, 12-month summation of the total phenol emissions from P027, P055 and P073, combined.

4. The permittee shall maintain records for each material employed in this emissions unit that indicate whether or not the material is a photochemically reactive material.

III. Monitoring and/or Record Keeping Requirements (continued)

5. The CAM plan for this emissions unit has been developed for visible particulate and particulate emissions. The CAM performance indicators for visible particulate and particulate emissions are the internal build-up of material on each cyclone as measured in accordance with the approved quality assurance and quality control program and the presence of any abnormal visible particulate emissions from the penthouse exhaust stack based on the results of the weekly visible emission checks specified in Section A.III.1, respectively. The build-up indicator is each 12-week period of material build-up. The material build-up indicator range is any build-up exceeding 3 inches on any single cyclone. Excessive buildup exceeding 6 inches will compromise the efficiency of any single cyclone. When the build-up of material is greater than 3 inches, corrective action (including, but not limited to, an evaluation of the emissions unit and each cyclone) will be required. The visible particulate emissions indicator range is the presence of any abnormal visible particulate emissions. When abnormal visible particulate emissions are documented, corrective action (including, but not limited to, an evaluation of the emissions unit and each cyclone) will be required.

Upon detecting an excursion of the indicator range for build-up listed above (CAM for particulate emissions) or the presence of abnormal visible particulate emissions (CAM for opacity), the owner or operator shall restore operation of the emissions unit (including the control device) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion. Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action, or any necessary follow-up actions to return operation to within the indicator range for build-up or any corrective actions taken to eliminate the presence of abnormal visible particulate emissions.

The permittee has developed a Quality Improvement Plan consistent with the requirements of 40 CFR Part 64.8.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the following

a. the cumulative rolling, 12-month tons of methanol and phenol in the resin delivered to P027 and P031 combined, limitation;

b. the rolling, 12-month total VOC emissions from P027, P055 and P073 combined, emission limitation;

c. the rolling, 12-month tons of methanol and phenol in the resin delivered to P027 limitation;

d. the rolling, 12-month total methanol emissions from P027, P055 and P073 combined, emission limitation; and

e. the rolling, 12-month summation of the total phenol emissions from P027, P055 and P073 combined, emission limitation.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I - General Term and Condition A.1.c.ii.

3. The permittee shall also submit annual reports that specify the total methanol, phenol and VOC emissions from P027, P055 and P073, combined. The reports shall be submitted by April 15th of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

IV. Reporting Requirements (continued)

4. The permittee shall submit annual reports that specify the total formaldehyde emissions from P027. The reports shall be submitted by April 15th of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

5. 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.

6. The permittee shall submit deviation (excursion) reports that identify all periods of time when a photochemically reactive material was employed in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

7. The permittee shall submit deviation (excursion) reports that identify all periods of time when the percent of free methanol in the phenol formaldehyde resin exceeds 1%. Each report shall be submitted within 30 days after the deviation occurs.

8. The permittee shall submit quarterly reports to the Director (the appropriate Ohio EPA District Office or local air agency) documenting all instances of material build-up in excess of the limitation specified above, detailing the date, magnitude (amount of build-up), reason (if known), and all corrective action(s) taken. The permittee shall also report all instances of abnormal visible emissions, detailing the date the visible emission check was performed, reason (if known), and all corrective action(s) taken to eliminate the abnormal visible emissions. If there are no exceedances of the established indicator range during the calendar quarter or if no abnormal visible emissions were observed, the permittee shall submit a statement to that effect along with the date, time, and findings for each indicator range inspection and visible emisison observation.

The quarterly reports shall be submitted on the dates specified in Part I - General Term and Condition A.1.c.ii.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitations:
Filterable particulate emissions shall not exceed 21.7 pounds per hour, whereas filterable and condensable particulate emissions shall not exceed 28.00 pounds per hour.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P027 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months of startup.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate emissions.

iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 5E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

1.b Emission Limitations:
PE shall not exceed 122.7 tons per year.

Applicable Compliance Method:
The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

V. Testing Requirements (continued)

1.c Emission Limitation:
NOx shall not exceed 4.37 pounds per hour.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P027 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months of startup.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for Nitrogen oxides.

iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

1.d Emission Limitation:
NOx shall not exceed 19.2 tons per year.

Applicable Compliance Method:
Compliance may be established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.e Emission Limitation:
SO2 emissions shall not exceed 5.63 pounds per hour.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P027 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months of startup.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for sulfur dioxide.

iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6C. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

1.f Emission Limitation:
SO2 emissions shall not exceed 24.7 tons per year.

Applicable Compliance Method:
Compliance may be established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

V. Testing Requirements (continued)

1.g Emission Limitations:
CO emissions shall not exceed 15.29 pounds per hour.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P027 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months of startup.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for carbon monoxide.

iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

1.h Emission Limitations:
CO emissions shall not exceed 67.0 tons per year.

Applicable Compliance Method:
Compliance may be established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.i Emission Limitation:
VOC emissions shall not exceed 30.11 pounds per hour.

Applicable Compliance Method:
Compliance with the hourly limitation may be determined by summing the hourly stack test results for formaldehyde, methanol and phenol with the hourly VOC emissions from natural gas combustion for this emissions unit. Hourly VOC emissions from natural gas combustion are derived by multiplying the burner rating of 20 MMBtu per hour by the AP-42 emission factor for natural gas (5.5 lbs VOC/MMCF) from Table 1.4-1, 7/98, and divide by the conversion factor of 1000 MMBtu per MMCF.

If required, the permittee shall demonstrate compliance with the allowable mass emission rate for VOC in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 25. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.j Emission Limitation:
Formaldehyde emissions shall not exceed 4.0 pounds per hour.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P027 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months of startup.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for formaldehyde.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): 40 CFR Part 63, Appendix A, Method 316 or 318. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

V. Testing Requirements (continued)

1.k Emission Limitation:
Formaldehyde emissions shall not exceed 17.6 tons per year.

Applicable Compliance Method:
Compliance may be determined by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.l Emission Limitation:
Methanol emissions shall not exceed 13.0 pounds per hour.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P027 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months of emissions unit start-up.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for methanol.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): 40 CFR Part 63, Appendix A, Method 308 or 318. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

1.m Emission Limitation:
Phenol emissions shall not exceed 13.0 pounds per hour.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P027 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months of emissions unit start-up.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for phenol.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): 40 CFR Part 60, Appendix A, Method 18 or 40 CFR Part 63, Appendix A, Method 318. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

1.n Emission Limitation:
Methanol emissions from P027, P055 and P073 shall not exceed 26.34 tons per rolling, 12-month summation.

Applicable Compliance Method:
For compliance with the rolling limitation, see A.III.3.p.

1.o Emission Limitation:
Phenol emissions from P027, P055 and P073 shall not exceed 26.46 tons per rolling, 12-month summation.

Applicable Compliance Method:
For compliance with the rolling limitation, see A.III.3.q.

V. Testing Requirements (continued)

1.p Emission Limitation:
VOC emissions from P027, P055 and P073 shall not exceed 74.67 tons per rolling, 12-month summation.

Applicable Compliance Method:
For compliance with the rolling limitation, see A.III.3.n.

1.q Emission Limitation:
1.2 pounds of formaldehyde per ton of glass pulled for the C-4 rotary spin manufacturing line

Applicable Compliance Method:
The permittee shall conduct emission testing for P027, P055 and P073 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months of startup.

ii. The emission testing shall be conducted to demonstrate compliance with the emission standard for formaldehyde from 40 CFR Part 63, Subpart NNN.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission factor: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 40 CFR Part 63, Appendix A, Methods 316 or 318. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

1.r Emission Limitation:
Visible emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

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

1.s Emission Limitations:
Ammonia emissions shall not exceed 33.0 pounds per hour.

Applicable Compliance Method:
The permittee shall conduct emission testing for P027 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months of startup.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for ammonia.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): US EPA Method CTM-027 or alternative U.S. EPA-approved test method may be used with prior approval from the Ohio EPA, Central District Office.

iv. 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 Ohio EPA, Central District Office.

1.t Emission Limitations:
Ammonia emissions shall not exceed 144.6 tons per year.

Applicable Compliance Method:
Compliance may be determined by multiplying the hourly emission rate established in an approved, compliance test (testing required above) by the actual hours of operation per year, and dividing by 2000 to convert to ton(s).

V. Testing Requirements (continued)

1.u Emission Limitation:
In accordance with 40 CFR 60.682, on and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, no owner or operator subject to the provisions of this subpart (40 CFR Part 60, Subpart PPP) shall cause to be discharged into the atmosphere from any affected facility any gases which contain particulate matter in excess of 5.5 kg/Mg (11.0 lb/ton) of glass pulled.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing in accordance with the following requirements:

i. In accordance with 40 CFR Part 60.8(a), within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test(s).

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate emissions.

iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 5E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

v. In accordance with 40 CFR 60.685, testing shall be conducted as follows:
(a) In conducting the performance tests required in ?60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in ?60.8(b).
(b) The owner or operator shall conduct performance tests while the product with the highest loss on ignition (LOI) expected to be produced by the affected facility is being manufactured.
(c) The owner or operator shall determine compliance with the particulate matter standard in ?60.682 as follows:
(1) The emission rate (E) of particulate matter shall be computed for each run using the following equation:
E=(Ct Qsd)/(Pavg K)
where:
E = emission rate of particulate matter, kg/Mg (lb/ton).
Ct = concentration of particulate matter, g/dscm (gr/dscf).
Qsd = volumetric flow rate of effluent gas, dscm/hr (dscf/hr).
Pavg = average glass pull rate, Mg/hr (ton/hr).
K = 1,000 g/kg (7,000 gr/lb).
(2) Method 5E shall be used to determine the particulate matter concentration (Ct) and the volumetric flow rate (Qsd) of the effluent gas. The sampling time and sample volume shall be at least 120 minutes and 2.55 dscm (90.1 dscf).

V. Testing Requirements (continued)

(3) The average glass pull rate (Pavg) for the manufacturing line shall be the arithmetic average of three glass pull rate (Pi) determinations taken at intervals of at least 30 minutes during each run.
The individual glass pull rates (Pi) shall be computed using the following equation:
Pi=K' Ls Wm M [1.0 -(LOI/100)]
where:
Pi=glass pull rate at interval "i", Mg/hr (ton/hr).
Ls=line speed, m/min (ft/min).
Wm=trimmed mat width, m (ft).
M=mat gram weight, g/m2 (lb/ft2).
LOI=loss on ignition, weight percent.
K'=conversion factor, 6?10 5 (min-Mg)/ (hr-g) [3?10 2 (min-ton)/(hr-lb)].
(i) ASTM D2584?68 (Reapproved 1985) or 94 (incorporated by reference?see ?60.17), shall be used to determine the LOI for each run.
(ii) Line speed (Ls), trimmed mat width (Wm), and mat gram weight (M) shall be determined for each run from the process information or from direct measurements.
(d) To comply with ?60.684(d), the owner or operator shall record measurements as required in ?60.684 (a) and (b) using the monitoring devices in ?60.683 (a) and (b) during the particulate matter runs.

2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Central District 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 the performance of the control equipment.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: D-5 Forming (P028)

Activity Description: D-5 Forming

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
9.75 tons per hour, D-5 fiber and pack forming, with penthouse (stack number 08-117)	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions shall not exceed 18.2 pounds per hour based on Table I. See A.I.2.f below.
	OAC rule 3745-21-07(G)(2)	Exempt, see A.II.2 below.
	OAC rule 3745-18-06(E)(2)	Sulfur dioxide emissions shall not exceed 138.0 pounds per hour. See A.I.2.e below.
	40 CFR 63, Subpart NNN	Formaldehyde emissions shall not exceed 1.2 pounds per ton of glass pulled for P028, P064 and P072, combined. See A.I.2.a-b below and Part II, A.1-14 above.
	OAC rule 3745-17-07(B)	See A.I.2.c below.
	OAC rule 3745-17-08(B)	See A.I.2.d below.

2. Additional Terms and Conditions

2.a The permittee shall demonstrate compliance with 40 CFR 63, Subpart NNN as described in the operating, monitoring, record keeeping, reporting and testing requirements included in Part II - Specific Facility Terms and Conditions.

2. Additional Terms and Conditions (continued)

2.b In accordance with 40 CFR 63.1382(a)(2)(i), the permittee shall not discharge or cause to be discharged into the atmosphere in excess of a total of 1.2 pounds of formaldehyde per ton of glass pulled for the D-5 rotary spin manufacturing line, which consists of P028, P064 and P072.

(The maximum hourly allowable formaldehyde emission rate of 7.5 pounds per hour from P028, P064 and P072 is calculated by multiplying the maximum glass throughput of 6.25 tons per hour by 1.2 pounds of formaldehyde per ton of glass pulled.)

2.c Pursuant to paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) do not apply to this emissions unit.

2.d Since this emissions unit is not located in an Appendix A area, pursuant to paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) do not apply to this emissions unit.

2.e The combustion of natural gas is the only source of sulfur dioxide emissions from this emissions unit. Due to the combustion of only natural gas in this emissions unit and the resulting low sulfur dioxide emissions, no monitoring, record keeping, or reporting requirements are necessary to ensure ongoing compliance with the sulfur dioxide emission limitation.

2.f Filterable particulate emissions shall not exceed 18.2 lbs/hr per the 1980 Consent Decree, State of Ohio versus the Owens-Corning Fiberglass Corporation.

II. Operational Restrictions

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

2. To avoid the emission limitations/control requirements contained in OAC rule 3745-21-07(G)(2), no photochemically reactive materials (i.e., as raw materials or cleanup materials) shall be employed in this emissions unit.

Note: The definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).

3. The permittee shall vent all the emissions from this emissions unit to the penthouse. The penthouse is a baffle system designed by Owens Corning to reduce air flow velocity and, thereby reduce entrained moisture.

III. Monitoring and/or Record Keeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

2. The permittee shall maintain records for each material employed in this emissions unit that indicate whether or not the material is a photochemically reactive material.

III. Monitoring and/or Record Keeping Requirements (continued)

3. The permittee shall perform weekly 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 emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the weekly check until the incident has ended. The observer may indicate that the visible emission 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.

IV. 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 deviation (excursion) reports that identify all periods of time when a photochemically reactive material was employed in this emissions unit. Each report shall be submitted within 30 days after the occurrence.

3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

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

V. Testing Requirements (continued)

1.b Emission Limitations:
Particulate emissions shall not exceed 18.2 pounds per hour based on Table I.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P028 in accordance with the following requirements:

i. The emission testing shall be conducted within 24 months after permit issuance.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulates.

iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 6-, Appendix A, Methods 1 through 4 and 5E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

1.c Emission Limitation:
1.2 pounds of formaldehyde per ton of glass pulled for the D-5 rotary spin manufacturing line.

Applicable Compliance Method:
The permittee shall conduct emission testing for P028, P064 and P072 in accordance with the following requirements:

i. The emission testing shall be conducted within 24 months of permit issuance.

ii. The emission testing shall be conducted to demonstrate compliance with the emission standard for formaldehyde from 40 CFR 63, Subpart NNN.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission factor: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 40 CFR 63, Appendix A, Methods 316 or 318. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office. During emissions testing for formaldehyde, ton(s) of glass pulled shall be recorded to demonstrate compliance with the 1.2 pounds of formaldehyde per ton of glass pulled limitation provided by 40 CFR Part 63, Subpart NNN.

Emissions testing was conducted for this emissions unit on August 7, 2002. This emissions test demonstrated compliance with the emission standard for formaldehyde from 40 CFR Part 63, Subpart NNN.

2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Central District 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 the performance of the control equipment.

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

V. Testing Requirements (continued)

3. Emission Limitation:
Sulfur dioxide emissions shall not exceed 138.0 pounds per hour.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR, Part 60, Appendix A, Methods 1 through 4 and 6. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: F-5/6 Forming (P031)

Activity Description: F-5/6 Forming

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
12.39 tons per hour, F-6/5 fiber and pack forming (forming zone stack numbers 08-191, 08-192, 08-193 and 08-194)	OAC rule 3745-31-05(A)(3) (PTI 01-08329)	Filterable and condensable particulate emissions shall not exceed 29.5 pounds per hour and 129.2 tons per year. Sulfur dioxide emissions shall not exceed 5.3 pounds per hour and 23.0 tons per year. Nitrogen oxides emissions shall not exceed 5.3 pounds per hour and 23.0 tons per year. Carbon monoxide emissions shall not exceed 17.5 pounds per hour and 76.7 tons per year. Formaldehyde emissions shall not exceed 8.5 pounds per hour and 37.2 tons per year. Methanol emissions shall not exceed 18.5 pounds per hour. Phenol emissions shall not exceed 26.5 pounds per hour. Volatile organic compound emissions shall not exceed 53.6 pounds per hour.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
		See A.II.1-2 and 5 below. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-21-07(G)(2), 3745-21-08(B), 3745-23-06(B), 3745-31-05(D) and 40 CFR 63, Subpart NNN.
	OAC rule 3745-31-05(D) (PTI 01-08329)	Methanol emissions from P031, P066 and P128 shall not exceed 45.00 tons per rolling 12-month summation. Phenol emissions from P031, P066 and P128 shall not exceed 50.00 tons per rolling 12-month summation. Volatile organic compound emissions from P031, P066 and P128 shall not exceed 143.2 tons per rolling 12-month summation. Ammonia emissions shall not exceed 50 pounds per hour and 219.0 tons per year. See See A.I.2.a and A.II.4 below.
	OAC rule 3745-17-11(B)(1)	Particulate emissions shall not exceed 23.5 pounds per hour based on Table I. See A.I.2.e below.
	See OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	40 CFR 63, Subpart NNN	Formaldehyde emissions shall not exceed 1.2 pounds per ton of glass pulled for P031, P066 and P128, combined. See A.I.2.c-d and Part II, A.1-14 above.
	OAC rule 3745-21-07(G)(2)	Exempt, see A.II.3 below.
	OAC rule 3745-21-08(B) and OAC rule 3745-23-06(B)	See A.I.2.b below.
	OAC rule 3745-18-06(E)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

2.a The hourly emission limitation was established and permitted under OAC rule 3745-31-05(D) in PTI 01-08329. Ammonia is an air toxic, and the hourly emission limitation was established to reflect the status quo ammonia emission rate for this emissions unit for future air toxics evaluations that may involve this emissions unit.

2.b The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-08329.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-08329.

2.c In accordance with 40 CFR 63.1382(a)(2)(i), the permittee shall not discharge or cause to be discharged into the atmosphere in excess of a total of 1.2 pounds of formaldehyde per ton of glass pulled for the C-4 rotary spin manufacturing line which, consists of P031, P066 and P128.

(The maximum hourly allowable formaldehyde emission rate of 7.5 pounds per hour from P031, P066 and P128, combined, is calculated by multiplying the maximum glass throughput of 6.25 tons per hour by 1.2 pounds of formaldehyde per ton of glass pulled.)

2.d The permittee shall demonstrate compliance with 40 CFR 63, Subpart NNN as described in the operating, monitoring, record keeeping, reporting and testing requirements included in Part II - Specific Facility Terms and Conditions.

2.e Filterable particulate emissions shall not exceed 23.5 lbs/hr per the 1980 Consent Decree, State of Ohio versus the Owens-Corning Fiberglass Corporation.

II. Operational Restrictions

1. The phenol formaldehyde resin delivered to this emissions unit shall not exceed a free methanol content of 1%, by weight.

2. The permittee shall only burn natural gas in this emissions unit.

3. To avoid the emission limitations/control requirements contained in OAC rule 3745-21-07(G)(2), no photochemically reactive materials (i.e., as raw materials or cleanup materials) shall be employed in this emissions unit.

Note: The definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).

4. The combined maximum amount of methanol and phenol in the resin delivered to P027 and P031 shall not exceed 156 tons, based upon a rolling, 12-month summation of the resin delivered.

5. The permittee shall vent all the emissions from this emissions unit through cyclonic separators for the elimination of moisture and control of particulate emissions.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall perform weekly 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 emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the weekly check until the incident has ended. The observer may indicate that the visible emission 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.

2. 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.

III. Monitoring and/or Record Keeping Requirements (continued)

3. The permittee shall maintain monthly records of the following information:

a. the tons of resin delivered to P031;

b. the methanol concentration in each batch of resin delivered to P031 (as a weighted average of the methanol contents of all the resins employed, as taken from the resin delivery certificates received during the month);

c. the phenol concentration in each batch of resin delivered to P031 (as a weighted average of the phenol contents of all the resins employed, as taken from the resin delivery certificates received during the month);

d. total monthly methanol delivered to P031, in tons, calculated as (a)x(b);

e. total monthly phenol delivered to P031, in tons, calculated as (a)x(c);

f. total monthly methanol and phenol delivered to P031;

g. total monthly methanol and phenol delivered to P027 and P031, combined, in tons;

h. the rolling, 12-month summation of the tons of methanol and phenol in the resin delivered to P027 and P031, combined;

i. monthly methanol emitted from P031, P066, and P128, calculated as follows: (d)x[0.87(fraction of delivered methanol estimated to be emitted over the entire C-4 manufacturing line)];

j. monthly phenol emitted from P031, P066, and P128, calculated as follows: (e)x[0.87(fraction of delivered phenol estimated to be emitted over the entire C-4 manufacturing line)];

k. total monthly hours of operations for P031;

l. monthly formaldehyde emissions from P031, calculated as follows: 8.5 lbs/hr (hourly maximum)x(k)/2000;

m. total monthly VOC emissions from natural gas combustion from P031 (tons), calculated as follows: [(157.7 MMCF/yr) x (5.5 lbs VOC/MMcf) x (k)/ (8760 x 2000)];

n. the rolling, 12-month summation of the total VOC emissions from P031, P066, and P128, combined, calculated as follows: i + j + l + m + NGP066 + NGP128 + FP066 + FP128, where NG equals natural gas combustion and F equals formaldehyde.

4. The permittee shall maintain records for each material employed in this emissions unit that indicate whether or not the material is a photochemically reactive material.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the cumulative rolling, 12-month tons of methanol and phenol in the resin delivered to P027 and P031 combined, limitation.

These reports are due by the date described in Part I - General Terms and Conditions of this permit under Section A.1.c.ii.

3. The permittee shall also submit annual reports that specify the total methanol, phenol and VOC emissions from P031, P066, and P128. These reports shall be submitted by January 31 of each year.

IV. Reporting Requirements (continued)

4. The permittee shall submit annual reports that specify the total formaldehyde emissions from P031. These reports shall be submitted by January 31 of each year.

5. 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.

6. The permittee shall submit deviation (excursion) reports that identify all periods of time when a photochemically reactive material was employed in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

7. The permittee shall submit deviation (excursion) reports that identify all periods of time when the percent of free methanol in the phenol formaldehyde resin exceeds 1. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitations:
Particulate emissions shall not exceed 23.5 pounds per hour based on Table I whereas filterable and condensable particulate emissions shall not exceed 29.5 pounds per hour.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P031 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months prior to permit expiration.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulates.

iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 5E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

Emission testing was conducted for this emissions unit on November 21, 2002, which demonstrated compliance with the emission limitation for particulates.

1.b Emission Limitations:
Filterable and condensable particulate emissions shall not exceed 129.2 tons per year.

Applicable Compliance Method:
The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

V. Testing Requirements (continued)

1.c Enission Limitation:
Carbon monoxide emissions shall not exceed 17.5 pounds per hour and 76.7 tons per year.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P031 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months prior to permit expiration.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for carbon monoxide.

iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

Emission testing was conducted on November 21, 22, and 23, 2002, which demonstrated compliance with the emission limitation for carbon monoxide.

The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.d Emission Limitations:
Sulfur dioxide emissions shall not exceed 5.3 pounds per hour and 23.0 tons per year.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P031 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months prior to permit expiration.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for sulfur dioxide.

iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6C. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

Emission testing was conducted on November 21 and 22, 2002, which demonstrated compliance with the emission limitation for sulfur dioxide.

The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

V. Testing Requirements (continued)

1.e Emission Limitation:
Nitrogen oxides shall not exceed 5.3 pounds per hour and 23.0 tons per year.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P031 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months prior to permit expiration.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for nitrogen oxides.

iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7 E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

Emission testing was conducted on November 21, 22, and 23, 2002, which demonstrated compliance with the emission limitation for nitrogen oxides.

The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.f Emission Limitation:
Formaldehyde emissions shall not exceed 8.5 pounds per hour and 37.2 tons per year.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with the allowable mass emission rate for formaldehyde in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 316 or 318. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

Emission testing was conducted on November 22, 2002, which demonstrated compliance with the emission limitation for formaldehyde.

