OhioEPA

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

03-15-06

CERTIFIED MAIL

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

04-48-00-0012
Johns Manville International, Inc. / Plant #01 - wtv1

Attn: Genevieve Damico AR-18J
United States Environmental Protection Agency
Region V
77 West Jackson Blvd.
Chicago, IL 60604-3590

Dear Ms. Damico:

The proposed issuance of the Title V permit for Johns Manville International, Inc. / Plant #01 - wtv1, has been created in Ohio EPA's State Air Resources System (STARS) on 03/15/06, for review by USEPA. This proposed action is identified in STARS as 3-Title V Proposed Permit T+C covering the facility specific terms and conditions, and Title V Proposed Permit covering the general terms and conditions. This proposed permit will be processed for issuance as a final action after forty-five (45) days from USEPA's electronic notification of this proposed action. Please contact me at (614) 644-3631 before the end of the forty-five (45) day review period if you wish to object to the proposed permit.

Very truly yours,

Michael W. Ahern

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

cc: Toledo Div of Environmental Services
File, DAPC PMU

State of Ohio Environmental Protection Agency

PROPOSED TITLE V SIGNIFICANT PERMIT MODIFICATION

Original Effective Date:	Expiration Date:	Modification Effective Date: ***To be entered upon final issuance***

This document constitutes issuance of a Title V permit for Facility ID: 04-48-00-0012 to:

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

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

P001 (Furnace 9211)
Direct Melt Recuperative Furnace - Melter+Forehearth+Forming (installation/startup dates estimated)

P013 (Furnace 9212)
Direct Melt Recuperative Furnace - Melter+Forehearth+Forming

P015 (Wet Process Fiberglass Mat Oven)
Fiber blend mat line - produces bonded non-woven fiberous mat.

P017 (Recycling Oven Shredder and Dryer)
5.8 mmBtu/hr dryer used in recycling area for direct melt furnace 9212, (installation/startup dates estimated)

P026 (Chop Dryer #1)
TP Chop - 1.9 mmBtu/hr Chopped Fiber Dryer #1/2

P037 (Direct Chop Oven #1)
Dryer Line #5 - 3.0 mmBtu/hr (Carrier LK 1593)

P038 (Direct Chop Oven #2)
Dryer Line #6 - 3.0 mmBtu/hr (Carman FBP-540)

P039 (Direct Chop Oven #3)
Dryer Line #7 - 3.0 mmBtu/hr (Carman FBP-540)

P040 (Direct Chop Oven #4)
Dryer Line #8 - 3.0 mmBtu/hr (Carman FBP-540)

P041 (Direct Dry Chop Classifier #1 Leg #5)
For Furnace 9212

P042 (Direct Dry Chop Classifier #2 Leg #6)
For Furnace 9212

P043 (Direct Dry Chop Classifier #3 Leg #7)
For Furnace 9212

P044 (Direct Dry Chop Classifier #4 Leg #8)
For Furnace 9212

P045 (Gypsum Line Oven)
For Furnace 9212 Line #4

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:

Toledo Div of Environmental Services
348 South Erie Street
Toledo, OH 43602-1633
(419) 936-3015

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 (i.e., postmarked) 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 reportable under OAC rule 3745-15-06(B) 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 (i.e., postmarked) 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 deviation reports shall satisfy the requirements 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. Full compliance with OAC rule 3745-77-07(A)(3)(c) requires reporting of all other deviations of the federally enforceable requirements specified in the permit as required by such rule.

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 satisfies 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 (for the deviations so reported) the requirements 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:**

Unless otherwise specified by rule, written reports that identify deviations of the following federally enforceable requirements contained in this permit; General Terms and Conditions: A.2, A.3, A.4, A.6.e, A.7, A.12, A.14, A.18, A.19, A.20, and A.22 of Part I of this Title V permit, as well as any deviations from the requirements in Section A.V or A.VI of Part III of this Title V permit**,** and any 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 (i.e., postmarked) 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. Unless otherwise specified by rule, all other deviations from federally enforceable

requirements identified in this permit shall be submitted annually as part of the annual compliance certification, including deviations of federally enforceable requirements not specifically addressed by permit or rule for the insignificant activities or emissions levels (IEU) identified in Part II.A of this Title V permit. Annual reporting of deviations is deemed adequate to meet the deviation reporting requirements for IEUs unless otherwise specified by permit or rule.