The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.g Emission Limitation:
Methanol emissions shall not exceed 18.5 pounds per hour.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with the allowable mass emission rate for methanol in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 308 or 318. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

Emission testing was conducted on November 22, 2002, which demonstrated compliance with the emission limitation for methanol.

V. Testing Requirements (continued)

1.h Emission Limitation:
Phenol emissions shall not exceed 26.5 pounds per hour.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with the allowable mass emission rate for phenol in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 18 or 318. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

Emission testing was conducted on November 21, 2002, which demonstrated compliance with the emission limitation for phenol.

1.i Emission Limitation:
Volatile organic compound emissions shall not exceed 53.6 pounds per hour.

Applicable Compliance Method:
The hourly VOC emission limitation was established as the summation of maximum formaldehyde, methanol, phenol and VOC emissions from natural gas combustion. Compliance with the hourly limitation may be demonstrated by summing the hourly stack test results for formaldehyde, methanol and phenol with the hourly VOC emissions from natural gas combustion for this emissions unit. Hourly VOC emissions from natural gas combustion are derived by multiplying the maximum MMCF usage of the natural gas burners (175.2) by the AP-42 emission factor for natural gas (5.5 lbs VOC/MMcf) from Table 1.4-1, 7/98, and then dividing by 8760 to convert from an annual to an hourly emission rate.

1.j Emission Limitation:
Methanol emissions from P031, P066 and P128 shall not exceed 45.00 tons per rolling 12-month summation.

Applicable Compliance Method:
For compliance with the annual limitation, see A.III.3.i.

1.k Emission Limitation:
Phenol emissions from P031, P066 and P128 shall not exceed 50.00 tons per rolling 12-month summation.

Applicable Compliance Method:
For compliance with the annual limitation, see A.III.3.j.

1.l Emission Limitation:
Volatile organic compound emissions from P031, P066 and P128 shall not exceed 143.2 tons per rolling 12-month summation.

Applicable Compliance Method:
For compliance with the annual limitation, see A.III.3.n.

V. Testing Requirements (continued)

1.m Emission Limitation:
1.2 pounds of formaldehyde per ton of glass pulled for the F-5/6 rotary spin manufacturing line

Applicable Compliance Method:
The permittee shall conduct emission testing for P031, P066 and P128 in accordance with the following requirements:

i. The emission testing shall be conducted 6 months prior to permit expiration.

ii. The emission testing shall be conducted to demonstrate compliance with the emission standard for formaldehyde from 40 CFR 63, Subpart NNN.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission factor: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 40 CFR 63, Appendix A, Methods 316 or 318. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

Emissions testing was conducted for this emissions unit on November 22, 2002. This emissions test demonstrated compliance with the emission standard for formaldehyde from 40 CFR Part 63, Subpart NNN.

1.n Emission Limitation:
Visible emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

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

Visible emission testing was conducted for this emissions unit on November 23, 2002. This emissions test demonstrated compliance with the visible emission limitation for this emissions unit.

1.o Emission Limitations:
Ammonia emissions shall not exceed 50 pounds per hour and 219.0 tons per year.

Applicable Compliance Method:
The permittee shall conduct emission testing for P031 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months before permit expiration.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for ammonia.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): US EPA Method CTM-027 or alternative U.S. EPA-approved test method may be used with prior approval from the Ohio EPA, Central District Office.

iv. 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 Central District Office.

Emissions testing was conducted for this emissions unit on November 22, 2002 which demonstrated compliance with the emission limitation for ammonia.

Compliance with the annual emission limitation may be demonstrated by multiplying the hourly emission rate established in an approved, compliance test (testing required above) by the actual hours of operation per year, and dividing by 2000 to convert to ton(s).

V. Testing Requirements (continued)

2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Central District 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 the performance of the control equipment.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: #1 Aeroflex Forming (P038)

Activity Description: #1 Aeroflex Forming

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
1.2 tons per hour, #1 Aeroflex forming (stack numbers 11-25 and 11-26)	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions shall not exceed 3.91 pounds per hour based on Table I. See A.I.2.c below.
	OAC rule 3745-21-07(G)(2)	Exempt, see A.II.2 below.
	40 CFR 63, Subpart NNN	Exempt, see A.I.2.a below.

2. Additional Terms and Conditions

2.a This emissions unit is exempt from the requirements of 40 CFR 63, Subpart NNN. It does not produce a bonded, wool fiberglass building insulation product and, therefore, does not meet the applicability requirement of 40 CFR 63.1380(a)(2).

2.b An emission limitation for sulfur dioxide is excluded from this emissions unit because this forming section forms a pack from recycled fibers and does not employ gas burners that create SO2 nor does it feature a heated atmosphere that can promote SO2 formation by degradation/oxidation of sulfur compounds that are contained within the binder.

2.c Filterable particulate emissions shall not exceed 3.91 lbs/hr per the 1980 Consent Decree, State of Ohio versus the Owens-Corning Fiberglass Corporation.

II. Operational Restrictions

1. To avoid the emission limitations/control requirements contained in OAC rule 3745-21-07(G)(2), no photochemically reactive materials (i.e., as raw materials or cleanup materials) shall be employed in this emissions unit.

Note: The definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain records for each material employed in this emissions unit that indicate whether or not the material is a photochemically reactive material.

III. Monitoring and/or Record Keeping Requirements (continued)

2. The permittee shall perform weekly 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 emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all periods of time when a photochemically reactive material was employed in this emissions unit. Each report shall be submitted within 30 days after deviation occurs.

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:
If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Method 9 and the procedures in OAC rule 3745-17-03(B)(1).

1.b Emission Limitation:
Particulate emissions shall not exceed 4.63 pounds per hour based on Table I.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P038 in accordance with the following requirements:

i. The emission testing shall be conducted within 24 months after permit issuance.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulates.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 5E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

V. Testing Requirements (continued)

2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Central District 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 the performance of the control equipment.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: #2 Aeroflex Forming (P039)

Activity Description: #2 Aeroflex Forming

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
1.2 tons per hour, #2 Aeroflex forming (stack numbers 11-29 and 11-30)	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions shall not exceed 4.63 pounds per hour based on Table I. See A.I.2.c below.
	OAC rule 3745-21-07(G)(2)	Exempt, see A.II.2 below.
	40 CFR 63, Subpart NNN	Exempt, see A.I.2.a below.

2. Additional Terms and Conditions

2.a This emissions unit is exempt from the requirements of 40 CFR 63, Subpart NNN. It does not produce a bonded, wool fiberglass building insulation product and, therefore, does not meet the applicability requirement of 40 CFR 63.1380(a)(2).

2.b An emission limitation for sulfur dioxide is excluded from this emissions unit because this forming section forms a pack from recycled fibers and does not employ gas burners that create SO2 nor does it feature a heated atmosphere that can promote SO2 formation by degradation/oxidation of sulfur compounds that are contained within the binder.

2.c Filterable particulate emissions shall not exceed 4.63 lbs/hr per the 1980 Consent Decree, State of Ohio versus the Owens-Corning Fiberglass Corporation.

II. Operational Restrictions

1. To avoid the emission limitations/control requirements contained in OAC rule 3745-21-07(G)(2), no photochemically reactive materials (i.e., as raw materials or cleanup materials) shall be employed in this emissions unit.

Note: The definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain records for each material employed in this emissions unit that indicate whether or not the material is a photochemically reactive material.

III. Monitoring and/or Record Keeping Requirements (continued)

2. The permittee shall perform weekly 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 emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all periods of time when a photochemically reactive material was employed in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:
If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Method 9 and the procedures in OAC rule 3745-17-03(B)(1).

1.b Emission Limitation:
Particulate emissions shall not exceed 4.6 pounds per hour.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P039 in accordance with the following requirements:

i. The emission testing shall be conducted within 24 months after permit issuance.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulates.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 5E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

V. Testing Requirements (continued)

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Central District 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 the performance of the control equipment.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: #1 Aeroflex Oven (P044)

Activity Description: #1 Aeroflex Oven

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
0.5 ton per hour, natural gas-fired, #1 Aeroflex curing oven, with stack burners (stack numbers 11-18 and 11-6)	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions shall not exceed 2.58 pounds per hour based on Table I. See A.I.2.d below.
	OAC rule 3745-21-07(G)(1)	Exempt, see A.I.2.c below.
	40 CFR 63, Subpart NNN	Exempt, see A.I.2.b below.

2. Additional Terms and Conditions

2.a The permittee shall vent all the emissions from this emissions unit through the stack burner.

2.b This emissions unit is exempt from the requirements of 40 CFR 63, Subpart NNN. It does not produce a bonded, wool fiberglass building insulation product and, therefore, does not meet the applicability requirement of 40 CFR 63.1380(a)(2).

2.c Per OAC rule 3745-21-07(G)(9)(c), this emissions unit is exempt from the requirements of OAC 3745-21-07(G)(1) because this emissions unit utilizes a binder that is composed of only water and organic materials, has an organic materials content that does not exceed 20% and contains organic materials that are not photochemically reactive.

2.d Filterable particulate emissions shall not exceed 2.58 lbs/hr per the 1980 Consent Decree, State of Ohio versus the Owens-Corning Fiberglass Corporation.

II. Operational Restrictions

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

2. The permittee shall vent all the emissions from this emissions unit to the stack burners.

3. The permittee shall only employ binders in this emissions unit that are composed of water and organic materials (with an organic materials content that does not exceed 20%) and the organic materials shall not be photochemically reactive.

III. Monitoring and/or Record Keeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

2. The permittee shall maintain records of the daily operating hours for this emissions unit.

3. For each day during which the permittee utilizes a binder with an organic materials content greater than 20% or which contains organic materials that are photochemically reactive, the permittee shall maintain a record of the type and quantity of binder utilized in this emissions unit.

4. The permittee shall perform weekly 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 emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

IV. 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 deviation (excursion) reports that identify each day during which the permittee utilizes a binder with an organic materials content greater than 20% or which contains organic materials that are photochemically reactive. Each report shall be submitted within 30 days after the deviation occurs.

3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

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

V. Testing Requirements (continued)

1.b Emission Limitation:
Particulate emissions shall not exceed 2.84 pounds per hour based on Table I.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P044 in accordance with the following requirements:

i. The emission testing shall be conducted within 24 months after permit issuance.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulates.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 5E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Central District 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 the performance of the control equipment.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: C-4 Oven (P055)

Activity Description: C-4 Oven

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
9.18 tons per hour, natural gas-fired, C-4 curing oven, with incinerator (stack no. 08-125)	OAC rule 3745-31-05(A)(3) (PTI 01-08902)	Filterable and condensable particulate emissions shall not exceed 3.0 pounds per hour and 13.2 tons per year. Nitrogen oxides emissions shall not exceed 15.27 pounds per hour and 67.0 tons per year. Sulfur dioxide emissions shall not exceed 0.71 pound per hour and 3.2 tons per year. Carbon monoxide emissions shall not exceed 22.94 pounds per hour and 100.5 tons per year. Volatile organic compound (VOC) emissions shall not exceed 0.38 pound per hour. See A.II.1-2 and 5 below. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-21-08(B), 3745-23-06(B), 3745-31-05(C), 40 CFR Part 63, Subpart NNN, and 40 CFR 60, Subpart PPP.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
	OAC rule 3745-31-05(C) (synthetic minor to avoid non-attainment NSR)	Methanol emissions from P027, P055 and P073 shall not exceed 26.34 tons per rolling 12-month summation. Phenol emissions from P027, P055 and P073 shall not exceed 26.46 tons per rolling 12-month summation. Volatile organic compound emissions from P027, P055 and P073 shall not exceed 74.67 tons per rolling 12-month summation. Ammonia emissions shall not exceed 2.18 pounds per hour and 9.6 tons per year. See A.I.2.a, A.II.4 and A.II.6 below.
	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	See A.I.2.e below.
	OAC rule 3745-21-07(G)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rules 3745-21-08(B) and OAC rule 3745-23-06(B)	See A.I.2.b below.
	40 CFR Part 63, Subpart NNN	Formaldehyde emissions shall not exceed 1.2 pounds per ton of glass pulled for P027, P055 and P071, combined. See A.I.2.c-d below.
	OAC rule 3745-18-06(E)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	40 CFR 60, Subpart PPP	See A.I.2.f below.

2. Additional Terms and Conditions

2.a The hourly emission limitation is established and permitted under OAC rule 3745-31-05(C) in PTI 01-08329. Ammonia is an air toxic, and the hourly emission limitation is established to reflect the status quo ammonia emission rate for this emissions unit for future air toxics evaluations that may involve this emissions unit.

2. Additional Terms and Conditions (continued)

2.b The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-08902.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-08902.

2.c In accordance with 40 CFR Part 63.1382(a)(2)(i), the permittee shall not discharge or cause to be discharged into the atmosphere in excess of a total of 1.2 pounds of formaldehyde per ton of glass pulled for the C-4 rotary spin manufacturing line, which consists of P027, P055 and P073.

2.d The permittee shall demonstrate compliance with 40 CFR Part 63, Subpart NNN as described in the operating, monitoring, record keeeping, reporting and testing requirements included in Part II - Specific Facility Terms and Conditions of the applicable Title V permit.

2.e Filterable particulate emissions shall not exceed 2.4 lbs/hr per the 1980 Consent Decree, State of Ohio versus the Owens-Corning Fiberglass Corporation.

2.f In accordance with 40 CFR 60.682, on and after the date on which the performance test required to be conducted by ?60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which contain particulate matter in excess of 5.5 kg/Mg (11.0 1b/ton) of glass pulled.

In accordance with 40 CFR 60.681, "Manufacturing line" means the manufacturing equipment comprising the forming section, where molten glass is fiberized and a fiberglass mat is formed; the curing section, where the binder resin in the mat is thermally "set;" and the cooling section, where the mat is cooled.

II. Operational Restrictions

1. The phenol formaldehyde resin delivered to this emissions unit shall not exceed a free methanol content of 1% by weight.

2. The phenol formaldehyde resin delivered to this emissions unit shall not exceed a free methanol content of 1% by weight.

3. Per 40 CFR Part 63.1382(b)(6), the permittee must operate each incinerator used to control formaldehyde emissions from forming (P027) or curing (P055) 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 section 63.1384.

4. The combined maximum amount of methanol and phenol in the resin delivered to P027 and P031 shall not exceed 156 tons, based upon a rolling, 12-month summation of the resin delivered. A table delineating the methanol and phenol in resin delivered during the first 12-months is not necessary because the permittee has maintained records which demonstrate past compliance with this limitation.

5. The permittee shall vent all the emissions from this emissions unit through the incinerator.

6. The maximum amount of methanol and phenol in the resin delivered to P027 shall not exceed 60.7 tons, based upon a rolling, 12-month summation of the resin delivered. A table delineating the methanol and phenol in resin delivered during the first 12-months is not necessary because the permittee has maintained records which demonstrate past compliance with this limitation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall perform weekly 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 emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission 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.

2. 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.

3. a. Per 40 CFR Part 63.1383(g)(1), the permittee shall install, calibrate, maintain and operate a monitoring device that continuously measures and records the operating temperature in the firebox of the incinerator.

b. Per 40 CFR Part 63.1383(g)(2), 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:

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

ii. ensure proper adjustment of combustion air and adjust, as necessary;

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

iv. inspect dampers, fans, and blowers for proper operating;

v. inspect for proper sealing;

vi. inspect motors for proper operation;

vii. inspect combustion chamber refractory lining and clean and reapir/replace lining, as necessary;

viii. inspect incinerator shell for corrosion and/or hot spots;

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

x. generally observe that the equipment is maintained in good operating condition.

xi. the permittee shall complete all necessary repairs as soon as practicable.

III. Monitoring and/or Record Keeping Requirements (continued)

4. Per 63.1386(d)(2)(viii), in addition to the general records required by section 63.10(b)(2) of this part, the permittee shall maintain records of the 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.

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

a. the tons of resin delivered to P027;

b. the methanol concentration in each batch of resin delivered to P027 (as a weighted average of the methanol contents of all the resins employed, as taken from the resin delivery certificates received during the month);

c. the phenol concentration in each batch of resin delivered to P027 (as a weighted average of the phenol contents of all the resins employed, as taken from the resin delivery certificates received during the month);

d. total monthly methanol delivered to P027, in tons, calculated as (a)x(b);

e. total monthly phenol delivered to P027, in tons, calculated as (a)x(c);

f. total monthly methanol and phenol delivered to P027;

g. total monthly methanol and phenol delivered to P027 and P031, combined, in tons;

h. the rolling, 12-month summation of the tons of methanol and phenol in the resin delivered to P027 and P031, combined;

i. monthly methanol emitted from P027, P055 and P073, calculated as follows: (d)x[0.87(fraction of delivered methanol estimated to be emitted over the entire C-4 manufacturing line)];

j. monthly phenol emitted from P027, P055 and P073, calculated as follows: (e)x[0.87(fraction of delivered phenol estimated to be emitted over the entire C-4 manufacturing line)];

k. total monthly hours of operations for P055;

l. monthly formaldehyde emissions from P055, calculated as follows: 0.1 lbs/hr (hourly maximum)x(k)/2000;

m. total monthly VOC emissions from natural gas combustion from P055 (tons), calculated as follows: [(126.5 MMCF/yr) x (5.5 lbs VOC/MMCF) x (k) / (8760 x 2000)];

n. the rolling, 12-month summation of the total VOC emissions from P027, P055 and P073, combined, calculated as follows: i + j + l + m + NGP027 + FP027 + FP073, where NG equals natural gas combustion and F equals formaldehyde;

o. the rolling, 12-month summation of the tons of methanol and phenol in the resin delivered to P027;

p. the rolling, 12-month summation of the total methanol emissions from P027, P055 and P073, combined; and

q. the rolling, 12-month summation of the total phenol emissions from P027, P055 and P073, combined.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the following

a. the cumulative rolling, 12-month tons of methanol and phenol in the resin delivered to P027 and P031 combined, limitation;

b. the rolling, 12-month total VOC emissions from P027, P055 and P073 combined, emission limitation;

c. the rolling, 12-month tons of methanol and phenol in the resin delivered to P027 limitation;

d. the rolling, 12-month total methanol emissions from P027, P055 and P073 combined, emission limitation; and

e. the rolling, 12-month summation of the total phenol emissions from P027, P055 and P073 combined, emission limitation.

These reports are due by the date described in Part I - General Terms and Conditions of this permit under Section A.1.c.ii.

3. The permittee shall also submit annual reports that specify the total methanol, phenol and VOC emissions from P027, P055 and P073, combined. The reports shall be submitted by April 15th of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

4. The permittee shall submit annual reports that specify the total formaldehyde emissions from P027. The reports shall be submitted by April 15th of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

5. 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.

6. The permittee shall submit deviation (excursion) reports that identify all periods of time when the percent of free methanol in the phenol formaldehyde resin exceeds 1%. Each report shall be submitted within 30 days after the deviation occurs.

7. Per 63.1386(e), as required by section 63.10(e)(3)(v) of 40 CFR Part 63, Subpart NNN, 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 section 63.10(c) of this part as well as the additional records required by the record keeping requirements of paragraph (d) of 63.1386. When no deviations have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

V. Testing Requirements (continued)

1.a Emission Limitations:
Filterable particulate emissions shall not exceed 2.4 pounds per hour, whereas filterable and condensable particulate emissions shall not exceed 3.0 pounds per hour.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P055 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months of startup.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate emissions.

iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 5E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

1.b Emission Limitations:
Filterable and condensable particulate emissions shall not exceed 13.2 tons per year.

Applicable Compliance Method:
The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.c Emission Limitations:
Carbon monoxide emissions shall not exceed 22.94 pounds per hour.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P055 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months of startup.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for carbon monoxide.

iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

1.d Emission Limitations:
Carbon monoxide emissions shall not exceed 100.5 tons per year.

Applicable Compliance Method:
The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

V. Testing Requirements (continued)

1.e Emission Limitations:
Sulfur dioxide emissions shall not exceed 0.71 pound per hour.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P055 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months of startup.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for sulfur dioxide.

iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6C. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

1.f Emission Limitations:
Sulfur dioxide emissions shall not exceed 3.2 tons per year.

Applicable Compliance Method:
The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.g Emission Limitation:
Nitrogen oxides shall not exceed 15.27 pounds per hour.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P055 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months of startup.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for Nitrogen oxides.

iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

1.h Emission Limitation:
Nitrogen oxides shall not exceed 67.0 tons per year.

Applicable Compliance Method:
The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

V. Testing Requirements (continued)

1.i Emission Limitation:
VOC emissions shall not exceed 0.38 pound per hour.

Applicable Compliance Method:
The hourly VOC emission limitation was established as the summation of maximum formaldehyde, methanol, phenol and VOC emissions from natural gas combustion. Compliance with the hourly limitation may be demonstrated by summing the hourly stack test results for formaldehyde, methanol and phenol with the hourly VOC emissions from natural gas combustion for this emissions unit. Hourly VOC emissions from natural gas combustion are derived by multiplying the maximum MMCF usage of the natural gas burners (126.5) by the AP-42 emission factor for natural gas (5.5 lbs VOC/MMCF) from Table 1.4-1, 7/98, and then dividing by 8760 to convert from an annual to an hourly emission rate.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 - 4 and 18, 25 or 25A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.j Emission Limitation:
Methanol emissions from P027, P055 and P073 shall not exceed 26.34 tons per rolling, 12-month summation.

Applicable Compliance Method:
For compliance with the rolling limitation, see A.III.4.p.

1.k Emission Limitation:
Phenol emissions from P027, P055 and P073 shall not exceed 26.46 tons per rolling, 12-month summation.

Applicable Compliance Method:
For compliance with the rolling limitation, see A.III.4.q.

1.l Emission Limitation:
Volatile organic compound emissions from P027, P055 and P073 shall not exceed 74.67 tons per rolling, 12-month summation.

Applicable Compliance Method:
For compliance with the rolling limitation, see A.III.4.n.

1.m Emission Limitation:
1.2 pounds of formaldehyde per ton of glass pulled for the C-4 rotary spin manufacturing line

Applicable Compliance Method:
The permittee shall conduct emission testing for P027, P055 and P073 in accordance with the following requirements:

i. The emission testing shall be conducted 6 months prior to permit expiration.

ii. The emission testing shall be conducted to demonstrate compliance with the emission standard for formaldehyde from 40 CFR Part 63, Subpart NNN.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission factor: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 40 CFR Part 63, Appendix A, Methods 316 or 318. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office. During emission testing for formaldehyde, the ton(s) of glass pull rate shall be recorded to demonstrate compliance with the 1.2 pounds of formaldehyde per ton of glass pulled limitation specified in 40 CFR Part 63, Subpart NNN.

V. Testing Requirements (continued)

1.n Emission Limitation:
Visible emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

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

1.o Emission Limitations:
Ammonia emissions shall not exceed 2.18 pounds per hour.

Applicable Compliance Method:
The permittee shall conduct emission testing for P055 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months of startup.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for ammonia.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): US EPA Method CTM-027 or alternative U.S. EPA-approved test method may be used with prior approval from the Ohio EPA, Central District Office.

iv. 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 Ohio EPA, Central District Office.

1.p Emission Limitations:
Ammonia emissions shall not exceed 9.6 tons per year.

Applicable Compliance Method:
The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.q Emission Limitation:
In accordance with 40 CFR 60.682, on and after the date on which the performance test required to be conducted by ?60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which contain particulate matter in excess of 5.5 kg/Mg (11.0 1b/ton) of glass pulled.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing in accordance with the following requirements:

i. In accordance with 40 CFR Part 60.8 (a), within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test(s).

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate emissions.

iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 5E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

V. Testing Requirements (continued)

v. In accordance with 40 CFR 60.685, testing shall be conducted as follows:
(a) In conducting the performance tests required in ?60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in ?60.8(b).
(b) The owner or operator shall conduct performance tests while the product with the highest loss on ignition (LOI) expected to be produced by the affected facility is being manufactured.
(c) The owner or operator shall determine compliance with the particulate matter standard in ?60.682 as follows:
(1) The emission rate (E) of particulate matter shall be computed for each run using the following equation:
E=(Ct Qsd)/(Pavg K)
where:
E = emission rate of particulate matter, kg/Mg (lb/ton).
Ct = concentration of particulate matter, g/dscm (gr/dscf).
Qsd = volumetric flow rate of effluent gas, dscm/hr (dscf/hr).
Pavg = average glass pull rate, Mg/hr (ton/hr).
K = 1,000 g/kg (7,000 gr/lb).
(2) Method 5E shall be used to determine the particulate matter concentration (Ct) and the volumetric flow rate (Qsd) of the effluent gas. The sampling time and sample volume shall be at least 120 minutes and 2.55 dscm (90.1 dscf).

(3) The average glass pull rate (Pavg) for the manufacturing line shall be the arithmetic average of three glass pull rate (Pi) determinations taken at intervals of at least 30 minutes during each run.
The individual glass pull rates (Pi) shall be computed using the following equation:
Pi=K' Ls Wm M [1.0 -(LOI/100)]
where:
Pi=glass pull rate at interval "i", Mg/hr (ton/hr).
Ls=line speed, m/min (ft/min).
Wm=trimmed mat width, m (ft).
M=mat gram weight, g/m2 (lb/ft2).
LOI=loss on ignition, weight percent.
K'=conversion factor, 6?10 5 (min-Mg)/ (hr-g) [3?10 2 (min-ton)/(hr-lb)].
(i) ASTM D2584?68 (Reapproved 1985) or 94 (incorporated by reference?see ?60.17), shall be used to determine the LOI for each run.
(ii) Line speed (Ls), trimmed mat width (Wm), and mat gram weight (M) shall be determined for each run from the process information or from direct measurements.
(d) To comply with ?60.684(d), the owner or operator shall record measurements as required in ?60.684 (a) and (b) using the monitoring devices in ?60.683 (a) and (b) during the particulate matter runs.

2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Central District 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 the performance of the control equipment.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: #2 Aeroflex Oven (P060)

Activity Description: #2 Aeroflex Oven

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
0.7 ton per hour, natural gas-fired, #2 Aeroflex curing oven, with stack burners (stack numbers 11-01 and 11-28)	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions shall not exceed 3.18 pounds per hour based on Table I. See A.I.2.d below.
	OAC rule 3745-21-07(G)(1)	Exempt, see A.I.2.c below.
	40 CFR 63, Subpart NNN	Exempt, see A.I.2.b below.

2. Additional Terms and Conditions

2.a The permittee shall vent all the emissions from this emissions unit through the stack burner.

2.b This emissions unit is exempt from the requirements of 40 CFR 63, Subpart NNN. It does not produce a bonded, wool fiberglass building insulation product and, therefore, does not meet the applicability requirement of 40 CFR 63.1380(a)(2).

2.c Per OAC rule 3745-21-07(G)(9)(c), this emissions unit is exempt from the requirements of OAC 3745-21-07(G)(1) because this emissions unit utilizes a binder that is composed of only water and organic materials, has an organic materials content that does not exceed 20% and contains organic materials that are not photochemically reactive.

2.d Filterable particulate emissions shall not exceed 3.18 lbs/hr per the 1980 Consent Decree, State of Ohio versus the Owens-Corning Fiberglass Corporation.

II. Operational Restrictions

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

2. The permittee shall vent all the emissions from this emissions unit to the stack burners.

3. The permittee shall only employ binders in this emissions unit that are composed of water and organic materials (with an organic materials content that does not exceed 20%) and the organic materials shall not be photochemically reactive.

III. Monitoring and/or Record Keeping 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. For each day during which the permittee utilizes a binder with an organic materials content greater than 20% or which contains organic materials that are photochemically reactive, the permittee shall maintain a record of the type and quantity of binder utilized in this emissions unit.

3. The permittee shall perform weekly 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 emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

IV. 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 deviation (excursion) reports that identify each day during which the permittee utilizes a binder with an organic materials content greater than 20% or which contains organic materials that are photochemically reactive. Each report shall be submitted within 30 days after the deviation occurs.

3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:
If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Method 9 and the procedures in OAC rule 3745-17-03(B)(1).

V. Testing Requirements (continued)

1.b Emission Limitation:
Particulate emissions shall not exceed 3.23 pounds per hour based on Table I.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P060 in accordance with the following requirements:

i. The emission testing shall be conducted within 24 months after permit issuance.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulates.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 5E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Central District 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 the performance of the control equipment.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: D-5 Oven (P064)

Activity Description: D-5 Oven

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
5.08 tons per hour natural gas-fired D-5 curing oven with stack burners (stack numbers 08-123 and 08-46)	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions shall not exceed 12.2 pounds per hour based on Table I which is more stringent than Figure II. See A.I.2.f below.
	OAC rule 3745-21-07(G)(1)	Exempt, see A.I.2.e below.
	40 CFR 63, Subpart NNN	Formaldehyde emissions shall not exceed 1.2 pounds per ton of glass pulled for P028, P064 and P072, combined. See A.I.2.a and A.I.2.b below and Part II, A.1 - 14.
	OAC rule 3745-18-06(E)(2)	Sulfur dioxide emissions shall not exceed 88.2 pounds per hour. See A.I.2.d below.

2. Additional Terms and Conditions

2.a The permittee shall demonstrate compliance with 40 CFR 63, Subpart NNN as described in the operating, monitoring, record keeeping, reporting and testing requirements included in Part II - Specific Facility Terms and Conditions.

2.b In accordance with 40 CFR 63.1382(a)(2)(i), the permittee shall not discharge or cause to be discharged into the atmosphere in excess of a total of 1.2 pounds of formaldehyde per ton of glass pulled for the D-5 rotary spin manufacturing line, which consists of P028, P064 and P072.

(The maximum hourly allowable formaldehyde emission rate of 6.0 pounds per hour from P028, P064, and P072, combined, is calculated by multiplying the maximum glass throughput of 5.0 tons per hour by 1.2 pounds of formaldehyde per ton of glass pulled.)

2. Additional Terms and Conditions (continued)

2.c The permittee shall vent all emissions from this emissions unit through the stack burner.

2.d The combustion of natural gas is the only source of sulfur dioxide emissions from this emissions unit. Due to the combustion of only natural gas in this emissions unit and the resulting low sulfur dioxide emissions, no monitoring, record keeping, or reporting requirements are necessary to ensure ongoing compliance with the sulfur dioxide emission limitation.

2.e Per OAC rule 3745-21-07(G)(9)(c), this emissions unit is exempt from the requirements of OAC 3745-21-07(G)(1) because this emissions unit utilizes a binder that is composed of only water and organic materials, has an organic materials content that does not exceed 20% and contains organic materials that are not photochemically reactive.

2.f Filterable particulate emissions shall not exceed 12.2 lbs/hr per the 1980 Consent Decree, State of Ohio versus the Owens-Corning Fiberglass Corporation.

II. Operational Restrictions

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

2. The permittee shall vent all the emissions from this emissions unit to the stack burners.

3. The permittee shall only employ binders in this emissions unit that are composed of water and organic materials (with an organic materials content that does not exceed 20%) and the organic materials shall not be photochemically reactive.

III. Monitoring and/or Record Keeping 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. For each day during which the permittee utilizes a binder with an organic materials content greater than 20% or which contains organic materials that are photochemically reactive, the permittee shall maintain a record of the type and quantity of binder utilized in this emissions unit.

3. The permittee shall perform weekly 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 emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the weekly check until the incident has ended. The observer may indicate that the visible emission 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.

IV. 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.

IV. Reporting Requirements (continued)

2. The permittee shall submit deviation (excursion) reports that identify each day during which the permittee utilizes a binder with an organic materials content greater than 20% or which contains organic materials that are photochemically reactive. Each report shall be submitted within 30 days after the deviation occurs.

3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

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

1.b Emission Limitation:
Particulate emissions shall not exceed 12.1 pounds per hour based on Table I.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P064 in accordance with the following requirements:

i. The emission testing shall be conducted within 24 months after permit issuance.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulates.

iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 6-, Appendix A, Methods 1 through 4 and 5E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

1.c Emission Limitation:
Sulfur dioxide emissions shall not exceed 88.2 pounds per hour.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with this emissions limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

V. Testing Requirements (continued)

1.d Emission Limitation:
1.2 pounds of formaldehyde per ton of glass pulled for D-5 rotary spin manufacturing line

Applicable Compliance Method:
The permittee shall conduct emission testing for P028, P064 and P072 in accordance with the following requirements:

i. The emission testing shall be conducted within 24 months after permit issuance.

ii. The emission testing shall be conducted to demonstrate compliance with the emission standard for formaldehyde from 40 CFR 63, Subpart NNN.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission factor: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 40 CFR 63, Appendix A, Methods 316 or 318. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office. During emission testing for formaldehyde, the glass pull rate shall be recorded to demonstrate compliance with the 1.2 pounds of formaldehyde per ton of glass pulled emission limitation specified by 40 CFR Part 63, Subpart NNN.

Emission testing was conducted for this emissions unit on August 7, 2002. This emissions test demonstrated compliance with the emission limitation for formaldehyde from 40 CFR Part 63, Subpart NNN.

2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Central District 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 the performance of the control equipment.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: F-5/6 Oven (P066)

Activity Description: F-5/6 Oven

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
8.97 tons per hour, natural gas-fired, F-5/6 curing oven, with incinerator (stack number 08-125)	OAC rule 3745-31-05(A)(3) (PTI 01-08329)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-21-08(B), 3745-23-06(B), 3745-31-05(D) and 40 CFR 63, Subpart NNN. Filterable and condensable particulate emissions shall not exceed 4.0 pounds per hour and 17.5 tons per year. Sulfur dioxide emissions shall not exceed 0.65 pound per hour and 2.9 tons per year. Nitrogen oxides emissions shall not exceed 14 pounds per hour and 61.3 tons per year. Carbon monoxide emissions shall not exceed 21 pounds per hour and 92 tons per year. Formaldehyde emissions shall not exceed 0.25 pound per hour and 1.1 tons per year. Methanol emissions shall not exceed 0.1 pound per hour. Phenol emissions shall not exceed 0.1 pound per hour. Volatile organic compound emissions shall not exceed 0.6 pound per hour. See A.II.1-2 and 5 below.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-21-07(G)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-21-08(B) and OAC rule 3745-23-06(B)	See A.I.2.b below.
	OAC rule 3745-31-05(D)	Methanol emissions from P031, P066 and P128 shall not exceed 45.00 tons per rolling 12-month summation. Phenol emissions from P031, P066 and P128 shall not exceed 50.00 tons per rolling 12-month summation. Volatile organic compound emissions from P031, P066 and P128 shall not exceed 143.2 tons per rolling 12-month summation. Ammonia emissions shall not exceed 3.25 pounds per hour and 14.3 tons per year. See A.I.2.a and A.II.4 below.
	40 CFR 63, Subpart NNN	Formaldehyde emissions shall not exceed 1.2 pounds per ton of glass pulled for P031, P066 and P128, combined. See A.I.2.d-e and Part II, A.1-14 above.
	OAC rule 3745-18-06(E)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-03(A)(3).
	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

2. Additional Terms and Conditions

2.a The hourly emission limitation was established and permitted under OAC rule 3745-31-05(D) in PTI 01-08329. Ammonia is an air toxic, and the hourly emission limitation was established to reflect the status quo ammonia emission rate for this emissions unit for future air toxics evaluations that may involve this emissions unit.

2.b The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-08329.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

2.c The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-08329.

2.d In accordance with 40 CFR 63.1382(a)(2)(i), the permittee shall not discharge or cause to be discharged into the atmosphere in excess of a total of 1.2 pounds of formaldehyde per ton of glass pulled for the F-5 rotary spin manufacturing line, which consists of P031, P066 and P128.

(The maximum hourly allowable formaldehyde emission rate of 7.5 pounds per hour from P031, P066 and P128, combined, is calculated by multiplying the maximum glass throughput of 6.25 tons per hour by 1.2 pounds of formaldehyde per ton of glass pulled.)

2.e The permittee shall demonstrate compliance with 40 CFR 63, Subpart NNN as described in the operating, monitoring, record keeeping, reporting and testing requirements included in Part II - Specific Facility Terms and Conditions.

II. Operational Restrictions

1. The phenol formaldehyde resin delivered to this emissions unit shall not exceed a free methanol content of 1%, by weight.

2. The permittee shall only burn natural gas in this emissions unit.

3. Per 40 CFR 63.1382(b)(6), the permittee must operate each incinerator used to control formaldehyde emissions from forming (P031) or curing (P066) 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 section 63.1384.

4. The combined maximum amount of methanol and phenol in the resin delivered to P027 and P031 shall not exceed 156 tons, based upon a rolling, 12-month summation of the resin delivered.

5. The permittee shall vent all the emissions from this emissions unit through the incinerator.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall perform weekly 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 emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

III. Monitoring and/or Record Keeping Requirements (continued)

2. 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.

3. a. Per 40 CFR 63.1383(g)(1), the permittee shall install, calibrate, maintain and operate a monitoring device that continuously measures and records the operating temperature in the firebox of the incinerator.

b. Per 40 CFR 63.1383(g)(2), 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:

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

ii. ensure proper adjustment of combustion air and adjust, as necessary;

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

iv. inspect dampers, fans, and blowers for proper operating;

v. inspect for proper sealing;

vi. inspect motors for proper operation;

vii. inspect combustion chamber refractory lining and clean and reapir/replace lining, as necessary;

viii. inspect incinerator shell for corrosion and/or hot spots;

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

x. generally observe that the equipment is maintained in good operating condition.

xi. the permittee shall complete all necessary repairs as soon as practicable.

4. Per 63.1386(d)(2)(viii), in addition to the general records required by section 63.10(b)(2) of this part, the permittee shall maintain records of the 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;

III. Monitoring and/or Record Keeping Requirements (continued)

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

a. the tons of resin delivered to P031;

b. the methanol concentration in each batch of resin delivered to P031 (as a weighted average of the methanol contents of all the resins employed, as taken from the resin delivery certificates received during the month);

c. the phenol concentration in each batch of resin delivered to P031 (as a weighted average of the phenol contents of all the resins employed, as taken from the resin delivery certificates received during the month);

d. total monthly methanol delivered to P031, in tons, calculated as (a)x(b);

e. total monthly phenol delivered to P031, in tons, calculated as (a)x(c);

f. total monthly methanol and phenol delivered to P031;

g. total monthly methanol and phenol delivered to P027 and P031, combined, in tons;

h. the rolling, 12-month summation of the tons of methanol and phenol in the resin delivered to P027 and P031, combined;

i. monthly methanol emitted from P031, P066 and P128, calculated as follows: (d)x[0.87(fraction of delivered methanol estimated to be emitted over the entire C-4 manufacturing line)];

j. monthly phenol emitted from P031, P066 and P128, calculated as follows: (e)x[0.87(fraction of delivered phenol estimated to be emitted over the entire C-4 manufacturing line)];

k. total monthly hours of operations for P066;

l. monthly formaldehyde emissions from P066, calculated as follows: 0.25 lb/hr (hourly maximum)x(k)/2000;

m. total monthly VOC emissions from natural gas combustion from P066 (tons), calculated as follows: [(239.2 MMCF/yr) x (5.5 lbs VOC/MMcf) x (k)/ (8760 x 2000)]; and

n. the rolling, 12-month summation of the total VOC emissions from P031, P066 and P128, combined, calculated as follows: i + j + l + m + NGP031 + NGP128 + FP031 + FP128, where NG equals natural gas combustion and F equals formaldehyde.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the cumulative rolling, 12-month tons of methanol and phenol in the resin delivered to P027 and P031 combined.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Condition A.1.c.ii.

3. The permittee shall also submit annual reports that specify the total methanol, phenol and VOC emissions. These reports shall be submitted by January 31 of each year.

4. 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.

IV. Reporting Requirements (continued)

5. Per 63.1386(e), as required by section 63.10(e)(3)(v) of 40 CFR 63, Subpart NNN, 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 section 63.10(c) of this part as well as the additional records required by the recordkeeping requirements of paragraph (d) of 63.1386. When no deviations have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period.

6. The permittee shall submit deviation (excursion) reports that identify all periods of time when the percent of free methanol in the phenol formaldehyde resin exceeds 1. Each report shall be submitted within 30 days after the deviation occurs.

7. The permittee shall submit annual reports that specify the total formaldehyde emissions from P066. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitations:
Filterable and condensable particulate emissions shall not exceed 4.0 pounds per hour and 17.5 tons per year.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P066 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months prior to permit expiration.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulates.

iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 5E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

Emission testing was conducted for this emissions unit on November 25, 2002, which demonstrated compliance with the emission limitation for particulates.

The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

V. Testing Requirements (continued)

1.b Enission Limitation:
Carbon monoxide emissions shall not exceed 21 pounds per hour and 92.0 tons per year.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P066 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months prior to permit expiration.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for carbon monoxide.

iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

Emission testing was conducted on November 25, 2002, which demonstrated compliance with the emission limitation for carbon monoxide.

The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.c Emission Limitations:
Sulfur dioxide emissions shall not exceed 0.65 pound per hour and 2.9 tons per year.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P066 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months prior to permit expiration.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for sulfur dioxide.

iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6C. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

Emission testing was conducted on November 25, 2002, which demonstrated compliance with the emission limitation for sulfur dioxide.

The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

V. Testing Requirements (continued)

1.d Emission Limitation:
Nitrogen oxides shall not exceed 14 pounds per hour and 61.3 tons per year.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P066 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months prior to permit expiration.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for nitrogen oxides.

iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7 E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

Emission testing was conducted on November 25, 2002, which demonstrated compliance with the emission limitations for nitrogen oxides.

The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.e Emission Limitation:
Formaldehyde emissions shall not exceed 0.25 pound per hour and 1.1 tons per year.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with the allowable mass emission rate for formaldehyde in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 316 or 318. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

Emission testing was conducted on November 20, 2002, which demonstrated compliance with the emission limitation for formaldehyde.

The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.f Emission Limitation:
Methanol emissions shall not exceed 0.1 pound per hour.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with the allowable mass emission rate for methanol in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 308 or 318. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

Emissions testing was conducted on November 25, 2002, which demonstrated compliance with the emission limitation for methanol.

V. Testing Requirements (continued)

1.g Emission Limitation:
Phenol emissions shall not exceed 0.1 pound per hour.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with the allowable mass emission rate for phenol in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 18 or 318. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

Emission testing was conducted on November 26, 2002, which demonstrated compliance with the emission limitation for phenol.

1.h Emission Limitation:
Volatile organic compound emissions shall not exceed 0.6 pound per hour.

Applicable Compliance Method:
The hourly VOC emission limitation was established as the summation of maximum formaldehyde, methanol, phenol and VOC emissions from natural gas combustion. Compliance with the hourly limitation may be demonstrated by summing the hourly stack test results for formaldehyde, methanol and phenol with the hourly VOC emissions from natural gas combustion for this emissions unit. Hourly VOC emissions from natural gas combustion are derived by multiplying the maximum MMCF usage of the natural gas burners (175.2) by the AP-42 emission factor for natural gas (5.5 lbs VOC/MMcf) from Table 1.4-1, 7/98, and then dividing by 8760 to convert from an annual to an hourly emission rate.

1.i Emission Limitation:
Methanol emissions from P031, P066 and P128 shall not exceed 45.00 tons per rolling, 12-month summation.

Applicable Compliance Method:
For compliance with the annual limitation, see A.III.3.i.

1.j Emission Limitation:
Phenol emissions from P031, P066 and P128 shall not exceed 50.00 tons per rolling, 12-month summation.

Applicable Compliance Method:
For compliance with the annual limitation, see A.III.3.j.

1.k Emission Limitation:
Volatile organic compound emissions from P031, P066 and P128 shall not exceed 143.2 tons per rolling, 12-month summation.

Applicable Compliance Method:
For compliance with the annual limitation, see A.III.3.q.

1.l Emission Limitation:
Visible emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

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

V. Testing Requirements (continued)

1.m Emission Limitation:
1.2 pounds of formaldehyde per ton of glass pulled for the F-5 rotary spin manufacturing line

Applicable Compliance Method:
The permittee shall conduct emission testing for P031, P066 and P128 in accordance with the following requirements:

i. The emission testing shall be conducted 6 months prior to permit expiration.

ii. The emission testing shall be conducted to demonstrate compliance with the emission standard for formaldehyde from 40 CFR 63, Subpart NNN.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission factor: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 40 CFR 63, Appendix A, Methods 316 or 318. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office. During emission testing for formaldehyde, the ton(s) of glass pull rate shall be recorded to demonstrate compliance with the 1.2 pounds of formaldehyde per ton of glass pulled limitation specified in 40 CFR Part 63, Subpart NNN.

Emission testing was conducted for this emissions unit on November 20, 2002. This emission test demonstrated compliance with the 40 CFR Part 63 , Subpart NNN emission limitation for formaldehyde.

1.n Emission Limitations:
Ammonia emissions shall not exceed 3.25 pounds per hour and 14.3 tons per year.

Applicable Compliance Method:
The permittee shall conduct emission testing for P066 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months before permit expiration.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for ammonia.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): US EPA Method CTM-027 or alternative U.S. EPA approved test method may be used with prior appoval from the Ohio EPA, Central District Office.

iv. 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 Central District Office.

Emission testing was conducted for this emissions unit on November 25, 2002, which demonstrated compliance with the emission limitation for ammonia.

The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

V. Testing Requirements (continued)

2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Central District 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 the performance of the control equipment.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: D-5 Cooling Sec (P072)

Activity Description: D-5 Cooling Sec

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
5.03 tons per hour D-5 cooling section with venturi scrubber, smoke stripper and stack burner (stack numbers 08-113 and 08-114)	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions shall not exceed 12.2 pounds per hour based on Table I which is more stringent than Figure II. See A.I.2.c below.
	40 CFR 63, Subpart NNN	Formaldehyde emissions shall not exceed 1.2 pounds per ton of glass pulled for P028, P064 and P072, combined. See A.I.2.a and A.I.2.b below and Part II, A.1 - 14 above.

2. Additional Terms and Conditions

2.a The permittee shall demonstrate compliance with 40 CFR 63, Subpart NNN as described in the operating, monitoring, record keeeping, reporting and testing requirements included in Part II - Specific Facility Terms and Conditions.

2.b In accordance with 40 CFR 63.1382(a)(2)(i), the permittee shall not discharge or cause to be discharged into the atmosphere in excess of a total of 1.2 pounds of formaldehyde per ton of glass pulled for the D-5 rotary spin manufacturing line, which consists of P028, P064 and P072.

(The maximum hourly allowable formaldehyde emission rate of 6.0 pounds per hour from P028, P064 and P072, combined, is calculated by multiplying the maximum glass throughput of 5.0 tons per hour by 1.2 pounds of formaldehyde per ton of glass pulled.)

2.c Filterable particulate emissions shall not exceed 12.2 lbs/hr per the 1980 Consent Decree, State of Ohio versus the Owens-Corning Fiberglass Corporation.

II. Operational Restrictions

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

II. Operational Restrictions (continued)

2. The permittee shall maintain the pressure drop across the venturi scrubber within a range of 0.3 to 10 inches of water while operating this emissions unit.

3. This emissions unit shall be equipped with a venturi scrubber to control particulate emissions.

III. Monitoring and/or Record Keeping 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 devices and recorders to monitor and record the pressure drop across the venturi scrubber, in inches of water. The permittee shall record the pressure drop across the venturi scrubber, in inches of water, on a daily basis.

The monitoring devices and recorders shall be installed, calibrated, operated and maintained in accordance with good engineering practices and shall be capable of accurately measuring the parameter listed above.

IV. 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 all periods of time during which the pressure drop across the venturi scrubber was not maintained within the required pressure drop range.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I - General Term and Condition A.1.c.ii.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

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

1.b Emission Limitation:
Particulate emissions shall not exceed 12.2 pounds per hour based on Table I.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P072 in accordance with the following requirements:

i. The emission testing shall be conducted within 24 months after permit issuance.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulates.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 5E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

V. Testing Requirements (continued)

1.c Emission Limitation:
1.2 pounds of formaldehyde per ton of glass pulled for D-5 rotary spin manufacturing line

Applicable Compliance Method:
The permittee shall conduct emission testing for P028, P064 and P072 in accordance with the following requirements:

i. The emission testing shall be conducted within 24 months after permit issuance.

ii. The emission testing shall be conducted to demonstrate compliance with the emission standard for formaldehyde from 40 CFR 63, Subpart NNN.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission factor: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 40 CFR 63, Appendix A, Methods 316 or 318. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office. During emission testing for formaldehyde, the ton(s) of glass pull rate shall be recorded to demonstrate compliance with the 1.2 pounds of formaldehyde per ton of glass pulled limitation specified in 40 CFR Part 63, Subpart NNN.

Emission testing was conducted for this emissions unit on August 7, 2002. This emission test demonstrated compliance with the 40 CFR Part 63 , Subpart NNN emission limitation for formaldehyde.

2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Central District 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 the performance of the control equipment.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: C-4 Cooling Sec (P073)

Activity Description: C-4 Cooling Sec

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
8.53 tons per hour, C-4 cooling section, w/ wet scrubber & smoke stripper (stack nos. 08-20 and 08-32)	OAC rule 3745-31-05(A)(3)	Filterable and condensable particulate emissions shall not exceed 3.85 pounds per hour and 16.9 tons per year. Volatile organic compound (VOC) emissions shall not exceed 1.22 pounds per hour. Formaldehyde emissions shall not exceed 0.7 pound per hour and 3.1 tons per year. See A.II.1 and 5 below. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-21-07(G)(2), 3745-21-08(B), 3745-23-06(B) 3745-31-05(C), 40 CFR Part 63, Subpart NNN and 40 CFR 60, Subpart PPP.
	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). See A.I.2.e below.
	OAC rule 3745-21-07(G)(2)	Exempt, see A.II.3 below.
	OAC rules 3745-21-08(B) and OAC rule 3745-23-06(B)	See A.I.2.b below.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
	OAC rule 3745-31-05(C) (synthetic minor to avoid non-attainment NSR)	Methanol emissions from P027, P055 and P073 shall not exceed 26.34 tons per rolling 12-month summation. Phenol emissions from P027, P055 and P073 shall not exceed 26.46 tons per rolling 12-month summation. Volatile organic compound emissions from P027, P055 and P073 shall not exceed 74.67 tons per rolling 12-month summation. Ammonia emissions shall not exceed 3.5 pounds per hour and 15.3 tons per year. See A.I.2.a, A.II.4 and A.II.6 below.
	40 CFR Part 63, Subpart NNN	Formaldehyde emissions shall not exceed 1.2 pounds per ton of glass pulled for P027, P055 and P073, combined. See A.I.2.c-d below.
	40 CFR 60, Subpart PPP	See A.I.2.f below.

2. Additional Terms and Conditions

2.a The hourly emission limitation is established and permitted under OAC rule 3745-31-05(C) in PTI 01-08902. Ammonia is an air toxic, and the hourly emission limitation is established to reflect the status quo ammonia emission rate for this emissions unit for future air toxics evaluations that may involve this emissions unit.

2.b The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-08902.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-08902.

2.c In accordance with 40 CFR Part 63.1382(a)(2)(i), the permittee shall not discharge or cause to be discharged into the atmosphere in excess of a total of 1.2 pounds of formaldehyde per ton of glass pulled for the C-4 rotary spin manufacturing line, which consists of P027, P055 and P073.

2. Additional Terms and Conditions (continued)

2.d The permittee shall demonstrate compliance with 40 CFR Part 63, Subpart NNN as described in the operating, monitoring, record keeeping, reporting and testing requirements included in Part II - Specific Facility Terms and Conditions of the applicable Title V permit.

2.e Filterable particulate emissions shall not exceed 14.5 lbs/hr per the 1980 Consent Decree, State of Ohio versus the Owens-Corning Fiberglass Corporation.

2.f In accordance with 40 CFR 60.682, on and after the date on which the performance test required to be conducted by ?60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which contain particulate matter in excess of 5.5 kg/Mg (11.0 1b/ton) of glass pulled.

In accordance with 40 CFR 60.681, "Manufacturing line" means the manufacturing equipment comprising the forming section, where molten glass is fiberized and a fiberglass mat is formed; the curing section, where the binder resin in the mat is thermally "set;" and the cooling section, where the mat is cooled.

II. Operational Restrictions

1. The phenol formaldehyde resin delivered to this emissions unit shall not exceed a free methanol content of 1%, by weight.

2. The pressure drop across the venturi throat portion of the scrubber shall be maintained within the range of 0.3 - 10.0 inches water column while the emissions unit is in operation. Upon demonstration of compliance with the hourly particulate emission limitation through stack testing, the permittee shall comply with the pressure drop range established during the compliance test that demonstrated compliance with the hourly particulate emission limitation.

3. To avoid the emission limitations/control requirements contained in OAC rule 3745-21-07(G)(2), no photochemically reactive materials (i.e., as raw materials or cleanup materials) shall be employed in this emissions unit.

Note: The definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).

4. The combined maximum amount of methanol and phenol in the resin delivered to P027 and P031 shall not exceed 156 tons, based upon a rolling, 12-month summation of the resin delivered. A table delineating the methanol and phenol in resin delivered during the first 12-months is not necessary because the permittee has maintained records which demonstrate past compliance with this limitation.

5. The permittee shall vent all the emissions from this emissions unit to one of two existing control systems: either a smoke stripper [scrubber followed by a high performance air filter (HPAF)] or a wet scrubber.

6. The maximum amount of methanol and phenol in the resin delivered to P027 shall not exceed 60.7 tons, based upon a rolling, 12-month summation of the resin delivered. A table delineating the methanol and phenol in resin delivered during the first 12-months is not necessary because the permittee has maintained records which demonstrate past compliance with this limitation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack(s) 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 emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission 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.

2. The permittee shall maintain records for each material employed in this emissions unit that indicate whether or not the material is a photochemically reactive material.

3. The permittee shall maintain monthly records of the following information:

a. the tons of resin delivered to P027;

b. the methanol concentration in each batch of resin delivered to P027 (as a weighted average of the methanol contents of all the resins employed, as taken from the resin delivery certificates received during the month);

c. the phenol concentration in each batch of resin delivered to P027 (as a weighted average of the phenol contents of all the resins employed, as taken from the resin delivery certificates received during the month);

d. total monthly methanol delivered to P027, in tons, calculated as (a)x(b);

e. total monthly phenol delivered to P027, in tons, calculated as (a)x(c);

f. total monthly methanol and phenol delivered to P027;

g. total monthly methanol and phenol delivered to P027 and P031, combined, in tons;

h. the rolling, 12-month summation of the tons of methanol and phenol in the resin delivered to P027 and P031, combined;

i. monthly methanol emitted from P027, P055 and P073, calculated as follows: (d)x[0.87(fraction of delivered methanol estimated to be emitted over the entire C-4 manufacturing line)];

j. monthly phenol emitted from P027, P055 and P073, calculated as follows: (e)x[0.87(fraction of delivered phenol estimated to be emitted over the entire C-4 manufacturing line)];

k. total monthly hours of operations for P073;

l. monthly formaldehyde emissions from P073, calculated as follows: 0.7 lbs/hr (hourly maximum)x(k)/2000;

m. the rolling, 12-month summation of the total VOC emissions from P027, P055 and P073, combined, calculated as follows: i + j + l + NGP027 + NGP055 + FP027 + FP073, where NG equals natural gas combustion and F equals formaldehyde;

III. Monitoring and/or Record Keeping Requirements (continued)

n. the rolling, 12-month summation of the tons of methanol and phenol in the resin delivered to P027;

o. the rolling, 12-month summation of the total methanol emissions from P027, P055 and P073, combined; and

p. the rolling, 12-month summation of the total phenol emissions from P027, P055 and P073, combined.

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

The permittee shall collect and record the following information each day:

a. the pressure drop across the venturi throat portion of the scrubber, in inches of water of water column; and

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

5. In accordance with 40 CFR 60.683(a), an owner or operator subject to the provisions of this subpart who uses a wet scrubbing control device to comply with the mass emission standard shall install, calibrate, maintain, and operate monitoring devices that measure the gas pressure drop across each scrubber and the scrubbing liquid flow rate to each scrubber. The pressure drop monitor is to be certified by its manufacturer to be accurate within ?250 pascals (?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.

6. In accordance with 40 CFR 60.683(c), all monitoring devices required under this section are to be recalibrated quarterly in accordance with procedures under ?60.13(b).

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack(s) serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the following

a. the cumulative rolling, 12-month tons of methanol and phenol in the resin delivered to P027 and P031 combined, limitation;

b. the rolling, 12-month total VOC emissions from P027, P055 and P073 combined, emission limitation;

c. the rolling, 12-month tons of methanol and phenol in the resin delivered to P027 limitation;

d. the rolling, 12-month total methanol emissions from P027, P055 and P073 combined, emission limitation; and

e. the rolling, 12-month summation of the total phenol emissions from P027, P055 and P073 combined, emission limitation.

f. all periods of time during which the static pressure drop across the scrubber was not maintained at or above the required level.

These reports are due by the date described in Part I - General Terms and Conditions of this permit under Section A.1.c.ii.

IV. Reporting Requirements (continued)

3. The permittee shall also submit annual reports that specify the total methanol, phenol and VOC emissions from P027, P055 and P073, combined. The reports shall be submitted by April 15th of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

4. The permittee shall submit annual reports that specify the total formaldehyde emissions from P027. The reports shall be submitted by April 15th of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

5. The permittee shall submit deviation (excursion) reports that identify all periods of time when the percent of free methanol in the phenol formaldehyde resin exceeds 1%. Each report shall be submitted within 30 days after the deviation occurs.

6. In accordance with 40 CFR 60.684, (a) At 30-minute intervals during each 2-hour test run of each performance test of a wet scrubber control device and at least once every 4 hours thereafter, the owner or operator shall record the measurements required by ?60.683(a).

7. In accordance with 40 CFR 60.684, (c) Records of the measurements required in paragraph (a) of this section must be retained for at least 2 years.
(d) Each owner or operator shall submit written semiannual reports of exceedances of control device operating parameters required to be monitored by paragraph (a) of this section and written documentation of, and a report of corrective maintenance required as a result of, quarterly calibrations of the monitoring devices required in ?60.683(c). For the purpose of these reports, exceedances are defined as any monitoring data that are less than 70 percent of the lowest value or greater than 130 percent of the highest value of each operating parameter recorded during the most recent performance test.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitations:
Filterable particulate emissions shall not exceed 14.5 pounds per hour, whereas filterable and condensable particulate emissions shall not exceed 3.85 pounds per hour.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P073 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months of startup.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate emissions.

iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 5E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

1.b Emission Limitations:
Filterable and condensable particulate emissions shall not exceed 16.9 tons per year.

Applicable Compliance Method:
The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

V. Testing Requirements (continued)

1.c Emission Limitation:
Volatile organic compound emissions shall not exceed 1.22 pounds per hour.

Applicable Compliance Method:
The hourly VOC emission limit was established as the summation of the maximum formaldehyde, methanol and phenol emissions. Compliance with the hourly limitation shall be demonstrated as the sum of the hourly stack test results for formaldehyde, methanol and phenol.

The permittee shall conduct, or have conducted, emission testing for P073 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months of startup.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for volatile organic compounds.

iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4, 308 or 318 for methanol, and 18 or 318 for phenol. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

1.d Emission Limitation:
Formaldehyde emissions shall not exceed 0.7 pound per hour.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P073 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months of startup.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for volatile organic compounds.

iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4, 316 or 318 for formaldehyde. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

1.e Emission Limitation:
Formaldehyde emissions shall not exceed 3.1 tons per year.

Applicable Compliance Method:
The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.f Emission Limitation:
Methanol emissions from P027, P055 and P073 shall not exceed 26.34 tons per rolling, 12-month summation.

Applicable Compliance Method:
For compliance with the rolling limitation, see A.III.4.o.

V. Testing Requirements (continued)

1.g Emission Limitation:
Phenol emissions from P027, P055 and P073 shall not exceed 26.46 tons per rolling, 12-month summation.

Applicable Compliance Method:
For compliance with the rolling limitation, see A.III.4.p.

1.h Emission Limitation:
Volatile organic compound emissions from P027, P055 and P073 shall not exceed 74.67 tons per rolling, 12-month summation.

Applicable Compliance Method:
For compliance with the rolling limitation, see A.III.4.m.

1.i Emission Limitation:
1.2 pounds of formaldehyde per ton of glass pulled for the C-4 rotary spin manufacturing line

Applicable Compliance Method:
The permittee shall conduct emission testing for P027, P055 and P073 in accordance with the following requirements:

i. The emission testing shall be conducted 6 months of startup.

ii. The emission testing shall be conducted to demonstrate compliance with the emission standard for formaldehyde from 40 CFR Part 63, Subpart NNN.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission factor: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 40 CFR Part 63, Appendix A, Methods 316 or 318. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office. During emission testing for formaldehyde, the ton(s) of glass pull rate shall be recorded to demonstrate compliance with the 1.2 pounds of formaldehyde per ton of glass pulled limitation specified in 40 CFR Part 63, Subpart NNN.

1.j Emission Limitation:
Visible emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

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

1.k Emission Limitations:
Ammonia emissions shall not exceed 3.5 pounds per hour.

Applicable Compliance Method:
The permittee shall conduct emission testing for P073 in accordance with the following requirements:

i. The emission testing shall be conducted 6 months of startup.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for ammonia.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): US EPA Method CTM-027 or alternative U.S. EPA-approved test method may be used with prior approval from the Ohio EPA, Central District Office.

iv. 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 Ohio EPA, Central District Office.

V. Testing Requirements (continued)

1.l Emission Limitations:
Ammonia emissions shall not exceed 15.3 tons per year.

Applicable Compliance Method:
The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.m Emission Limitations:
In accordance with 40 CFR 60.682, on and after the date on which the performance test required to be conducted by ?60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which contain particulate matter in excess of 5.5 kg/Mg (11.0 1b/ton) of glass pulled.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing in accordance with the following requirements:

i. In accordance with 40 CFR Part 60.8 (a), within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test(s).

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate emissions.

iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 5E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

v. In accordance with 40 CFR 60.685, testing shall be conducted as follows:
(a) In conducting the performance tests required in ?60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in ?60.8(b).
(b) The owner or operator shall conduct performance tests while the product with the highest loss on ignition (LOI) expected to be produced by the affected facility is being manufactured.
(c) The owner or operator shall determine compliance with the particulate matter standard in ?60.682 as follows:
(1) The emission rate (E) of particulate matter shall be computed for each run using the following equation:
E=(Ct Qsd)/(Pavg K)
where:
E = emission rate of particulate matter, kg/Mg (lb/ton).
Ct = concentration of particulate matter, g/dscm (gr/dscf).
Qsd = volumetric flow rate of effluent gas, dscm/hr (dscf/hr).
Pavg = average glass pull rate, Mg/hr (ton/hr).
K = 1,000 g/kg (7,000 gr/lb).
(2) Method 5E shall be used to determine the particulate matter concentration (Ct) and the volumetric flow rate (Qsd) of the effluent gas. The sampling time and sample volume shall be at least 120 minutes and 2.55 dscm (90.1 dscf).

V. Testing Requirements (continued)

(3) The average glass pull rate (Pavg) for the manufacturing line shall be the arithmetic average of three glass pull rate (Pi) determinations taken at intervals of at least 30 minutes during each run.
The individual glass pull rates (Pi) shall be computed using the following equation:
Pi=K' Ls Wm M [1.0 -(LOI/100)]
where:
Pi=glass pull rate at interval "i", Mg/hr (ton/hr).
Ls=line speed, m/min (ft/min).
Wm=trimmed mat width, m (ft).
M=mat gram weight, g/m2 (lb/ft2).
LOI=loss on ignition, weight percent.
K'=conversion factor, 6?10 5 (min-Mg)/ (hr-g) [3?10 2 (min-ton)/(hr-lb)].
(i) ASTM D2584?68 (Reapproved 1985) or 94 (incorporated by reference?see ?60.17), shall be used to determine the LOI for each run.
(ii) Line speed (Ls), trimmed mat width (Wm), and mat gram weight (M) shall be determined for each run from the process information or from direct measurements.
(d) To comply with ?60.684(d), the owner or operator shall record measurements as required in ?60.684 (a) and (b) using the monitoring devices in ?60.683 (a) and (b) during the particulate matter runs.

2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Central District 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 the performance of the control equipment.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: F6/5 Trim (P128)

Activity Description: F6/5 Trim

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
8.34 tons per hour, natural gas-fired, F-6/5 cooling section, with stack burner, filter and scrubber (stack numbers 08-115 and 08-185)	OAC rule 3745-31-05(A)(3) (PTI 01-08329)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-21-07(G)(2), 3745-21-08(B), 3745-23-06(B), 3745-31-05(D) and 40 CFR 63, Subpart NNN. Filterable and condensable particulate emissions shall not exceed 5.6 pounds per hour and 24.5 tons per year. Volatile organic compound emissions shall not exceed 2.92 pounds per hour. Formaldehyde emissions shall not exceed 2.0 pounds per hour and 8.8 tons per year. Phenol emissions shall not exceed 0.5 pound per hour. Methanol emissions shall not exceed 0.4 pound per hour. See A.II.1-3 below.
	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
	OAC rule 3745-21-07(G)(2)	Exempt, see A.II.3 below.
	OAC rule 3745-21-08(B) and OAC rule 3745-23-06(B)	See A.I.2.b below.
	OAC rule 3745-31-05(D)	Methanol emissions from P031, P066 and P128 shall not exceed 45.0 tons per rolling 12-month summation. Phenol emissions from P031, P066 and P128 shall not exceed 50.0 tons per rolling 12-month summation. Volatile organic compound emissions from P031, P066 and P128 shall not exceed 143.2 tons per rolling 12-month summation. Ammonia emissions shall not exceed 1.6 pounds per hour and 7.0 tons per year. See A.I.2.a and A.II.5 below.
	40 CFR 63, Subpart NNN	Formaldehyde emissions shall not exceed 1.2 pounds per ton of glass pulled for P031, P066 and P128, combined. See A.I.2.c-d below and Part II, A.1-14 above.

2. Additional Terms and Conditions

2.a The hourly emission limitation was established and permitted under OAC rule 3745-31-05(D) in PTI 01-08329. Ammonia is an air toxic, and the hourly emission limitation was established to reflect the status quo ammonia emission rate for this emissions unit for future air toxics evaluations that may involve this emissions unit.

2.b The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-08329.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-08329.

2. Additional Terms and Conditions (continued)

2.c In accordance with 40 CFR 63.1382(a)(2)(i), the permittee shall not discharge or cause to be discharged into the atmosphere in excess of a total of 1.2 pounds of formaldehyde per ton of glass pulled for the F-5 rotary spin manufacturing line which consists of P031, P066 and P128.

(The maximum hourly allowable formaldehyde emission rate of 7.5 pounds per hour from P031, P066 and P128, combined, is calculated by multiplying the maximum glass throughput of 6.25 tons per hour by 1.2 pounds of formaldehyde per ton of glass pulled.)

2.d The permittee shall demonstrate compliance with 40 CFR 63, Subpart NNN as described in the operating, monitoring, record keeeping, reporting and testing requirements included in Part II - Specific Facility Terms and Conditions.

II. Operational Restrictions

1. The phenol formaldehyde resin delivered to this emissions unit shall not exceed a free methanol content of 1%, by weight.

2. The permittee shall only burn natural gas in this emissions unit.

3. To avoid the emission limitations/control requirements contained in OAC rule 3745-21-07(G)(2), no photochemically reactive materials (i.e., as raw materials or cleanup materials) shall be employed in this emissions unit.

Note: The definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).

4. The combined maximum amount of methanol and phenol in the resin delivered to P027 and P031 shall not exceed 156 tons, based upon a rolling, 12-month summation of the resin delivered.

5. The permittee shall vent all emissions from this emissions unit through either the stack burner and filter, or venturi scrubber.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall perform weekly 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 emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the weekly check until the incident has ended. The observer may indicate that the visible emission 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.

2. 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.

3. The permittee shall maintain records for each material employed in this emissions unit that indicate whether or not the material is a photochemically reactive material.

III. Monitoring and/or Record Keeping Requirements (continued)

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

a. the tons of resin delivered to P031;

b. the methanol concentration in each batch of resin delivered to P031 (as a weighted average of the methanol contents of all the resins employed, as taken from the resin delivery certificates received during the month);

c. the phenol concentration in each batch of resin delivered to P031 (as a weighted average of the phenol contents of all the resins employed, as taken from the resin delivery certificates received during the month);

d. total monthly methanol delivered to P031, in tons, calculated as (a)x(b);

e. total monthly phenol delivered to P031, in tons, calculated as (a)x(c);

f. total monthly methanol and phenol delivered to P031;

g. total monthly methanol and phenol delivered to P027 and P031, combined, in tons;

h. the rolling, 12-month summation of the tons of methanol and phenol in the resin delivered to P027 and P031, combined;

i. monthly methanol emitted from P031, P066 and P128, calculated as follows: (d)x[0.87(fraction of delivered methanol estimated to be emitted over the entire C-4 manufacturing line)];

j. monthly phenol emitted from P031, P066 and P128, calculated as follows: (e)x[0.87(fraction of delivered phenol estimated to be emitted over the entire C-4 manufacturing line)];

k. total monthly hours of operations for P128;

l. monthly formaldehyde emissions from P128, calculated as follows: 2.0 lbs/hr (hourly maximum)x(k)/2000;

m. total monthly VOC emissions from natural gas combustion from P128 (tons), calculated as follows: [(30.7 MMCF/yr) x (5.5 lbs VOC/MMcf) x (k)/ (8760 x 2000)]; and

n. the rolling, 12-month summation of the total VOC emissions from P031, P066 and P128, combined, calculated as follows: i + j + l + m + NGP031 + NGP066 + FP031 + FP066, where NG equals natural gas combustion and F equals formaldehyde.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the cumulative rolling, 12-month tons of methanol and phenol in the resin delivered to P027 and P031 combined, limitation.

The quarterly deviation reports are due by the dates described in Part I - General Terms and Conditions of this permit under Section A.1.c.ii.

3. The permittee shall also submit annual reports that specify the total methanol, phenol and VOC emissions. These reports shall be submitted by January 31 of each year.

4. 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.

IV. Reporting Requirements (continued)

5. The permittee shall submit deviation (excursion) reports that identify all periods of time when a photochemically reactive material was employed in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

6. The permittee shall submit deviation (excursion) reports that identify all periods of time when the percent of free methanol in the phenol formaldehyde resin exceeds 1. Each report shall be submitted within 30 days after the deviation occurs.

7. The permittee shall submit annual reports that specify the total formaldehyde emissions from P128. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitations:
Filterable and condensable particulate emissions shall not exceed 5.6 pounds per hour and 24.5 tons per year.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P128 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months prior to permit expiration.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulates.

iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 5E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

Emission testing was conducted for this emissions unit on November 25, 2002, which demonstrated compliance with the emission limitation for particulates.

The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.b Emission Limitation:
Formaldehyde emissions shall not exceed 2.0 pounds per hour and 8.8 tons per year.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with the allowable mass emission rate for formaldehyde in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 316 or 318. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

Emission testing was conducted on November 25, 2002, which demonstrated compliance with the emission limitations for formaldehyde.

The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

V. Testing Requirements (continued)

1.c Emission Limitation:
Methanol emissions shall not exceed 0.4 pound per hour.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with the allowable mass emission rate for methanol in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 308 or 318. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

Emission testing was conducted on November 25, 2002, which demonstrated compliance with the emission limitation for methanol.

1.d Emission Limitation:
Phenol emissions shall not exceed 0.5 pound per hour.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with the allowable mass emission rate for phenol in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 18 or 318. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

Emission testing was conducted on November 26, 2002, which demonstrated compliance with the emission limitation for phenol.

1.e Emission Limitation:
Volatile organic compound emissions shall not exceed 2.92 pounds per hour.

Applicable Compliance Method:
The hourly VOC emission limitation was established as the summation of maximum formaldehyde, methanol, phenol and VOC emissions from natural gas combustion. Compliance with the hourly limitation may be demonstrated by summing the hourly stack test results for formaldehyde, methanol and phenol with the hourly VOC emissions from natural gas combustion for this emissions unit. Hourly VOC emissions from natural gas combustion are derived by multiplying the maximum MMCF usage of the natural gas burners (175.2) by the AP-42 emission factor for natural gas (5.5 lbs VOC/MMcf) from Table 1.4-1, 7/98, and then dividing by 8760 to convert from an annual to an hourly emission rate.

1.f Emission Limitation:
Methanol emissions from P031, P066 and P128 shall not exceed 45.0 tons per rolling 12-month summation.

Applicable Compliance Method:
For compliance with the annual limitation, see A.III.3.i.

1.g Emission Limitation:
Phenol emissions from P031, P066 and P128 shall not exceed 50.0 tons per rolling 12-month summation.

Applicable Compliance Method:
For compliance with the annual limitation, see A.III.3.j.

1.h Emission Limitation:
Volatile organic compound emissions from P031, P066 and P128 shall not exceed 143.2 tons per rolling 12-month summation.

Applicable Compliance Method:
For compliance with the annual limitation, see A.III.3.n.

V. Testing Requirements (continued)

1.i Emission Limitation:
1.2 pounds of formaldehyde per ton of glass pulled for the F-5 rotary spin manufacturing line

Applicable Compliance Method:
The permittee shall conduct emission testing for P031, P066 and P128 in accordance with the following requirements:

i. The emission testing shall be conducted 6 months prior to permit expiration.

ii. The emission testing shall be conducted to demonstrate compliance with the emission standard for formaldehyde from 40 CFR 63, Subpart NNN.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission factor: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 40 CFR 63, Appendix A, Methods 316 or 318. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office. During emission testing for formaldehyde, the ton(s) of glass pull rate shall be recorded to demonstrate compliance with the 1.2 pounds of formaldehyde per ton of glass pulled limitation specified in 40 CFR Part 63, Subpart NNN.

Emission testing was conducted for this emissions unit on November 20, 2002. This emission test demonstrated compliance with the 40 CFR Part 63, Subpart NNN emission limitation for formaldehyde.

1.j Emission Limitation:
Visible emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

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

1.k Emission Limitations:
Ammonia emissions shall not exceed 1.6 pounds per hour and 7.0 tons per year.

Applicable Compliance Method:
The permittee shall conduct emission testing for P128 in accordance with the following requirements:

i. The emission testing shall be conducted 6 months prior to permit expiration.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for ammonia.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): U.S. EPA Method CTM-027 or alternative U.S. EPA approved test method may be used with prior approval from the Ohio EPA, Central District Office.

iv. 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 Central District Office.

The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

V. Testing Requirements (continued)

2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Central District 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 the performance of the control equipment.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Pipe A-3 Furnace (P129)

Activity Description: Pipe A-3 Furnace

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
2.07 tons of batch per hour, 37.2 tons of glass per day, A-3 pipe natural gas-fired, glass melt furnace, w/ ESP (stack no. 28-94)	OAC rule 3745-31-05(A)(3) (PTI 01-08902)	Filterable and condensable particulate emissions (PE) shall not exceed 0.78 pound per hour and 3.5 tons per year. Nitrogen oxides (NOx) emissions from natural gas combustion and niter usage shall not exceed 23.30 pounds per hour. NOx emissions from natural gas combustion shall not exceed 4.0 tons per year. Sulfur Dioxide (SO2) emissions shall not exceed 0.69 pound per hour and 3.1 tons per year. Carbon Monoxide (CO) emissions shall not exceed 0.76 pound per hour and 3.4 tons per year. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-21-08(B), 3745-23-06(B) and 40 CFR Part 63, Subpart NNN. See A.I.2.d below
	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to 40 CFR Part 63, Subpart NNN.
	OAC rules 3745-21-08(B) and 3745-23-06(B)	See A.I.2.a below.
	40 CFR Part 63, Subpart NNN	See A.I.2.b-c below.
	OAC rule 3745-18-06(E)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-31-05(C) (synthetic minor to avoid non-attainment NSR)	Nitrogen oxides emissions from niter usage shall not exceed 34.4 tons per rolling, 12-month summation. See A.II.4 below.

2. Additional Terms and Conditions

2.a The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-08902.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-08902.

2.b The permittee shall demonstrate compliance with 40 CFR Part 63, Subpart NNN as described in the operating, monitoring, record keeeping, reporting and testing requirements included in Part II - Specific Facility Terms and Conditions of the applicable Title V permit.

2.c In accordance with 40 CFR Part 63.1382(a)(1), the permittee shall not discharge or cause to be discharged into the atmosphere in excess of 0.5 pound of particulate per ton of glass pulled for emissions unit P129.

(The maximum hourly allowable particulate emission rate of 0.78 pound per hour is calculated by multiplying the maximum glass throughput of 1.55 tons per hour by 0.5 pound of particulate per ton of glass pulled.)

2.d The hourly PE, NOx, SO2 and CO emission limitations and annual PE, NOx, SO2 and CO emission limitations for this emissions unit were established to reflect the potentials to emit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these emission limitations.

II. Operational Restrictions

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

2. The permittee shall vent all the emissions from this emissions unit through an electrostatic precipitator that shall operate during any operation of this emissions unit.

3. The voltage (V) at each field within the ESP shall be maintained within the values specified in the manufacturer's recommendations, instructions, and operating manual(s). These values are:

a. the primary voltage (V) at each field within the ESP shall be maintained within the manufacturer's recommendations, instructions and operating manuals;
b. a minimum of two fields out of a total of three must be operating; and
c. if all three fields are in operation, the third field's secondary voltage must be within the range of 8 kv to 30 kv and the third field's average amperage must be within the range of 5 ma to 25 ma.

These ranges for the ESP parameters are effective for the duration of this permit unless additional performance testing is conducted which shows that the emissions unit is in compliance with the particulate emission limitation. At that time the test results will be reviewed by the Ohio EPA and the ESP parameter ranges may be adjusted accordingly, provided that written approval of the new ESP parameters is obtained from the Ohio EPA, Central District Office.

4. The maximum annual niter usage for P129 shall not exceed 63.5 tons, based upon a rolling, 12-month summation of the niter usage. A table delineating the niter usage during the first 12-months is not necessary because the permittee has maintained records which demonstrate past compliance with this limitation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall monitor and record, once each day, the voltage, in kilovolts, to each field and the number of fields operating in the ESP.

2. The permittee shall perform weekly 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 emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission 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.

III. Monitoring and/or Record Keeping Requirements (continued)

3. The permittee shall maintain monthly records of the following information:

a. the amount of niter used (tons);

b. the total Nitrogen oxides emissions from niter usage, in tons, using the following formula: {tons of niter used per month} x 0.541 pound of Nitrogen oxides formed per pound of niter used; and

c. the rolling, 12-month summation of Nitrogen oxides emissions from niter usage (tons) and the rolling, 12-month summation of niter usage (tons).

0.541 is derived from the percent of complete dissociation from niter (sodium nitrate) to nitrogen dioxide which is 54.1%.

4. 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.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify any deviations from the secondary voltage and current ranges specified in Section A.II.3.

The deviation reports shall be submitted in accordance with the requirements specified in Part I - General Terms and Conditions, Section A.1.c.ii.

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

3. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month niter usage rate limitation and all exceedances of the rolling, 12-month Nitrogen oxides emission limitation.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I - General Term and Condition A.1.c.ii.

4. The permittee shall also submit annual reports that specify Nitrogen oxides emissions from niter usage from emissions unit P129 for the previous calendar year. The reports shall be submitted by April 15th of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

5. 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.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Filterable and condensable particulate emissions shall not exceed 0.78 pound per hour.

Applicable Compliance Method:
Compliance may be established by multiplying the maximum emission rate of 0.5 pound per ton of glass pulled by the maximum glass pull rate of 1.55 tons per hour.

If required, the permittee shall demonstrate compliance with the allowable mass emission rate for PE in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

V. Testing Requirements (continued)

1.b Emission Limitation:
Filterable and condensable particulate emissions shall not exceed 3.5 tons per year.

Applicable Compliance Method:
Compliance may be established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.c Emission Limitation:
Nitrogen oxides (NOx) emissions from natural gas combustion and niter usage shall not exceed 23.30 pounds per hour.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P129 in accordance with the following requirements:

i. The emission testing shall be conducted within 6 months of startup.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for Nitrogen oxides.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

1.d Emission Limitation:
NOx emissions from natural gas combustion shall not exceed 4.0 tons per year.

Applicable Compliance Method:
Compliance may be determined by multiplying the maximum rated input capacity of 9.0 MMBtu per hour by the AP-42 emission factor for natural gas combustion (100 lbs NOx/MMCF) from Table 1.4-1, 7/98, dividing by the conversion factor of 1000 MMBtu per MMCF, multiplying by 8760 hours of operation per year and dividing by 2000 to convert to ton(s).

1.e Emission Limitation:
SO2 emissions shall not exceed 0.69 pound per hour.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with this emissions limitation through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 6. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

Emissions testing was conducted for this emissions unit on November 25, 2002 prior to the increase in capacity approved by this permit. The results of the emissions test indicate compliance with the new allowable emission rate.

1.f Emission Limitation:
SO2 emissions shall not exceed 3.1 tons per year.

Applicable Compliance Method:
Compliance may be established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

V. Testing Requirements (continued)

1.g Emission Limitation:
CO emissions shall not exceed 0.76 pounds per hour.

Emission Limitation:
Compliance may be determined by multiplying the rated input capacity of 9.0 MMBtu per hour by the AP-42 emission factor for natural gas combustion (84 lbs CO/MMCF) from Table 1.4-1, 7/98, and then dividing by the conversion factor of 1000 MMBtu per MMCF.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 - 4 and 10. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.h Emission Limitation:
CO emissions shall not exceed 3.4 tons per year.

Applicable Compliance Method:
Compliance with the annual limitation may be demonstrated by multiplying the maximum annual MMCF usage of the natural gas burners (77.3) by the AP-42 emission factor for natural gas combustion (84.0 lbs carbon monoxide/MMCF) from Table 1.4-1, 7/98, and then dividing by 2000 to convert to tons per year.

1.i Emission Limitation:
Visible emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

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

1.j Emission Limitation:
0.5 pound of particulates per ton of glass pulled

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P129 in accordance with the following requirements:

The permittee shall conduct emission testing for P129 in accordance with the following requirements:

i. The emission testing shall be conducted 6 months of startup.

ii. The emission testing shall be conducted to demonstrate compliance with the emission standard for particulate from 40 CFR Part 63, Subpart NNN.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission factor: 40 CFR Part 60, Appendix A, Methods 1 through 5. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

Emissions testing was conducted for this emissions unit on November 26, 2002 which demonstrated compliance with the emission limitations for total particulate emissions.

1.k Emission Limitation:
Nitrogen oxides emissions from niter usage shall not exceed 34.4 tons per rolling, 12-month summation.

Applicable Compliance Method:
Compliance may be demonstrated by the record keeping specified in Section A.III.3 above.

V. Testing Requirements (continued)

2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Central District 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 the performance of the control equipment.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Pipe A-4 Forming (P130)

Activity Description: Pipe A-4 Forming

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
3.20 tons per hour, natural gas-fired, pipe A-4 forming, with cyclone (stack no. 28-92)	OAC rule 3745-31-05(A)(3) (PTI 01-08902)	Filterable and condensable particulate emissions shall not exceed 7.2 pounds per hour and 31.5 tons per year. Nitrogen oxides (NOx) emissions shall not exceed 0.45 pound per hour and 2.0 tons per year. Carbon monoxide (CO) emissions shall not exceed 1.60 pounds per hour and 7.0 tons per year. Sulfur dioxide (SO2) emissions shall not exceed 0.28 pound per hour and 1.2 tons per year. Volatile organic compound (VOC) emissions shall not exceed 7.73 pounds per hour and 33.9 tons per year. Ammonia emissions shall not exceed 13.26 pounds per hour and 58.1 tons per year. Methanol emissions shall not exceed 0.47 pound per hour and 2.1 tons per year Phenol emissions shall not exceed 0.62 pound per hour and 2.8 tons per year.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
		Formaldehyde emissions shall not exceed 0.46 pound per hour and 2.0 tons per year. See A.I.2.c below. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-21-07(G)(2), 3745-21-08(B) and 3745-23-06(B).
	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	See OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	40 CFR Part 63, Subpart NNN	See A.I.2.b below. (Exempt)
	OAC rule 3745-21-07(G)(2)	Exempt, see A.II.2 below.
	OAC rules 3745-21-08(B) and OAC rule 3745-23-06(B)	See A.I.2.a below
	OAC rule 3745-18-06(E)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

2.a The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-08902.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-08902.

2.b This emissions unit is exempt from the requirements of 40 CFR Part 63, Subpart NNN since it is a component of a rotary spin wool fiberglass manufacturing line that produces a bonded, heavy-density wool fiberglass building insulation product and therefore does not meet the applicability requirement of 63.1380(a)(2).

2. Additional Terms and Conditions (continued)

2.c The hourly NOx, CO, SO2, Methanol, Phenol and Formaldehyde emission limitations and annual NOx, CO, SO2, Methanol, Phenol and Formaldehyde emission limitations for this emissions unit were established to reflect the potentials to emit as vented through the control equipment. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these emissions limitations.

II. Operational Restrictions

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

2. To avoid the emission limitations/control requirements contained in OAC rule 3745-21-07(G)(2), no photochemically reactive materials (i.e., as raw materials or cleanup materials) shall be employed in this emissions unit.

Note: The definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).

3. The permittee shall vent all the emissions from this emissions unit to a cyclone.

III. Monitoring and/or Record Keeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

2. The permittee shall maintain records for each material employed in this emissions unit that indicate whether or not the material is a photochemically reactive material.

3. The permittee shall perform weekly 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 emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission 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.

IV. 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 deviation (excursion) reports that identify all periods of time when a photochemically reactive material was employed in this emissions unit. These reports shall be submitted within 30 days after the occurrence.

IV. Reporting Requirements (continued)

3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Filterable and condensable particulate emissions shall not exceed 7.2 pounds per hour.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P130 in accordance with the following requirements:

i. The emission testing shall be conducted within 24 months after permit issuance.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 5E and 40 CFR Part 51, Appendix M, Method 202. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA Central District Office.

1.b Emission Limitation:
Filterable and condensable particulate emissions shall not exceed 31.5 tons per year.

Applicable Compliance Method:
The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.c Emission Limitation:
NOx emissions shall not exceed 0.45 pound per hour.

Applicable Compliance Method:
Compliance may be demonstrated by multiplying the maximum glass pull rate of 1.55 tons per hour by the emission rate of 0.292 lbs per ton of glass pulled (PTI application submitted 09/29/2004).

If required, the permittee shall demonstrate compliance with this emissions limitation through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.d Emission Limitation:
NOx emissions shall not exceed 2.0 tons per year.

Applicable Compliance Method:
The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

V. Testing Requirements (continued)

1.e Emission Limitation:
CO emissions shall not exceed 1.60 pounds per hour.

Applicable Compliance Method:
Compliance may be demonstrated by multiplying the maximum glass pull rate of 1.55 tons per hour by the emission rate of 1.033 lbs per ton of glass pulled (PTI application submitted 09/29/2004).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 - 4 and 10. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.f Emission Limitation:
CO emissions shall not exceed 7.0 tons per year.

Applicable Compliance Method:
The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.g Emission Limitation:
VOC emissions shall not exceed 7.73 pounds per hour.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P130 in accordance with the following requirements:

i. The emission testing shall be conducted within 24 months of permit issuance.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable, hourly mass emission rate for organic compounds.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 18, 25 or 25A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

1.h Emission Limitation:
VOC emissions shall not exceed 33.9 tons per year.

Applicable Compliance Method:
The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

V. Testing Requirements (continued)

1.i Emission Limitation:
Ammonia emissions shall not exceed 13.26 pounds per hour.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P130 in accordance with the following requirements:

i. The emission testing shall be conducted within 24 months after permit issuance.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for ammonia.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Conditional Testing Method (CMT-027). Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

1.j Emission Limitation:
Ammonia emissions shall not exceed 58.1 tons per year.

Applicable Compliance Method:
The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.k Emission Limitation:
Methanol emissions shall not exceed 0.47 pound per hour.

Applicable Compliance Method:
Compliance may be demonstrated by multiplying the maximum glass pull rate of 1.55 tons per hour by the emission rate of 0.30 lbs per ton of glass pulled (PTI application submitted 09/29/2004).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 - 4 and Method 308 or 318. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.l Emission Limitation:
Methanol emissions shall not exceed 2.1 tons per year.

Applicable Compliance Method:
The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.m Emission Limitation:
Phenol emissions shall not exceed 0.62 pound per hour.

Applicable Compliance Method:
Compliance may be demonstrated by multiplying the maximum glass pull rate of 1.55 tons per hour by the emission rate of 0.40 lbs per ton of glass pulled (PTI application submitted 09/29/2004).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 - 4 and Method 18 or 318. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

V. Testing Requirements (continued)

1.n Emission Limitation:
Phenol emissions shall not exceed 2.8 tons per year.

Applicable Compliance Method:
The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.o Emission Limitation:
Formaldehyde emissions shall not exceed 0.46 pounds per hour.

Applicable Compliance Method:
Compliance may be demonstrated by multiplying the maximum glass pull rate of 1.55 tons per hour by the emission rate of 0.291 lbs per ton of glass pulled (PTI application submitted 09/29/2004).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 - 4 and Method 316 or 318. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.p Emission Limitation:
Formaldehyde emissions shall not exceed 2.0 tons per year.

Applicable Compliance Method:
The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.q Emission Limitation:
SO2 emissions shall not exceed 0.28 pound per hour.

Applicable Compliance Method:
Compliance may be demonstrated by multiplying the maximum glass pull rate of 1.55 tons per hour by the emission rate of 0.179 lbs per ton of glass pulled (PTI application submitted 09/29/2004).

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 - 4 and Method 6C. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.r Emission Limitation:
SO2 emissions shall not exceed 1.2 tons per year.

Applicable Compliance Method:
The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.s Emission Limitation:
Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:
If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Method 9 and the procedures in OAC rule 3745-17-03(B)(1).

V. Testing Requirements (continued)

2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Central District 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 the performance of the control equipment.

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

VI. Miscellaneous Requirements

1. This emissions unit was once referred to as A-4-5 forming because it is fed molten glass from the A-3 furnace, P129.

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: RSM (A-5 Oven) (P131)

Activity Description: RSM oven

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
0.35 ton per hour, natural gas-fired, rigid section molding pipe A-5 oven (stack number 28-92)	OAC rule 3745-31-05(A)(3) (PTI 01-1184)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-21-07(G)(1), 3745-21-08(B) and 3745-23-06(B). Particulate emissions shall not exceed 3.2 tons per year.
	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions shall not exceed 2 pounds per hour based on Table I.
	OAC rule 3745-21-07(G)(1)	Exempt, see A.I.2.d.
	OAC rule 3745-21-08(B) and OAC rule 3745-23-06(B)	See A.I.2.b below.
	40 CFR 63, Subpart NNN	Exempt, see A.I.2.c below.

2. Additional Terms and Conditions

2.a The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-1184.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-1184.

2.b This emissions unit is exempt from the requirements of 40 CFR 63, Subpart NNN. It is a component of a rotary spin wool fiberglass manufacturing line that produces a bonded, heavy-density wool fiberglass building insulation product and, therefore, does not meet the applicability requirement of 40 CFR 63.1380(a)(2).

2.c Per OAC rule 3745-21-07(G)(9)(c), this emissions unit is exempt from the requirements of OAC 3745-21-07(G)(1) because this emissions unit utilizes a binder that is composed of only water and organic materials, has an organic materials content that does not exceed 20% and contains organic materials that are not photochemically reactive.

II. Operational Restrictions

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

2. The permittee shall only employ binders in this emissions unit that are composed of water and organic materials (with an organic materials content that does not exceed 20%) and the organic materials shall not be photochemically reactive.

III. Monitoring and/or Record Keeping 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. For each day during which the permittee utilizes a binder with an organic materials content greater than 20% or which contains organic materials that are photochemically reactive, the permittee shall maintain a record of the type and quantity of binder utilized in this emissions unit.

3. The permittee shall collect and record the annual hours of operation for this emissions unit.

4. The permittee shall perform weekly 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 emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

IV. 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.

IV. Reporting Requirements (continued)

2. The permittee shall submit deviation (excursion) reports that identify each day during which the permittee utilizes a binder with an organic materials content greater than 20% or which contains organic materials that are photochemically reactive. Each report shall be submitted within 30 days after the deviation occurs.

3. The permittee shall submit annual reports which specify the total particulate emissions from emissions unit P131 for the previous calendar year. These reports shall be submitted by January 31 of each year.

4. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:
If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Method 9 and the procedures in OAC rule 3745-17-03(B)(1).

1.b Emission Limitation:
Particulate emissions shall not exceed 2 pounds per hour based on Table I.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P131 in accordance with the following requirements:

i. The emission testing shall be conducted within 24 months after permit issuance.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): 40 CFR Part 60, Appendix A, Methods 1 through 4 and 5E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

V. Testing Requirements (continued)

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Central District 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 the performance of the control equipment.

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

1.c Emission Limitation:
Particulate emissions shall not exceed 3.2 tons per year.

Applicable Compliance Method:
Compliance with the annual emission limitation shall be demonstrated by multiplying the hourly emission rate established in an approved, compliance test (testing required above) by the actual hours of operation per year, and dividing by 2000 to convert to ton(s).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Pipe CMP -1 Oven (P133)

Activity Description: Pipe CMP -1 Oven

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
0.28 ton per hour, natural gas-fired, continuous molded pipe oven #1, with stack burner and filter (stack number 28-54)	OAC rule 3745-31-05(A)(3) (PTI 01-1184)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-21-07(G)(1), 3745-21-08(B) and 3745-23-06(B). Particulate emissions shall not exceed 2.5 tons per year.
	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions shall not exceed 1.75 pounds per hour based on Table I.
	OAC rule 3745-21-07(G)(1)	Exempt, see A.I.2.d.
	OAC rule 3745-21-08(B) and OAC rule 3745-23-06(B)	See A.I.2.b below.
	40 CFR 63, Subpart NNN	Exempt, see A.I.2.c below.

2. Additional Terms and Conditions

2.a The permittee shall vent all the emissions from this emissions unit through the stack burner and filter.

2. Additional Terms and Conditions (continued)

2.b The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-1184.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-1184.

2.c This emissions unit is exempt from the requirements of 40 CFR 63, Subpart NNN. It is a component of a rotary spin wool fiberglass manufacturing line that produces a bonded, heavy-density wool fiberglass building insulation product and, therefore, does not meet the applicability requirement of 40 CFR 63.1380(a)(2).

2.d Per OAC rule 3745-21-07(G)(9)(c), this emissions unit is exempt from the requirements of OAC 3745-21-07(G)(1) because this emissions unit utilizes a binder that is composed of only water and organic materials, has an organic materials content that does not exceed 20% and contains organic materials that are not photochemically reactive.

II. Operational Restrictions

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

2. The permittee shall vent all the emissions from this emissions unit to the stack burner and filter for the control of particulate emissions.

3. The permittee shall only employ binders in this emissions unit that are composed of water and organic materials (with an organic materials content that does not exceed 20%) and the organic materials shall not be photochemically reactive.

III. Monitoring and/or Record Keeping 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. For each day during which the permittee utilizes a binder with an organic materials content greater than 20% or which contains organic materials that are photochemically reactive, the permittee shall maintain a record of the type and quantity of binder utilized in this emissions unit.

3. The permittee shall collect and record the annual hours of operation for this emissions unit.

4. The permittee shall perform weekly 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 emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

IV. 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 deviation (excursion) reports that identify each day during which the permittee utilizes a binder with an organic materials content greater than 20% or which contains organic materials that are photochemically reactive. Each report shall be submitted within 30 days after the deviation occurs.

3. The permittee shall submit annual reports which specify the total particulate emissions from emissions unit P133 for the previous calendar year. These reports shall be submitted by January 31 of each year.

4. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:
If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Method 9 and the procedures in OAC rule 3745-17-03(B)(1).

1.b Emission Limitation:
Particulate emissions shall not exceed 1.75 pounds per hour based on Table I.

Applicable Compliance Method:
Compliance shall be based on the results of the emission testing required for P135 (identical emissions unit).

1.c Emission Limitation:
Particulate emissions shall not exceed 2.5 tons per year.

Applicable Compliance Method:
Compliance with the annual emission limitation shall be demonstrated by multiplying the hourly emission rate established in an approved, compliance test for P135 by the actual hours of operation per year, and dividing by 2000 to convert to ton(s).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Pipe CMP-2 Oven (P134)

Activity Description: Pipe CMP-2 Oven

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
0.28 ton per hour, natural gas-fired, continuous molded pipe oven #2, with stack burner and filter (stack number 28-55)	OAC rule 3745-31-05(A)(3) (PTI 01-1184)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-21-07(G)(1), 3745-21-08(B) and 3745-23-06(B). Particulate emissions shall not exceed 2.5 tons per year.
	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions shall not exceed 1.75 pounds per hour based on Table I.
	OAC rule 3745-21-07(G)(1)	Exempt, see A.I.2.d.
	OAC rule 3745-21-08(B) and OAC rule 3745-23-06(B)	See A.I.2.b below.
	40 CFR 63, Subpart NNN	Exempt, see A.I.2.c below.

2. Additional Terms and Conditions

2.a The permittee shall vent all the emissions from this emissions unit through the stack burner and filter.

2. Additional Terms and Conditions (continued)

2.b The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-1184.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-1184.

2.c This emissions unit is exempt from the requirements of 40 CFR 63, Subpart NNN. It is a component of a rotary spin wool fiberglass manufacturing line that produces a bonded, heavy-density wool fiberglass building insulation product and, therefore, does not meet the applicability requirement of 40 CFR 63.1380(a)(2).

2.d Per OAC rule 3745-21-07(G)(9)(c), this emissions unit is exempt from the requirements of OAC 3745-21-07(G)(1) because this emissions unit utilizes a binder that is composed of only water and organic materials, has an organic materials content that does not exceed 20% and contains organic materials that are not photochemically reactive.

II. Operational Restrictions

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

2. The permittee shall vent all the emissions from this emissions unit to the stack burner and filter for the control of particulate emissions.

3. The permittee shall only employ binders in this emissions unit that are composed of water and organic materials (with an organic materials content that does not exceed 20%) and the organic materials shall not be photochemically reactive.

III. Monitoring and/or Record Keeping 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. For each day during which the permittee utilizes a binder with an organic materials content greater than 20% or which contains organic materials that are photochemically reactive, the permittee shall maintain a record of the type and quantity of binder utilized in this emissions unit.

3. The permittee shall collect and record the annual hours of operation for this emissions unit.

4. The permittee shall perform weekly 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 emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

IV. 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 deviation (excursion) reports that identify each day during which the permittee utilizes a binder with an organic materials content greater than 20% or which contains organic materials that are photochemically reactive. Each report shall be submitted within 30 days after the deviation occurs.

3. The permittee shall submit annual reports which specify the total particulate emissions from emissions unit P134 for the previous calendar year. These reports shall be submitted by January 31 of each year.

4. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:
If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Method 9 and the procedures in OAC rule 3745-17-03(B)(1).

1.b Emission Limitation:
Particulate emissions shall not exceed 1.75 pounds per hour based on Table I.

Applicable Compliance Method:
Compliance shall be based on the results of the emission testing required for P135 (identical emissions unit).

1.c Emission Limitation:
Particulate emissions shall not exceed 2.5 tons per year.

Applicable Compliance Method:
Compliance with the annual emission limitation shall be demonstrated by multiplying the hourly emission rate established in an approved, compliance test for P135 by the actual hours of operation per year, and dividing by 2000 to convert to ton(s).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Pipe CMP-3 Oven (P135)

Activity Description: Pipe CMP-3 Oven

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
0.28 ton per hour, natural gas-fired, continuous molded pipe oven #3, with stack burner and filter (stack number 28-56)	OAC rule 3745-31-05(A)(3) (PTI 01-1184)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-21-07(G)(1), 3745-21-08(B) and 3745-23-06(B). Particulate emissions shall not exceed 2.5 tons per year.
	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions shall not exceed 1.75 pounds per hour based on Table I.
	OAC rule 3745-21-07(G)(1)	Exempt, see A.I.2.d.
	OAC rule 3745-21-08(B) and OAC rule 3745-23-06(B)	See A.I.2.b below.
	40 CFR 63, Subpart NNN	Exempt, see A.I.2.c below.

2. Additional Terms and Conditions

2.a The permittee shall vent all the emissions from this emissions unit through the stack burner and filter.

2. Additional Terms and Conditions (continued)

2.b The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-1184.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-1184.

2.c This emissions unit is exempt from the requirements of 40 CFR 63, Subpart NNN. It is a component of a rotary spin wool fiberglass manufacturing line that produces a bonded, heavy-density wool fiberglass building insulation product and, therefore, does not meet the applicability requirement of 40 CFR 63.1380(a)(2).

2.d Per OAC rule 3745-21-07(G)(9)(c), this emissions unit is exempt from the requirements of OAC 3745-21-07(G)(1) because this emissions unit utilizes a binder that is composed of only water and organic materials, has an organic materials content that does not exceed 20% and contains organic materials that are not photochemically reactive.

II. Operational Restrictions

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

2. The permittee shall only employ binders in this emissions unit that are composed of water and organic materials (with an organic materials content that does not exceed 20%) and the organic materials shall not be photochemically reactive.

III. Monitoring and/or Record Keeping 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. For each day during which the permittee utilizes a binder with an organic materials content greater than 20% or which contains organic materials that are photochemically reactive, the permittee shall maintain a record of the type and quantity of binder utilized in this emissions unit.

3. The permittee shall collect and record the annual hours of operation for this emissions unit.

4. The permittee shall perform weekly 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 emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

IV. 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.

IV. Reporting Requirements (continued)

2. The permittee shall submit deviation (excursion) reports that identify each day during which the permittee utilizes a binder with an organic materials content greater than 20% or which contains organic materials that are photochemically reactive. Each report shall be submitted within 30 days after the deviation occurs.

3. The permittee shall submit annual reports which specify the total particulate emissions from emissions unit P135 for the previous calendar year. These reports shall be submitted by January 31 of each year.

4. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:
If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Method 9 and the procedures in OAC rule 3745-17-03(B)(1).

1.b Emission Limitation:
Particulate emissions shall not exceed 1.75 pounds per hour based on Table I.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P135 in accordance with the following requirements:

i. The emission testing shall be conducted within 24 months after permit issuance.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulates.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): 40 CFR Part 60, Appendix A, Methods 1 through 4 and 5E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

1.c Emission Limitation:
Particulate emissions shall not exceed 2.5 tons per year.

Applicable Compliance Method:
Compliance with the annual emission limitation shall be demonstrated by multiplying the hourly emission rate established in an approved, compliance test (testing required above) by the actual hours of operation per year, and dividing by 2000 to convert to ton(s).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Pipe Truck Oven #1 (P136)

Activity Description: Pipe Truck Oven #1

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
150 pounds per hour, natural gas-fired, batch operated pipe truck oven #1, with stack burner (stack number 28-01)	OAC rule 3745-31-05(A)(3) (PTI 01-1184)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-21-07(G)(1), 3745-21-08(B) and 3745-23-06(B). Particulate emissions shall not exceed 3.2 tons per year.
	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions shall not exceed 0.73 pound per hour based on Table I.
	OAC rule 3745-21-07(G)(1)	Exempt, see A.I.2.d.
	OAC rule 3745-21-08(B) and OAC rule 3745-23-06(B)	See A.I.2.b below.
	40 CFR 63, Subpart NNN	Exempt, see A.I.2.c below.

2. Additional Terms and Conditions

2.a The permittee shall vent all the emissions from this emissions unit through the stack burner.

2. Additional Terms and Conditions (continued)

2.b The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-1184.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-1184.

2.c This emissions unit is exempt from the requirements of 40 CFR 63, Subpart NNN. It is a component of a rotary spin wool fiberglass manufacturing line that produces a bonded, heavy-density wool fiberglass building insulation product and, therefore, does not meet the applicability requirement of 40 CFR 63.1380(a)(2).

2.d Per OAC rule 3745-21-07(G)(9)(c), this emissions unit is exempt from the requirements of OAC 3745-21-07(G)(1) because this emissions unit utilizes a binder that is composed of only water and organic materials, has an organic materials content that does not exceed 20% and contains organic materials that are not photochemically reactive.

II. Operational Restrictions

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

2. The permittee shall vent all the emissions from this emissions unit to the stack burner.

3. The permittee shall only employ binders in this emissions unit that are composed of water and organic materials (with an organic materials content that does not exceed 20%) and the organic materials shall not be photochemically reactive.

III. Monitoring and/or Record Keeping 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. For each day during which the permittee utilizes a binder with an organic materials content greater than 20% or which contains organic materials that are photochemically reactive, the permittee shall maintain a record of the type and quantity of binder utilized in this emissions unit.

3. The permittee shall perform weekly 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 emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

IV. 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.

IV. Reporting Requirements (continued)

2. The permittee shall submit deviation (excursion) reports that identify each day during which the permittee utilizes a binder with an organic materials content greater than 20% or which contains organic materials that are photochemically reactive. Each report shall be submitted within 30 days after the deviation occurs.

3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:
If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Method 9 and the procedures in OAC rule 3745-17-03(B)(1).

1.b Emission Limitation:
Particulate emissions shall not exceed 0.73 pound per hour based on Table I.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with the allowable mass emission rate through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 5E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.c Emission Limitation:
Particulate emissions shall not exceed 3.2 tons per year.

Applicable Compliance Method:
The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: B-4 Oven (P140)

Activity Description: B-4 Oven

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
6.75 tons per hour, natural gas-fired, B-4 curing oven, with stack burners and filter (stack numbers 08-10 and 08-11)	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions shall not exceed 14.2 pounds per hour based on Table I. See A.I.2.e below.
	OAC rule 3745-21-07(G)(1)	Exempt, see A.I.2.d beow.
	40 CFR 63, Subpart NNN	Formaldehyde emissions shall not exceed 1.2 pounds per ton of glass pulled for P026, P140 and P176, combined. See A.I.2.a-b below and Part II, A.1-14 above.
	OAC rule 3745-18-06(E)(2)	Sulfur dioxide emissions shall not exceed 107.8 pounds per hour. See A.I.2.c below.

2. Additional Terms and Conditions

2.a The permittee shall demonstrate compliance with 40 CFR 63, Subpart NNN as described in the operating, monitoring, record keeeping, reporting and testing requirements included in Part II - Specific Facility Terms and Conditions.

2.b In accordance with 40 CFR 63.1382(a)(2)(i), the permittee shall not discharge or cause to be discharged into the atmosphere in excess of a total of 1.2 pounds of formaldehyde per ton of glass pulled for the B-4 rotary spin manufacturing line, which consists of P026, P140 and P176.

(The maximum hourly allowable formaldehyde emission rate of 7.5 pounds per hour from P026, P140 and P176, combined, is calculated by multiplying the maximum glass throughput of 6.25 tons per hour by 1.2 pounds of formaldehyde per ton of glass pulled.)

2. Additional Terms and Conditions (continued)

2.c The combustion of natural gas is the only source of sulfur dioxide emissions from this emissions unit. Due to the combustion of only natural gas in this emissions unit and the resulting low sulfur dioxide emissions, no monitoring, record keeping, or reporting requirements are necessary to ensure ongoing compliance with the sulfur dioxide emission limitation.

2.d Per OAC rule 3745-21-07(G)(9)(c), this emissions unit is exempt from the requirements of OAC 3745-21-07(G)(1) because this emissions unit utilizes a binder that is composed of only water and organic materials, has an organic materials content that does not exceed 20% and contains organic materials that are not photochemically reactive.

2.e Filterable PE shall not exceed 14.2 lbs/hr per the 1980 Consent Decree, State of Ohio versus the Owens-Corning Fiberglass Corporation.

II. Operational Restrictions

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

2. The permittee shall vent all the emissions from this emissions unit to the stack burners and filter for primary control of particulate emissions and opacity.

3. The permittee shall only employ binders in this emissions unit that are composed of water and organic materials (with an organic materials content that does not exceed 20%) and the organic materials shall not be photochemically reactive.

III. Monitoring and/or Record Keeping 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. For each day during which the permittee utilizes a binder with an organic materials content greater than 20% or which contains organic materials that are photochemically reactive, the permittee shall maintain a record of the type and quantity of binder utilized in this emissions unit.

3. The permittee shall perform weekly 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 emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

IV. 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 deviation (excursion) reports that identify each day during which the permittee utilizes a binder with an organic materials content greater than 20% or which contains organic materials that are photochemically reactive. Each report shall be submitted within 30 days after the deviation occurs.

3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

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

1.b Emission Limitation:
Particulate emissions shall not exceed 14.7 pounds per hour based on Table I.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P140 in accordance with the following requirements:

i. The emission testing shall be conducted within 24 months after permit issuance.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulates.

iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 5E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

1.c Emission Limitation:
Sulfur dioxide emissions shall not exceed 107.8 pounds per hour.

Applicable Compliance Method:
Compliance with this emission limitation will be assumed due to the high allowable emission limitation and the relatively low amount of sulfur dioxide emitted from the process. The relatively low amount of sulfur dioxide emissions from this emissions unit is due to the combustion of only natural gas.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR, Part 60, Appendix A, Methods 1 through 4 and 6. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.d Emission Limitation:
1.2 pounds of formaldehyde per ton of glass pulled for the B-4 rotary spin manufacturing line.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance through emission testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 40 CFR 63, Appendix A, Methods 316 or 318 while emissions units P026, P140 and P176 are in operation. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

Emission testing was conducted for this emissions unit on August 6, 2002. This emissions test demonstrated compliance with the emission standard for formaldehyde from 40 CFR Part 63, Subpart NNN.

V. Testing Requirements (continued)

2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Central District 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 the performance of the control equipment.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: B-4 Forehearth\ Conditioner (P141)

Activity Description: B-4 Forehearth\Conditioner

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
6.25 tons per hour, B-4 forehearth, with 5.6 MMCF/hr, natural gas-fired burner (stack number 08-126)	OAC rule 3745-31-05(A)(3) (PTI 01-010)	The requirements established pursuant to this rule are equivalent to the requirement of OAC rules 3745-17-07(A), 3745-18-06(E)(2), 3745-21-08(B) and 3745-23-06(B).
	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 pounds per hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. To ensure that Figure II will not be applicable, the uncontrolled mass rate of particulate emissions is limited to less than 10 pounds per hour. See A.I.2.c below.
	OAC rule 3745-21-08(B) and 3745-23-06(B)	See A.I.2.a below.
	OAC rule 3745-18-06(E)(2)	Sulfur dioxide emissions shall not exceed 102.4 pounds per hour. See A.I.2.b below.

2. Additional Terms and Conditions

2.a The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-010.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-010.

2.b The combustion of natural gas is the only source of sulfur dioxide emissions from this emissions unit. Due to the combustion of only natural gas in this emissions unit and the resulting low sulfur dioxide emissions, no monitoring, record keeping, or reporting requirements are necessary to ensure ongoing compliance with the sulfur dioxide emission limitation.

2.c If the emission testing for this emissions unit demonstrates that the allowable emission rate from Figure II is more stringent than 10 lbs/hour, the permittee shall comply with the more stringent limitation.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping 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 perform weekly 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 emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the weekly check until the incident has ended. The observer may indicate that the visible emission 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.

IV. 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.

IV. Reporting Requirements (continued)

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

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

1.b Emission Limitation:
The uncontrolled mass emission rate of particulate emissions is limited to less than 10 pounds per hour.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P141 in accordance with the following requirements:

i. The emission testing shall be conducted within 24 months after permit issuance.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable hourly mass emission rate for particulates.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 5. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Central District 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 the performance of the control equipment.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Pipe CMP-4 Oven (P142)

Activity Description: Pipe CMP-4 Oven

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
0.73 ton per hour, natural gas-fired, continuous molded pipe oven #4, with stack burner and filter (stack number 28-57)	OAC rule 3745-31-05(A)(3) (PTI 01-1184)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-21-07(G)(1), 3745-21-08(B) and 3745-23-06(B). Particulate emissions shall not exceed 2.5 tons per year.
	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions shall not exceed 3.32 pounds per hour based on Table I.
	OAC rule 3745-21-07(G)(1)	Exempt, see A.I.2.d.
	OAC rule 3745-21-08(B) and OAC rule 3745-23-06(B)	See A.I.2.b below.
	40 CFR 63, Subpart NNN	Exempt, see A.I.2.c below.

2. Additional Terms and Conditions

2.a The permittee shall vent all the emissions from this emissions unit through the stack burner and filter.

2. Additional Terms and Conditions (continued)

2.b The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-1184.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-1184.

2.c This emissions unit is exempt from the requirements of 40 CFR 63, Subpart NNN. It is a component of a rotary spin wool fiberglass manufacturing line that produces a bonded, heavy-density wool fiberglass building insulation product and, therefore, does not meet the applicability requirement of 40 CFR 63.1380(a)(2).

2.d Per OAC rule 3745-21-07(G)(9)(c), this emissions unit is exempt from the requirements of OAC 3745-21-07(G)(1) because this emissions unit utilizes a binder that is composed of only water and organic materials, has an organic materials content that does not exceed 20% and contains organic materials that are not photochemically reactive.

II. Operational Restrictions

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

2. The permittee shall vent all the emissions from this emissions unit to the stack burner and filter for the control of particulate emissions.

3. The permittee shall only employ binders in this emissions unit that are composed of water and organic materials (with an organic materials content that does not exceed 20%) and the organic materials shall not be photochemically reactive.

III. Monitoring and/or Record Keeping 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. For each day during which the permittee utilizes a binder with an organic materials content greater than 20% or which contains organic materials that are photochemically reactive, the permittee shall maintain a record of the type and quantity of binder utilized in this emissions unit.

3. The permittee shall collect and record the annual hours of operation for this emissions unit.

4. The permittee shall perform weekly 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 emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

IV. 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 deviation (excursion) reports that identify each day during which the permittee utilizes a binder with an organic materials content greater than 20% or which contains organic materials that are photochemically reactive. Each report shall be submitted within 30 days after the deviation occurs.

3. The permittee shall submit annual reports which specify the total particulate emissions from emissions unit P142 for the previous calendar year. These reports shall be submitted by January 31 of each year.

4. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:
If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Method 9 and the procedures in OAC rule 3745-17-03(B)(1).

1.b Emission Limitation:
Particulate emissions shall not exceed 3.32 pounds per hour based on Table I.

Applicable Compliance Method:
Compliance shall be based on the results of the emission testing required for P194 (identical emissions unit).

1.c Emission Limitation:
Particulate emissions shall not exceed 2.5 tons per year.

Applicable Compliance Method:
Compliance with the annual emission limitation shall be demonstrated by multiplying the hourly emission rate established in an approved, compliance test for P194 by the actual hours of operation per year, and dividing by 2000 to convert to ton(s).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Pipe A-5 Forming (P143)

Activity Description: Pipe A-5 Forming

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
0.67 ton per hour, natural gas-fired, rigid section molding pipe A-5 forming, with cyclone (stack number 28-92)	OAC rule 3745-31-05(A)(3) (PTI 01-425)	The requirements established pursuant to this rule are equivalent to the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-21-08(B), 3745-23-06(B) and 3745-21-07(G)(2) and 40 CFR 63, Subpart NNN.
	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions shall not exceed 3.12 pounds per hour based on Table I.
	OAC rule 3745-21-07(G)(2)	Exempt, see A.II.2 below.
	OAC rule 3745-21-08(B) and OAC rule 3745-23-06(B)	See A.I.2.a below.
	40 CFR 63, Subpart NNN	Exempt, see A.I.2.b below.

2. Additional Terms and Conditions

2.a The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-425.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-425.

2. Additional Terms and Conditions (continued)

2.b This emissions unit is exempt from the requirements of 40 CFR 63, Subpart NNN since it is a component of a rotary spin wool fiberglass manufacturing line that produces a bonded, heavy-density wool fiberglass building insulation product and therefore does not meet the applicability requirement of 63.1380(a)(2).

II. Operational Restrictions

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

2. To avoid the emission limitations/control requirements contained in OAC rule 3745-21-07(G)(2), no photochemically reactive materials (i.e., as raw materials or cleanup materials) shall be employed in this emissions unit.

Note: The definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).

3. The permittee shall vent all the emissions from this emissions unit to a dust collection system consisting of a cyclone.

III. Monitoring and/or Record Keeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

2. The permittee shall maintain records for each material employed in this emissions unit that indicate whether or not the material is a photochemically reactive material.

3. The permittee shall perform weekly 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 emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

IV. 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 deviation (excursion) reports that identify all periods of time when a photochemically reactive material was employed in this emissions unit. These reports shall be submitted within 30 days after the occurrence.

3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

V. Testing Requirements (continued)

1.a Emission Limitation:
Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

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

1.b Emission Limitation:
Particulate emissions shall not exceed 3.12 pounds per hour based on Table I.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P143 in accordance with the following requirements:

i. The emission testing shall be conducted within 24 months after permit issuance.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulates.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 5E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Central District 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 the performance of the control equipment.

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

VI. Miscellaneous Requirements

1. This emissions unit was once referred to as A-3-5 forming because it is fed molten glass from the A-3 furnace, P129.

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Pipe Truck Oven #2 (P147)

Activity Description: Pipe Truck Oven #2

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
150 pounds per hour, natural gas-fired, batch operated, pipe truck oven #2, with stack burner (stack number 28-01)	OAC rule 3745-31-05(A)(3) (PTI 01-1184)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-21-07(G)(1), 3745-21-08(B) and 3745-23-06(B). Particulate emissions shall not exceed 3.2 tons per year.
	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions shall not exceed 0.73 pound per hour based on Table I.
	OAC rule 3745-21-07(G)(1)	Exempt, see A.I.2.d.
	OAC rule 3745-21-08(B) and OAC rule 3745-23-06(B)	See A.I.2.b below.
	40 CFR 63, Subpart NNN	Exempt, see A.I.2.c below.

2. Additional Terms and Conditions

2.a The permittee shall vent all the emissions from this emissions unit through the stack burner.

2. Additional Terms and Conditions (continued)

2.b The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-1184.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-1184.

2.c This emissions unit is exempt from the requirements of 40 CFR 63, Subpart NNN. It is a component of a rotary spin wool fiberglass manufacturing line that produces a bonded, heavy-density wool fiberglass building insulation product and, therefore, does not meet the applicability requirement of 40 CFR 63.1380(a)(2).

2.d Per OAC rule 3745-21-07(G)(9)(c), this emissions unit is exempt from the requirements of OAC 3745-21-07(G)(1) because this emissions unit utilizes a binder that is composed of only water and organic materials, has an organic materials content that does not exceed 20% and contains organic materials that are not photochemically reactive.

II. Operational Restrictions

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

2. The permittee shall only employ binders in this emissions unit that are composed of water and organic materials (with an organic materials content that does not exceed 20%) and the organic materials shall not be photochemically reactive.

III. Monitoring and/or Record Keeping 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. For each day during which the permittee utilizes a binder with an organic materials content greater than 20% or which contains organic materials that are photochemically reactive, the permittee shall maintain a record of the type and quantity of binder utilized in this emissions unit.

3. The permittee shall perform weekly 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 emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

IV. 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.

IV. Reporting Requirements (continued)

2. The permittee shall submit deviation (excursion) reports that identify each day during which the permittee utilizes a binder with an organic materials content greater than 20% or which contains organic materials that are photochemically reactive. Each report shall be submitted within 30 days after the deviation occurs.

3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:
If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Method 9 and the procedures in OAC rule 3745-17-03(B)(1).

1.b Emission Limitation:
Particulate emissions shall not exceed 0.73 pound per hour based on Table I.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with the allowable mass emission rate through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 5E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.c Emission Limitation:
Particulate emissions shall not exceed 3.2 tons per year.

Applicable Compliance Method:
The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Scrap Dock Conveyor (P162)

Activity Description: Scrap Dock Conveyor

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
scrap dock conveyor system	OAC rules 3745-17-07(B) and 3745-17-08(B)	Since this emissions unit is not located in an Appendix A area, pursuant to paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) do not apply to this emissions unit. Also, pursuant to paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) do not apply to this emissions unit.

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Batch Transfer Mixed Batch (P174)

Activity Description: Batch Transfer Mixed Batch

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
50 tons per hour, mixed batch transfer system	OAC rules 3745-17-07(B) and 3745-17-08(B)	Since this emissions unit is not located in an Appendix A area, pursuant to paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) do not apply to this emissions unit. Also, pursuant to paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) do not apply to this emissions unit.

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Batch Vacuum System (P175)

Activity Description: Batch Vacuum System

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
2.5 tons per hour, batch vacuum system, with fabric filter	OAC rule 3745-31-05(A)(3) (PTI 01-3287)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A). Particulate emissions shall not exceed 0.26 pound per hour and 1.15 tons per year.
	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

None

II. Operational Restrictions

1. The permittee shall vent all the emissions from this emissions unit to the fabric filter.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall perform weekly 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 emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:
If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Method 9 and the procedures in OAC rule 3745-17-03(B)(1).

1.b Emission Limitations:
Particulate emissions shall not exceed 0.26 pound per hour and 1.15 tons per year.

Applicable Compliance Method:
Compliance with the short term emission limitation may be determined by multiplying the maximum outlet emission rate of the dust collector (0.020 gr/dscf, based on manufacturer's guaranteed emission factor) by the air flow capacity of the dust collection system (3,600 acfm) by 60 minutes per hour and dividing by 7,000 grains per pound.

If required, the permittee shall demonstrate compliance with the allowable emission rate for particulate emissions through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 5E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: B-4 Cooling (P176)

Activity Description: B-4 Cooling

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
6.75 tons per hour, natural gas-fired, B-4 cooling section, with smoke stripper and screen filter (stack numbers 08-19 and 08-82)	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 pounds per hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. To ensure that Figure II will not be applicable, the uncontrolled mass rate of particulate emissions is limited to less than 10 pounds per hour. See A.I.2.d below.
	40 CFR 63, Subpart NNN	Formaldehyde emissions shall not exceed 1.2 pounds per ton of glass pulled for P026, P140 and P176, combined. See A.I.2.a and A.I.2.b below and Part II, A.1-14 above.

2. Additional Terms and Conditions

2.a The permittee shall demonstrate compliance with 40 CFR 63, Subpart NNN as described in the operating, monitoring, record keeeping, reporting and testing requirements included in Part II - Specific Facility Terms and Conditions.

2. Additional Terms and Conditions (continued)

2.b In accordance with 40 CFR 63.1382(a)(2)(i), the permittee shall not discharge or cause to be discharged into the atmosphere in excess of a total of 1.2 pounds of formaldehyde per ton of glass pulled for the B-4 rotary spin manufacturing line, which consists of P026, P140 and P176.

(The maximum hourly allowable formaldehyde emission rate of 7.5 pounds per hour from P026, P140 and P176, combined, is calculated by multiplying the maximum glass throughput of 6.25 tons per hour by 1.2 pounds of formaldehyde per ton of glass pulled.)

2.c The permittee shall vent all the emissions from this emissions unit to the smoke stripper and screen filter.

2.d If the emission testing for this emissions unit demonstrates that the allowable emission rate from Figure II is more stringent than 10 lbs/hour, the permittee shall comply with the more stringent limitation.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping 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 perform weekly 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 emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the weekly check until the incident has ended. The observer may indicate that the visible emission 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.

IV. 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 semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

V. Testing Requirements (continued)

1.a Emission Limitation:
Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:
If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Method 9 and the procedures in OAC rule 3745-17-03(B)(1).

1.b Emission Limitation:
The uncontrolled mass rate of particulate emissions is limited to less than 10 pounds per hour.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P176 in accordance with the following requirements:

i. The emission testing shall be conducted within 24 months after permit issuance.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulates.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 5E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

1.c Emission Limitation:
1.2 pounds of formaldehyde per ton of glass pulled for the B-4 rotary spin manufacturing line.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance through emission testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 40 CFR 63, Appendix A, Methods 316 or 318 while emissions units P026, P140 and P176 are in operation. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

Emission testing was conducted for this emissions unit on August 6, 2002. This emissions test demonstrated compliance with the emission standard for formaldehyde from 40 CFR Part 63, Subpart NNN.

2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Central District 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 the performance of the control equipment.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Batch Mixer (P180)

Activity Description: Batch Mixer

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
50 tons per hour, batch mixer, with two baghouses	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions shall not exceed 44.6 pounds per hour based on Table I. See A.I.2.a below.
	OAC rules 3745-17-07(B) and 3745-17-08(B)	Since this emissions unit is not located in an Appendix A area, pursuant to paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) do not apply to this emissions unit. Also, pursuant to paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) do not apply to this emissions unit.

2. Additional Terms and Conditions

2.a If the emission testing for this emissions unit demonstrates that the allowable emission rate from Figure II is more stringent than 44.6 lbs/hour, the permittee shall comply with the more stringent limitation.

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall perform weekly 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 emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:
If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Method 9 and the procedures in OAC rule 3745-17-03(B)(1).

1.b Emission Limitations:
Particulate emissions shall not exceed 44.6 pounds per hour based on Table I and the uncontrolled mass rate of particulate emissions is limited to less than 10 pounds per hour.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with these emission limitations through emission tests performed for the inlet and outlet of each baghouse in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures in OAC rule 3745-17-03(B)(10). Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Pipe CMP-5 Oven (P194)

Activity Description: Pipe CMP-5 Oven

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
0.75 ton per hour, natural gas-fired, continuous molded pipe oven #5, with stack burner and filter (stack number 28-172)	OAC rule 3745-31-05(A)(3) (PTI 01-5682)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), 3745-18-06(E)(2), 3745-21-08(B) and 3745-23-06(B). Particulate emissions shall not exceed 0.44 pound per hour and 1.93 tons per year. Sulfur dioxide emissions shall not exceed 0.21 pound per hour and 0.92 ton per year. Organic compound emissions shall not exceed 1.35 pounds per hour and 5.91 tons per year. Nitrogen oxides emissions shall not exceed 0.06 pound per hour and 0.26 ton per year. Carbon monoxide emissions shall not exceed 1.97 pounds per hour and 8.63 tons per year.
	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-21-07(G)(1)	Exempt, see A.I.2.c below.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
	OAC rule 3745-21-08(B) and OAC rule 3745-23-06(B)	See A.I.2.a below.
	40 CFR 63, Subpart NNN	Exempt, see A.I.2.b below.
	OAC rule 3745-18-06(E)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

2.a The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-5682.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-5682.

2.b This emissions unit is exempt from the requirements of 40 CFR 63, Subpart NNN. It is a component of a rotary spin wool fiberglass manufacturing line that produces a bonded, heavy-density wool fiberglass building insulation product and, therefore, does not meet the applicability requirement of 40 CFR 63.1380(a)(2).

2.c Per OAC rule 3745-21-07(G)(9)(c), this emissions unit is exempt from the requirements of OAC 3745-21-07(G)(1) because this emissions unit utilizes a binder that is composed of only water and organic materials, has an organic materials content that does not exceed 20% and contains organic materials that are not photochemically reactive.

II. Operational Restrictions

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

2. The permittee shall vent all the emissions from this emissions unit to the stack burner.

3. The permittee shall only employ binders in this emissions unit that are composed of water and organic materials (with an organic materials content that does not exceed 20%) and the organic materials shall not be photochemically reactive.

III. Monitoring and/or Record Keeping 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.

III. Monitoring and/or Record Keeping Requirements (continued)

2. The permittee shall perform weekly 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 emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

3. For each day during which the permittee utilizes a binder with an organic materials content greater than 20% or which contains organic materials that are photochemically reactive, the permittee shall maintain a record of the type and quantity of binder utilized in this emissions unit.

IV. 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 semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

3. The permittee shall submit deviation (excursion) reports that identify each day during which the permittee utilizes a binder with an organic materials content greater than 20% or which contains organic materials that are photochemically reactive. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:
If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Method 9 and the procedures in OAC rule 3745-17-03(B)(1).

V. Testing Requirements (continued)

1.b Emission Limitations:
Particulate emissions shall not exceed 0.44 pound per hour and 1.93 tons per year.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P194 in accordance with the following requirements:

i. The emission testing shall be conducted within 24 months after permit issuance.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulates.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 5E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.c Emission Limitations:
Nitrogen oxides emissions shall not exceed 0.06 pound per hour and 0.26 ton per year.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7E.

The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.d Emission Limitations:
Sulfur dioxide emissions shall not exceed 0.21 pound per hour and 0.92 ton per year.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6.

The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

V. Testing Requirements (continued)

1.e Emission Limitation:
Organic compound emissions shall not exceed 1.35 pounds per hour.

Applicable Compliance Method:
The permittee shall conduct, or have conducted, emission testing for P194 in accordance with the following requirements:

i. The emission testing shall be conducted within 24 months after permit issuance.

ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for organic compounds.

iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): 40 CFR Part 60, Appendix A, Methods 1 through 4, 18, 25 or 25A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

iv. 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 Ohio EPA, Central District Office.

1.f Emission Limitation:
Organic compound emissions shall not exceed 5.91 tons per year.

Applicable Compliance Method:
The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

1.g Emission Limitations:
Carbon monoxide emissions shall not exceed 1.97 pounds per hour and 8.63 tons per year.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10.

The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours of operation per year and dividing by 2000 to convert to ton(s). Therefore, compliance with the annual emission limitation shall be assumed if compliance with the hourly emission limitation is maintained.

2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Central District 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 the performance of the control equipment.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Batch House Sand Storage, Silo & Unloading (P901)

Activity Description: Batch House Sand Storage Silo & Unloading

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
200 tons per hour, loading of batch house, sand storage silo, with a baghouse.	OAC rule 3745-31-05(A)(3) (PTI 01-872)	The requirements established pursuant to this rule are equivalent to the requirements of OAC rules 3745-17-07(A) and 3745-17-11(B)(1).
	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	Particulate emissions shall not exceed 58.5 pounds per hour based on Table I. See A.I.2.a below.
	OAC rules 3745-17-07(B) and 3745-17-08(B)	Since this emissions unit is not located in an Appendix A area, pursuant to paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) do not apply to this emissions unit. Also, pursuant to paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) do not apply to this emissions unit.

2. Additional Terms and Conditions

2.a If the emission testing for this emissions unit demonstrates that the allowable emission rate from Figure II is more stringent than 58.5 lbs/hour, the permittee shall comply with the more stringent limitation.

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall perform weekly 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 emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible particulate emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:
If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Method 9 and the procedures in OAC rule 3745-17-03(B)(1).

1.b Emission Limitation:
Particulate emissions shall not exceed 58.5 pounds per hour based on Table I and the uncontrolled mass rate of particulate emissions is limited to less than 10 pounds per hour.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with these emission limitations through emission tests performed for the inlet and outlet of the baghouse in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures in OAC rule 3745-17-03(B)(10). Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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THIS IS THE LAST PAGE OF THE PERMIT

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Statement of Basis For Title V Permit

Version 3. - 02/24/05

Company Name	Owens Corning
Premise Number	01-45-02-0185
What makes this facility a Title V facility?	VOC, PM-10, Sox, NOx, CO, HAP, HAPs
Has each insignificant emissions unit been reviewed to confirm it meets the definition in 3745-77-01 (U)?	Yes.
Were there any “common control” issues associated with this facility? If yes, provide a summary of those issues and explain how the DAPC decided to resolve them.	no

Part II (State and Federally Enforceable Requirements)			
Term and Condition (paragraph)	Basis		Comments
	SIP (3745-)	Other	
A.1	N	Y 40 CFR Part 63, NNN	States MACT subjectivity and must comply with 40 CFR 63.1387
A.1.a	N	Y 40 CFR Part 63, NNN	States MACT subjectivity and must comply with 40 CFR 63.1387
A.2	N	Y 40 CFR Part 63, NNN	Comply with 40 CFR 63.1382(a)(1) for affected emissions units

A.3	N	Y 40 CFR Part 63, NNN	Comply with 40 CFR 63.1382(a)(2)(i) for affected emissions units
A.4, A.4.a - A.4.d, A.5	N	Y 40 CFR Part 63, NNN	Comply with Operating Limits - 40 CFR 63.1382(b) for affected emissions units
A.6	N	Y 40 CFR Part 63, NNN	Comply with Monitoring Limits - 40 CFR 63.1383 for affected emissions units
A.6.a - A.6.e	N	Y 40 CFR Part 63, NNN	Comply with Monitoring Limits - 40 CFR 63.1383(b) for affected emissions units
A.7	N	Y 40 CFR Part 63, NNN	Comply with Performance Test Requirements and Reporting - 40 CFR 63.1384 for affected emissions units
A.8	N	Y 40 CFR Part 63, NNN	Comply with Test Methods and Procedures - 40 CFR 63.1385 for affected emissions units
A.9, A.9.a - A.9.c	N	Y 40 CFR Part 63, NNN	Comply with Record keeping Requirements - 40 CFR 63.1386(d) for affected emissions units
A.10	N	Y 40 CFR Part 63, NNN	Comply with Test Methods and Procedures - 40 CFR 63.1386 for affected emissions units

A.11	N	Y 40 CFR Part 63, NNN	Comply with Excess Emission Reports - 40 CFR 63.1386 for affected emissions units
A.12, A.12.a	N	Y 40 CFR Part 63, NNN	Comply with Operation and Maintenance Requirements - 40 CFR 63.6 for affected emissions units
A.12.b	N	Y 40 CFR Part 63, NNN	Comply with Test Methods and Procedures - 40 CFR 63.7 for affected emissions units
A.12.c	N	Y 40 CFR Part 63, NNN	Comply with Reconstruction - 40 CFR 63.9 for affected emissions units
A.12.d, A.12.e	N	Y 40 CFR Part 63, NNN	Comply with Record keeping - 40 CFR 63.10 for affected emissions units
A.13	N	Y 40 CFR Part 61	Sections referenced in 40 CFR 61 for Asbestos
A.14	N	Y OAC rule 3745-25-03	OAC rule 3745-25-03 for control action program
A.15	Y	N	Listing of insignificant emission units. **MPM - Removal of insignificant emission units that have been permanently shut down.**
B.1	N	N	Listing of insignificant emission units exempt due to “de minimis” status **MPM - Removal of insignificant emission units that have been permanently shut down.**

C **<u>Instructions for Part II</u>:**

Each paragraph in Part II must be identified and the remainder of the table completed. If the SIP (not including 31-05) is the basis for the term and condition, identify the specific rule. If the SIP is not the basis for the term and condition, place an “N” in the column under “SIP.” If the basis for the term and condition is something other than the SIP, including 3745-31-05, NSPS or MACT, a “Y” should be noted in the “Other” column, and if not, an “N” should be noted. Whether the basis for the term and condition is the “SIP” or “Other,” an explanation of each term and condition in Part II must be provided in the “Comments” section.

C **Additional information for modifications** - Several types of modifications, as defined by rule, may be processed concurrently. Review and comment rights vary depending on the basis for the modification. Please provide one of the following codes for each affected part of the permit being modified along with a brief explanation of what/what the affected part of the permit is being modified:

“**APA**” - Administrative Permit Amendment “**MPM**” - Minor Permit Modification
“**SPM**” - Significant Permit Modification “**R**” -Reopening

Appeal - Please also indicate if the modification is being initiated by an appeal by including the ERAC case number in the “Comments” area.

Part III (Requirements Within the State & Federally Enforceable Section)

Any unusual requirements or aspects of the terms and conditions in Part III that are not self-explanatory should be explained in the appropriate comment field or in a paragraph following the table for Part III.

EU(s)	Limitation	Basis		ND	OR	M	St	ENF	R	St	Rp	St	ET	Misc	Comments
		SIP (3745-)	Other												Comments *(Please Note: For Modifications, please indicate the basis for modification and provide a brief description of the what/why the affected part of the permit is being modified - see instructions for further information*
F001	Particulate emissions shall not exceed 6 tons per year.	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Require use of dust suppressants and speed limit. ET -Compliance demonstrated through use of AP-42 emission factors for paved and unpaved roadways and annual vehicle miles traveled.
F001	Emission unit description of paved areas	N	31-05(A)(3)	N	N	N	N	N	N	N	N	N	N	N	Detailed description of emission unit
F001	Emission unit description of unpaved areas	N	31-05(A)(3)	N	N	N	N	N	N	N	N	N	N	N	Detailed description of emission unit
F001	Sweep paved areas as necessary	N	31-05(A)(3)	N	N	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Require use of dust suppressants and speed limit.. ET - Compliance demonstrated through VE checks and method 9 if necessary.
F001	treat unpaved areas as necessary	N	31-05(A)(3)	N	N	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Require use of dust suppressants and speed limit. ET - Compliance demonstrated through VE checks and method 9 if nec.
F001	control measure weather restrictions	N	31-05(A)(3)	N	N	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Require use of dust suppressants and speed limit. ET - Compliance demonstrated through VE checks and method 9 if nec.
F001	unpaved to paved transition description	N	31-05(A)(3)	N	N	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Require use of dust suppressants and speed limit. ET - Compliance demonstrated through VE checks and method 9 if nec.
F001	drag-out restrictions	N	31-05(A)(3)	N	N	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Require use of dust suppressants and speed limit. ET - Compliance demonstrated through VE checks and method 9 if nec.

F001	vehicle restrictions	N	31-05(A)(3)	N	N	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Require use of dust suppressants and speed limit. ET - Compliance demonstrated through VE checks and method 9 if nec.
F001	BAT statement	N	31-05(A)(3)	N	N	N	N	N	N	N	N	N	N	N	Description of applicability
F001 F002 P024 P020 P025 P028 P162 P174	not in Appendix A area	N	N	Y	N	N	N	N	N	N	N	N	N	N	This emissions unit is not located in an Appendix A area of OAC rule 3745-17-08; therefore, the requirements of OAC rules 3745-17-07(B) and 3745-17-08(B) do not apply.
F002	Particulate emissions shall not exceed 3.3 tons per year.	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	N	N	N	N	All requirements have been transferred from PTI. OR - Require use of dust suppressants and speed limit. ET -Compliance demonstrated through use of AP-42 emission factor for unpaved roadways and annual vehicle miles traveled.
F001	No visible emissions from any paved roadway or parking area except for a period of time not to exceed one minute during any 60-minute observation period	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Require use of dust suppressants and speed limit. ET -Compliance demonstrated through VE checks and method 9 if nec.

F001 F002	No visible emissions from any unpaved roadway or parking area except for a period of time not to exceed three minutes during any 60-minute observation period	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Require use of dust suppressants and limit speed limit. ET -Compliance demonstrated through VE checks and method 9 if nec.
K003	No visible emissions.	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Require filtration system. ET - Compliance demonstrated through VE checks and method 5 if nec.
K003	6 lbs/hr VOC	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Limited to 10 gallon per day usage ET - Compliance shall be demonstrated through record keeping; if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4, 18 , 25 or 25A.
K003	0.551 lb PM/hr	17-11(B)(1)	N	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Require filtration system. ET - Compliance shall be demonstrated by calculation and VE checks; if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5.

P001 P004 P005 P006 P008 P129 P175 P180 P901 P020 P021 P024 P025 P141 P026 P027 P028 P031 P038 P039 P130 P143 P072 P073 P115 P128 P176 P003 P044 P055 P060 P064 P066 P131 P133 P134 P135 P136 P140 P142 P147 P194	20% opacity, as a 6-minute average	17-07(A)(1)	N	N	N	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. ET - Compliance demonstrated through VE checks and method 9 if nec.
P022	20% opacity, as a 3-minute average	N	31-05(A)(3)	N	N	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. ET - Compliance demonstrated through VE checks and method 9 if nec.

P001 P004 P005 P020 P021 P022 P025 P027 P031 P055 P066 P073 P128 P129 P130 P131 P134 P135 P136 P141 P142 P143 P147 P194	negative declaration	N	N	N	N	N	N	N	N	N	N	N	N	N	All requirements have been transferred from PTI. The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-08329. On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio. The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 01-08329.
P001 P004 P005 P006 P026 P027 P028 P031 P055 P064 P066 P072 P073 P128 P129 P140 P176	applicability of NNN	N	40 CFR 63, NNN	N	N	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. ET - Each unit is testing in accordance with the appropriate MACT language.
P001	vent emissions to baghouse	31-05(C)	N	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - Baghouse pressure drop range of 3-18 inches of water

P001 P006 P129 P004 P005	0.5 lb PM/ton of glass pulled	N	40 CFR 63, NNN	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - P001, P006 and P007 will comply with MACT limit through use of baghouse while P129 will comply through use of an ESP
P001	97.5 lbs nitrogen oxide emissions/hr	N	31-05(A)(3)	N	Y	N	N	N	N	N	N	N	Y	N	All requirements have been transferred from PTI. OR - Burn only natural gas M - Compliance demonstrated through testing R - Compliance demonstrated through testing Rp - Compliance demonstrated through testing
P001	8.8 tons nitrogen oxide emissions/yr	N	31-05(A)(3)	N	Y	N	N	N	N	N	N	N	Y	N	All requirements have been transferred from PTI. OR - Burn only natural gas M - Compliance demonstrated through testing R - Compliance demonstrated through testing Rp - Compliance demonstrated through testing
P001	3.24 lbs filterable and condensable particulate/hr and 14.2 tpy.	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Using baghouse to meet limit. ET - Compliance demonstrated through calculations and VE checks; if required, the permittee shall demonstrate compliance in accordance with 40 CFR Part 60, Appendix A.
P001	2.2 lbs/hr sulfur dioxide and 9.5 tpy	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas. ET - Compliance demonstrated through calculations and VE checks; if required, the permittee shall demonstrate compliance in accordance with 40 CFR Part 60, Appendix A.
P001	0.4 lb/hr and 1.76 tpy chlorides	N	31-05(A)(3)	N	N	N	N	N	N	N	N	N	Y	N	All requirements have been transferred from PTI. M - Emission limit is maximum capacity. R - Emission limit is maximum capacity. Rp - Emission limit is maximum capacity.
P001	1.68 lbs/hr and 7.4 tpy carbon monoxide	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas. ET - Compliance demonstrated through calculations and VE checks; if required, the permittee shall demonstrate compliance in accordance with 40 CFR Part 60, Appendix A.
P001	208.3 tons nitrogen oxide per cumulative, rolling 12-month summation	31-05(C)	N	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Niter limit of 385 tons /rolling 12 months ET - Compliance demonstrated through record keeping.

P004	114.2 lbs/hr sulfur dioxide	18-06 (E)(2)	N	N	N	N	N	N	N	N	N	N	N	N	All requirements have been transferred from PTI. M - Emission limit is greater than maximum capacity. R - Emission limit is greater than maximum capacity. Rp - Emission limit is greater than maximum capacity. ET - Emission limit is greater than maximum capacity. if required, the permittee shall demonstrate compliance in accordance with 40 CFR Part 60, Appendix A.
P005 **MPM**	90.10 lbs NOx/hr	N	31-05(A)(3)	N	N	N	N	N	N	N	N	N	Y	N	All requirements have been transferred from PTI. M - Compliance demonstrated through testing R - Compliance demonstrated through testing Rp - Compliance demonstrated through testing **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P005 **MPM**	3.54 lbs/hr and 15.6 tpy of PE	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - Use of batch boom spray to control PE **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P005 **MPM**	1.75 lbs/hr and 7.7 tpy of SO2	N	31-05(A)(3)	N	N	N	N	N	N	N	N	N	N	N	All requirements have been transferred from PTI. M - Emission limit is greater than maximum capacity. R - Emission limit is greater than maximum capacity. Rp - Emission limit is greater than maximum capacity. ET - Emission limit is greater than maximum capacity. if required, the permittee shall demonstrate compliance in accordance with 40 CFR Part 60, Appendix A. **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P005 **MPM**	0.60 lbs/hr and 2.7 tpy of HCl	N	31-05(A)(3)	N	N	N	N	N	N	N	N	N	N	N	All requirements have been transferred from PTI. M - Emission limit is greater than maximum capacity. R - Emission limit is greater than maximum capacity. Rp - Emission limit is greater than maximum capacity. ET - Emission limit is greater than maximum capacity. if required, the permittee shall demonstrate compliance in accordance with 40 CFR Part 60, Appendix A. **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P005 **MPM**	288.3 tons NOx per rolling, 12-month summation	31-05(C)	N	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Niter limit of 533 tons /rolling 12 months ET - Compliance demonstrated through record keeping. **MPM - Addition of 31-05(C) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P006	1.4 lbs SO2/ton of PWR	18-51 (D)(1)	N	Y	Y	N	N	Y	N	Y	N	N	Y	N	All requirements have been transferred from PTI. ET - the permittee shall demonstrate compliance in accordance with 40 CFR Part 60, Appendix A, Method 6.

P020 **MPM**	7.76 lbs/hr and 34.0 tpy PE	N	31-05(A)(3)	N	N	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. ET - Compliance demonstrated through calculation; if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A. **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P020 **MPM**	0.56 lbs/hr and 2.46 tpy NOx	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas. ET - Compliance demonstrated through calculation; if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A. **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P020 **MPM**	0.47 lbs/hr and 2.1 tpy CO	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas. ET - Compliance demonstrated through calculation; if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A. **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P024	79.4 lbs SO2/hr	18-06(E)21)	N	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas. ET - Compliance demonstrated through calculation; if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A.
P141 P176	UMRE less than 10 lbs PM/hr	17-11(B)(1)	N	N	N	Y	N	N	Y	N	Y	N	Y	N	
P141	102.4 lbs/hr SO2	18-06(E)(2)	N	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas. ET - Compliance demonstrated through calculation; if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A.
P021	1.43 lbs/hr and 6.4 tpy filterable and condensable particulate	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas. ET - Compliance demonstrated through previous testing; if required, the permittee shall demonstrate compliance in accordance with 40 CFR Part 60, Appendix A.
P022	5.5 lbs/hr and 24 tpy filterable and condensable particulate	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas. ET - Compliance demonstrated through calculation; if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A.

P021	0.71 lb/hr and 3.1 tpy nitrogen oxide	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas. ET - Compliance demonstrated through calculation; if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A.
P022	0.6 lb/hr and 2.5 tpy nitrogen oxide	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas. ET - Compliance demonstrated through calculation; if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A.
P021	0.6 lb/hr and 2.6 tpy carbon monoxide	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas. ET - Compliance demonstrated through calculation; if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A.
P022	0.5 lb/hr and 2.1 tpy carbon monoxide	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas. ET - Compliance demonstrated through calculation; if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A.
P026	18.6 lbs/hr particulate	17-11(B)(1)	N	N	Y	Y	N	Y	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - using penthouse to meet limit ENF-1980 Consent Decree
P028	18.2 lbs/hr particulate	17-11(B)(1)	N	N	Y	Y	N	Y	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - using penthouse to meet limit ENF-1980 Consent Decree
P026	141.5 lbs/hr sulfur dioxide	18-06(E)(2)	N	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas. ET - Compliance demonstrated through calculation; if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A.
P028	138.0 lbs/hr sulfur dioxide	18-06(E)(2)	N	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas. ET - Compliance demonstrated through calculation; if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A.

P026 P027 P028 P031 P055 P064 P066 P072 P073 P128 P140 P176 P064	1.2 lbs formaldehyde per ton of glass pulled	N	40 CFR 63, NNN	N	Y	N	N	N	N	N	N	N	Y	N	All requirements have been transferred from PTI. OR - limit given is a MACT standard M,R,Rp - not necessary according to MACT.
P027 **MPM** **SPM**	28 lbs/hr and 122.7tpy filterable and condensable particulate	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - uses dust collection system consisting of a drop-out box, fans, cyclonic separators, penthouse (moisture eliminator) and mixing chamber **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.** **SPM - Particulate emissions and visible emissions from this emissions unit are subject to CAM. A CAM Plan was submitted with the significant modification Title V application. Build-up of material inside each cyclone and abnormal visible emissions will be used to demonstrate compliance with both the VE and particulate emission rates.**
P027 **MPM** **SPM**	21.7 lbs/hr PM	N	31-05(A)(3)	N	Y	Y	N	Y	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - uses dust collection system consisting of a drop-out box, fans, cyclonic separators, penthouse (moisture eliminator) and mixing chamber ENF-1980 Consent Decree **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.** **SPM - Particulate emissions and visible emissions from this emissions unit are subject to CAM. A CAM Plan was submitted with the significant modification Title V application. Build-up of material inside each cyclone and abnormal visible emissions will be used to demonstrate compliance with both the VE and particulate emission rates.**

P027 **MPM** **SPM**	20% opacity, as a 6-minute average	N	17-07(A)(1)	N	N	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - uses dust collection system consisting of a drop-out box, fans, cyclonic separators, penthouse (moisture eliminator) and mixing chamber ENF-1980 Consent Decree **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.** **SPM - Particulate emissions and visible emissions from this emissions unit are subject to CAM. A CAM Plan was submitted with the significant modification Title V application. Build-up of material inside each cyclone and abnormal visible emissions will be used to demonstrate compliance with both the VE and particulate emission rates.**
P027 **MPM**	5.63 lbs/hr and 24.7 tpy sulfur dioxide	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas. **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P027 **MPM**	4.37 lbs/hr and 19.2 tpy nitrogen oxide	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas. **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P027 **MPM**	15.29 lbs/hr and 67.0 tpy carbon monoxide	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas. **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P027 **MPM**	4 lbs/hr and 17.6 tpy formaldehyde	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - limitation of methanol content of formaldehyde resin **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P027 **MPM**	33 lbs/hr and 144.6 tpy ammonia	31-05 (D)	N	N	N	N	N	N	N	N	N	N	Y	N	All requirements have been transferred from PTI. M, R, Rp - Compliance is based upon testing. **MPM - Addition of 31-05(C) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P027 **MPM**	13.0 lbs/hr methanol	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - monthly limitation on methanol usage **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P027 **MPM**	13.0 lbs/hr phenol	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - monthly limitation on phenol usage **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**

P027 **MPM**	30.11 lbs/hr VOC	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	Y	All requirements have been transferred from PTI. OR - limitation on methanol content of formaldehyde and monthly restrictions on resin usage required to ensure VOC permit limit ET - VOC summation of phenol, methanol and formaldehyde emissions from stack tests as well as burner emissions using AP-42 emission factors **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P027 P055 P073 **SPM**	11.0 lbs PE/ton of glass pulled	N	40 CFR 60, PPP	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - P027 uses dust collection system consisting of cyclonic separators, penthouse (moisture eliminator) **SPM - Addition of 40 CFR 60, PPP based emission limitation and associated M, R, Rp and ET. Applicability is initiated through PTI 01-08902 approved modifications to the manufacturing line.**
P027 P055 P073 **MPM**	26.34 tons of methanol per rolling 12-month summation for P027, P055 and P073	31-05(C)	N	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - limitation on methanol usage to comply with rolling 12-month summation ET - Compliance demonstrated through calculation in record keeping section **MPM - Addition of 31-05(C) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P027 P055 P073 **MPM**	26.46 tons of phenol per rolling 12-month summation for P027, P055 and P073	31-05(C)	N	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - limitation on phenol usage to comply with rolling 12-month summation ET - Compliance demonstrated through calculation in record keeping section **MPM - Addition of 31-05(C) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P027 P055 P073 **MPM**	74.67 tons of VOC per rolling 12-month summation for P027, P055 and P073	31-05(C)	N	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - limitation on methanol content of formaldehyde and monthly restrictions on resin usage required to ensure VOC permit limit ET - Compliance demonstrated through calculation in record keeping section **MPM - Addition of 31-05(C) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P031 **APA**	29.5 lbs/hr and 129.2 tpy filterable and condensable particulate	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - uses dust collection system consisting of ~~a drop-out box, fan, penthouse and~~ cyclonic separators. ENF-1980 Consent Decree **APA - Correction of reference to control equipment**

P031 **APA**	23.5 lbs particulate/hr	17-11(B)	N	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - uses dust collection system consisting of ~~a drop-out box, fan, penthouse and~~ cyclonic separators. ENF-1980 Consent Decree **APA - Correction of reference to control equipment**
P031	50 lbs/hr and 219 tpy ammonia	31-05(C)	N	N	N	N	N	N	N	N	N	N	Y	N	All requirements have been transferred from PTI. M, R, Rp - Compliance is based upon testing.
P031	5.3 lbs/hr and 23 tpy sulfur dioxide	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas. ET - Compliance demonstrated through calculation; if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A.
P031	5.3 lbs/hr and 23 tpy nitrogen oxide	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas. ET - Compliance demonstrated through calculation; if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A.
P031	17.5 lbs/hr and 76.7 tpy carbon monoxide	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas. ET - Compliance demonstrated through calculation; if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A.
P031	8.5 lbs/hr and 37.2 tpy formaldehyde	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - limitation of methanol content of formaldehyde
P031	18.5 lbs/hr methanol	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - monthly limitation on methanol usage ET - Compliance demonstrated through monitoring and record keeping
P031	26.5 lbs/hr phenol	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - monthly limitation on phenol usage ET - Compliance demonstrated through monitoring and record keeping
P031	53.6 lbs/hr VOC	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	Y	All requirements have been transferred from PTI. OR - limitation on methanol content of formaldehyde and monthly restrictions on resin usage required to ensure VOC permit limit ET - VOC summation of phenol, methanol and formaldehyde emissions as well as burner emissions using AP-42 emission factors
P055 **MPM**	3 lbs/hr and 13.2 tpy particulate	N	31-05(A)(3)	N	N	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**

P055	2.4 lbs/hr particulate	17-11 (B)(1)	N	N	N	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. ENF-1980 Consent Decree
P055 **MPM**	2.18 lbs/hr and 9.6 tons/yr ammonia	31-05(C)	N	N	N	N	N	N	N	N	N	N	Y	N	M, R, Rp - Compliance is based upon testing. **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P055 **MPM**	0.71 lbs/hr and 3.2 toy sulfur dioxide	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas. **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P055 **MPM**	15.27 lbs/hr and 67.0 tpy nitrogen oxides	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas. **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P055 **MPM**	22.94 lbs/hr and 100.5 tpy carbon monoxide	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas. **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P055 **MPM**	0.38 lb/hr VOC	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - monthly limitation on methanol usage ET - Compliance demonstrated through previous testing; if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A. **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P066	0.65 lb/hr and 2.9 tpy sulfur dioxide	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas.
P066	14 lbs/hr and 61.3 tpy nitrogen oxides	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas.
P066	21 lbs/hr and 92 tpy carbon monoxide	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas.
P066	0.1 lb/hr methanol	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - monthly limitation on methanol usage ET - Compliance demonstrated through previous testing; if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A.

P066	0.1 lb/hr phenol	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - monthly limitation on methanol usage ET - Compliance demonstrated through previous testing; if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A.
P066	4 lbs/hr and 17.5 tpy particulate	N	31-05(A)(3)	N	N	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI.
P066	0.25 lb/hr and 1.1 tpy formaldehyde	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - limitation of methanol content of formaldehyde ET - Compliance demonstrated through previous testing; if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A.
P066	0.6 lb/hr OC	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - limitation on methanol content of formaldehyde and monthly restrictions on resin usage required to ensure VOC permit limit ET - VOC summation of phenol,methanol and formaldehyde emissions from stack tests as well as burner emissions using AP-42 emission factors
P066	3.25 lbs/hr and 14.3 tpy ammonia	31-05(C)	N	N	N	N	N	N	N	N	N	N	Y	N	M, R, Rp - Compliance is based upon testing.
P031 P066 P128	45 tons of methanol per rolling 12-month summation for P031, P066 and P128	31-05(C)	N	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - limitation on methanol usage to comply with rolling 12-month summation ET - Compliance demonstrated through calculations in record keeping section. if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A.
P031 P066 P128	50 tons of phenol per rolling 12-month summation for P031, P066 and P128	31-05(C)	N	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - limitation on phenol usage to comply with rolling 12-month summation ET - Compliance demonstrated through calculation in record keeping section if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A.

P031 P066 P128	143.2 tons of VOC per rolling 12-month summation for P031, P066 and P128	31-05(C)	N	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - limitation on methanol content of formaldehyde and monthly restrictions on resin usage required to ensure VOC permit limit ET - Compliance demonstrated through calculation in record keeping section. if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A.
P038	3.91 lbs/hr particulate	17-11(B)(1)	N	N	N	Y	N	Y	N	N	Y	N	Y	N	All requirements have been transferred from PTI. ENF-1980 Consent Decree
P039	14.63 lbs/hr particulate	17-11(B)(1)	N	N	N	Y	N	Y	N	N	Y	N	Y	N	All requirements have been transferred from PTI. ENF-1980 Consent Decree
P073 **MPM**	3.85 lb/hr and 16.9 tpy filterable and condensable particulate	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - Using scrubber to meet limit. **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P073 **MPM**	14.5 lbs/hr particulate	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - Using scrubber to meet limit. **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P073 **MPM**	3.5 lbs/hr and 15.3 tpy ammonia	31-05(C)	N	N	N	N	N	N	N	N	N	N	Y	N	All requirements have been transferred from PTI. M, R, Rp - Compliance is based upon testing. **MPM - Addition of 31-05(C) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P073 **MPM**	0.7 lb/hr and 3.1 tpy formaldehyde	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - limitation of methanol content of formaldehyde **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P073 **MPM**	1.22 lbs/hr VOC	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - monthly limitation on methanol and phenol usage **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P143	3.12 lbs/hr particulate	17-11(B)(1)	N	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - using scrubber to meet limit

P130 **MPM**	7.2 lbs/hr and 31.5 tpy filterable and condensable particulate	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - uses cyclone and scrubber to comply with particulate limit **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P130 **MPM**	7.73 lbs/hr and 33.9 tpy VOC	N	31-05(A)(3)	N	N	N	N	N	N	N	N	N	Y	N	All requirements have been transferred from PTI. M, R, Rp - Compliance is based upon testing. **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P130 **MPM**	0.47 lbs/hr and 2.1 tpy methanol	N	31-05(A)(3)	N	N	N	N	N	N	N	N	N	N	N	All requirements have been transferred from PTI. M, R, Rp - Emission limitations are set at the unit's maximum capacity. ET - Compliance demonstrated through calculations. if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A. **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P130 **MPM**	0.62 lbs/hr and 2.8 tpy phenol	N	31-05(A)(3)	N	N	N	N	N	N	N	N	N	N	N	All requirements have been transferred from PTI. M, R, Rp - Emission limitations are set at the unit's maximum capacity. ET - Compliance demonstrated through calculations. if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A. **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P130 **MPM**	0.46 lbs/hr and 2.0 tpy formaldehyde	N	31-05(A)(3)	N	N	N	N	N	N	N	N	N	N	N	All requirements have been transferred from PTI. M, R, Rp - Emission limitations are set at the unit's maximum capacity. ET - Compliance demonstrated through calculations. if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A. **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P130 **MPM**	13.26 lbs/hr and 58.1 tpy ammonia	N	31-05(A)(3)	N	N	N	N	N	N	N	N	N	Y	N	All requirements have been transferred from PTI. M, R, Rp - Compliance is based upon testing. **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P130 **MPM**	0.45 lb/hr and 2.0 tpy NOx	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas. ET - Compliance is based upon calculations. if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A. **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**

P130 **MPM**	1.60 lb/hr and 7.0 tpy CO	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas. ET - Compliance is based upon calculations. if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A. **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P130 **MPM**	0.28 lb/hr and 1.2 tpy SO2	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas. ET - Compliance is based upon calculations. if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A. **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P072	12.2 lbs/hr particulate	17-11(B)(1)	N	N	Y	Y	N	Y	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - Using scrubber to meet limit. ENF-1980 Consent Decree
P176	14.7 lbs/hr particulate	17-11(B)(1)	N	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - Using baghouse to meet limit.
P128 **APA**	5.6 lbs/hr and 24.5 tpy filterable and condensable particulate	N	Y 31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - Using **stack burner and filter or** scrubber to meet limit. **APA - Correction of reference to control equipment**.
P128	2 lbs/hr and 8.8 tpy formaldehyde	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - limitation of methanol content of formaldehyde
P128	0.5 lb/hr phenol	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - monthly limitation on methanol usage
P128	0.4 lb/hr methanol	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - monthly limitation on phenol usage
P128	2.92 lbs/hr VOC	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - limitation on methanol content of formaldehyde and monthly restrictions on resin usage required to ensure VOC permit limit ET - VOC summation of phenol, methanol and formaldehyde emissions from stack tests as well as burner emissions using AP-42 emission factors

P128	1.6 lbs/hr and 7.0 tpy ammonia	31-05 (C)	N	N	N	N	N	N	N	N	N	N	Y	N	M, R, Rp - Compliance is based upon testing.
P129 **MPM**	0.78 lbs/hr and 3.5 tpy filterable and condensable particulate	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - use of ESP to comply with particulate limit **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P129 **MPM**	23.3 lbs NOx/hr	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - use of natural gas and niter usage restriction on a monthly basis **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P129 **MPM**	4.0 tpy NOx from natural gas	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - use of natural gas **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P129 **MPM**	0.69 lbs/hr and 3.1 tpy sulfur dioxide	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - use of natural gas ET - Compliance demonstrated through calculations; if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P129 **MPM**	0.76 lbs/hr and 3.4 tpy carbon monoxide	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - use of natural gas ET - Compliance demonstrated through calculations; if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A **MPM - Addition of 31-05(A)(3) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P129 **MPM**	34.4 tons NOx per rolling 12-month period from niter usage	31-05(C)	N	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - niter usage restriction on a monthly basis ET - Compliance demonstrated through monitoring and recordkeeping; if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A **MPM - Addition of 31-05(C) based emission limitation and associated M, R, Rp and ET through PTI 01-08902.**
P136 P147 **APA**	3.2 tpy particulate	N	31-05 (A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Use of stack burner for control of particulate ET - established from stack test requirement for hourly limit **APA - Correction of stack numbers in emission unit descriptions (P136: stack 28-56 to 28-01 and P147: stack 28-02 to 28-01)**

P136 P147	0.73 lb/hr particulate	17-11 (B)(1)	N	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Use of stack burner for control of particulate ET - if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A, Method 5.
P136 P147 P140 P044 P060 P064 P131 P133 P134 P135 P142 P051 P194	Use of non-photochemical coatings	21-07 (G)(1)	N	N	Y	Y	N	N	Y	N	Y	N	Y	N	P044, P051, P064, P060, P140 and P194: OR - using thermal burner to comply with limit P131: OR - expecting 5% control from thermal burner use P051: Misc - unit has undergone a modification per Ohio's regulations, requirement to submit complete permit to install application within 2 months of TV issuance and obtain a final permit to install within 8 months of TV issuance
P044	2.58 lbs/hr particulate	17-11 (B)(1)	N	N	Y	Y	N	N	Y	N	Y	N	Y	N	OR - using thermal burner to comply with limit ENF-1980 Consent Decree
P060	3.18 lbs/hr particulate	17-11 (B)(1)	N	N	Y	Y	N	N	Y	N	Y	N	Y	N	OR - using thermal burner to comply with limit ENF-1980 Consent Decree
P133 P134 P135 P142	2.5 tpy particulate	N	31-05(A)(3)	N	N	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. ET - established from stack test requirement for hourly limit
P133 P134 P135	1.75 lbs/hr particulate	17-11 (B)(1)	N	N	N	Y	N	N	Y	N	Y	N	Y	N	
P142	3.32 lbs/hr particulate	17-11 (B)(1)	N	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - using thermal burner to comply with limit
P194	0.44 lb/hr and 1.93 tpy particulate	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - Use of stack burner for control of particulate

P194	0.21 lb/hr and 0.92 tpy sulfur dioxide	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas. ET - Compliance demonstrated through calculation; if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A.
P194	1.35 lbs/hr and 5.91 tpy OC	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas.
P194	0.06 lb/hr and 0.26 tpy nitrogen oxides	N	Y 31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas. ET - Compliance demonstrated through calculation; if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A.
P194	1.97 lbs/hr and 8.63 tpy carbon monoxide	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas. ET - Compliance demonstrated through calculation; if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A.
P131	3.2 tpy particulate	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - using thermal burner to comply with limit ET - established from stack test requirement for hourly limit
P131	2 lbs/hr particulate	17-11(B)(1)	N	N	Y	Y	N	N	Y	N	Y	N	Y	N	OR - using thermal burner to comply with limit
P064	12.2 lbs/hr particulate	17-11(B)(1)	N	N	Y	Y	N	Y	Y	N	Y	N	Y	N	OR - using thermal burner to comply with limit ENF-1980 Consent Decree
P064	88.2 lbs/hr sulfur dioxide	18-06(E)(2)	N	N	N	N	N	N	N	N	N	N	Y	N	M - Maximum emissions are less than allowable R - Maximum emissions are less than allowable. Rp - Maximum emissions are less than allowable
P140	14.2 lbs/hr particulate	17-11(B)(1)	N	N	Y	Y	N	N	Y	N	Y	N	Y	N	OR - using thermal burner to comply with limit
P140	107.8 lbs/hr sulfur dioxide	18-06(E)(2)	N	N	Y	Y	N	N	Y	N	Y	Y	N	N	All requirements have been transferred from PTI. OR - Ensure compliance through only burning natural gas. ET - Compliance demonstrated through calculations; if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A. ENF-1980 Consent Decree

P175	0.26 particulate/hr and 1.15 particulate tpy	N	31-05(A)(3)	N	Y	Y	N	N	Y	N	Y	N	Y	N	All requirements have been transferred from PTI. OR - Using fabric filter to meet limit.
P180	44.6 particulate lbs/hr	17-11(B)(1)	N	N	Y	Y	N	N	Y	N	Y	N	N	N	OR - Using fabric filter to meet limit. ET - Compliance demonstrated through use of AP-42 emission factors for drop operation; if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5.
P901	58.5 particulate lbs/hr	17-11(B)(1)	N	N	Y	Y	N	N	Y	N	Y	N	N	N	All requirements have been transferred from PTI. OR - Using 2 baghouses to meet limit. ET - Compliance demonstrated through use of AP-42 emission factors for drop operation; if required, the permittee shall demonstrate compliance with this emissions limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5.

CAM did not apply when the permit was initially issued. Therefore it can only be applied to the emission units with significant modifications (P0027, P055, P073). CAM does not apply to any of these emission units.

APA: Removal of shutdown emission units P033, P051 and P199.

Directions:
EU = emissions unit ID
ND = negative declaration (i.e., term that indicates that a particular rule(s) is (are) not applicable to a specific emissions unit)
OR = operational restriction
M = monitoring requirements
St = streamlining term used to replace a PTI monitoring, record keeping, or reporting requirement with an equivalent or more stringent requirement
ENF = did noncompliance issues drive the monitoring requirements?
R = record keeping requirements
Rp = reporting requirements
ET = emission testing requirements (not including compliance method terms)
Misc = miscellaneous requirements

- **Instructions for Part III:**

  - All non-insignificant EUs must be included in this table. For each EU, or group of similar EUs, each emission limitation and control requirement specified in section A.I.1 and A.I.2 of the permit must be identified and the remainder of the table completed.

  - If the SIP (not including OAC rule 3745-31-05) is the basis for the term and condition, identify the specific rule. If the SIP is not the basis for the term and condition, place an “N” in the column under “SIP.” If the basis for the term and condition is something other than the SIP, including OAC rule 3745-31-05, NSPS or MACT, a “Y” should be noted in the “Other” column, and if not, an “N” should be noted. If the basis for the term and condition is “Other,” an explanation of the basis must be provided in the “Comments” section. If OAC rule 3745-31-05 is cited in the “Other” column, please indicate in the “Comments” section whether or not all of the requirements have been transferred from the permit to install.

- To complete the remainder of the table after “Basis,” except for the “Comments” section, simply specify a “Y” for yes or an “N” for no. For the “M,” “R,” “Rp,” and “ET” columns, if “N” is specified, there should be a brief explanation in the “Comments” section as to why there are no requirements. If a brief explanation is provided in the “Comments” section, please do not simply indicate that monitoring or testing requirements are not necessary. An explanation of why a requirement is not necessary should be specified.

  When periodic monitoring requirements are established to satisfy the provisions of OAC rule 3745-77-07(A)(3)(a)(ii), the basis for the requirements must be explained. Whenever Engineering Guides have been used to establish the periodic monitoring requirements, the applicable Engineering Guide may be referenced in the “Comments” section. An example that should be clarified would be the situation where it has been determined that control equipment parametric monitoring will be used to evaluate ongoing compliance in lieu of performing frequent emission tests. In this situation, Engineering Guide #65 would be referenced along with the fact that the parametric monitoring range (or minimum value) corresponded to the range (or minimum value) documented during the most recent emission tests that demonstrated that the emissions unit was in compliance. If streamlining language is included in the “Monitoring,” “Record Keeping,” or “Reporting” requirements sections of the permit, explain which requirements are being streamlined (mark appropriate column above) and provide a brief explanation of why the streamlined term is equal to or more stringent than the “Monitoring,” “Record Keeping,” or “Reporting” requirements specified in the permit to install. If Engineering Guide #16 was used as the basis for establishing an emission test frequency, a simple note referencing the Engineering Guide in the “Comments” section would be sufficient.

  Also, if a “Y” is noted under “OR,” “Misc,” “St,” “ND,” or “ENF” an explanation of the requirements must be provided in the “Comments” section. In addition to a general explanation of the “OR,” “Misc,” “St,” “ND,” and/or “ENF” the following must be provided:

  1. For an operational restriction, clarify if appropriate monitoring, record keeping, and reporting requirements have been specified for the operational restriction and indicate whether or not CAM is currently applicable.
  2. If a control plan and schedule is included in the “Miscellaneous Requirements” section of the permit, provide an explanation in the “Comments” section of the violation, basis for the violation, and the company’s proposed control plan and schedule.
  3. If the “ND” column above is marked, please identify the particular rule(s) that is (are) not applicable to the specified emissions unit.
  2. If the “ENF” column above is marked, please provide a brief explanation of the noncompliance issue(s) which prompted the use of the specified monitoring requirement.

  An explanation is not required if an “N” is noted in the “OR,” “Misc,” “St,” “ND,” or “ENF” columns.

C **Additional information for modifications** - Several types of modifications, as defined by rule, may be processed concurrently. Review and comment rights vary depending on the basis for the modification. Please provide one of the following codes for each affected part of the permit being modified, along with a brief explanation of what/what the affected part of the permit is being modified:

“**APA**” - Administrative Permit Amendment “**MPM**” - Minor Permit Modification
“**SPM**” - Significant Permit Modification “**R**” -Reopening

Appeal - Please also indicate if the modification is being initiated by an appeal by including the ERAC case number in the “Comments” area.