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 and 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) and OAC rule 3745-77-07(A)(13)(b))

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.

f. Except as otherwise indicated below, this Title V permit, or permit modification, is effective for five years from the original effective date specified in the permit. In the event that this facility becomes eligible for non-title V permits, this permit shall cease to be enforceable upon final issuance of all applicable OAC Chapter 3745-35 operating permits and/or registrations for all subject emissions units located at the facility and:

i. the permittee submits an approved facility-wide potential to emit analysis supporting a claim that the facility no longer meets the definition of a “major source” as defined in OAC rule 3745-77-01(W) based on the permanent shutdown and removal of one or more emissions units identified in this permit; or

ii. the permittee no longer meets the definition of a “major source” as defined in OAC rule 3745-77-01(W) based on obtaining restrictions on the facility-wide potential(s) to emit that are federally enforceable or legally and practically enforceable ; or

iii. a combination of i. and ii. above.

The permittee shall comply with any residual requirements, such as quarterly deviation reports, semi-annual deviation reports, and annual compliance certifications covering the period during which this Title V permit was enforceable. All records relating to this permit must be maintained in accordance with law.
(Authority for term: OAC rule 3745-77-01(W), OAC rule 3745-77-07(A)(3)(b)(ii), OAC rule 3745-77(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 (i.e., postmarked) 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, except that no such notice shall be required for changes that qualify as insignificant emissions levels or activities as defined in OAC rule 3745-77-01(U). 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 or Emissions Levels

Each IEU 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 from the responsible official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the responsible official that the emissions unit was permanently shut down.

After the date on which 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 Title V permit 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.
(Authority for term: OAC rule 3745-77-01)

22. Title VI Provisions

If applicable, the permittee shall comply with the standards for recycling and reducing emissions of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:

a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices specified in 40 CFR 82.156.

b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment specified in 40 CFR 82.158.

c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

(Authority for term: OAC rule 3745-77-01(H)(11))

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 (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

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 <u>Federally Enforceable</u> 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 (i.e., postmarked) 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; or

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; or

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 following insignificant emissions units are located at this facility:

B016 - boiler - 6.3 mmBtu/hr boiler (PTI 04-636);
P016 - Kolene salt bath - caustic cleaning solution (PTI 04-326);
P018 - Tempstran bag opening station - unloading of tempstran for mats w/ baghouse (PTI 04-377);
P019 - batch oven #1 - 1.0 mmBtu/hr oven (PTI 04-01345);
P020 - batch oven #2 - 1.0 mmBtu/hr oven (PTI 04-01345);
P021 - batch oven #3 - 1.0 mmBtu/hr oven (PTI 04-01345);
P022 - batch oven #4 - 1.0 mmBtu/hr oven (PTI 04-01345);
P023 - batch oven #5 - 1.0 mmBtu/hr oven (PTI 04-01345);
P024 - batch oven #6 - 1.0 mmBtu/hr oven (PTI 04-01345);
P027 - developmental pre-bake oven - 1.0 mmBtu/hr oven (PTI 04-552);
P028 - TP chop, fluidized bed dryer line 2 - 1.9 mmBtu/hr dryer (PTI 04-01345);
P029 - pre-bake tunnel oven A - 8.0 mmBtu/hr oven (PTI 04-01345);
P030 - pre-bake tunnel oven B - 8.0 mmBtu/hr oven (PTI 04-01345);
P031 - afterbake tunnel oven - 2.0 mmBtu oven (PTI 04-587);
P032 - BMC (PTI 04-01345);
P033 - finishing dielectric oven - finishing dried cakes (PTI 04-01345);
P046 - small scale T-glass #1 - melting and forming for marble melt T-glass (PTI-1209);
P047 - small scale T-glass #2 - melting and forming for marble melt T-glass (PTI-1209);
P048 - small scale T-glass #3 - melting and forming for marble melt T-glass (PTI-1209);
P049 - small scale T-glass #4 - melting and forming for marble melt T-glass (PTI-1209);
P050 - small scale T-glass #5 - melting and forming for marble melt T-glass (PTI-1209);
P051 - small scale T-glass #6 - melting and forming for marble melt T-glass (PTI-1209);
P052 - small scale T-glass #7 - melting and forming for marble melt T-glass (PTI-1209); and
P053 - Batch Oven No. 7 (Forming Pre-bake curing oven) (PTI 04-01345).

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:

B005 - boiler (Erie City, gas fired) - 2.23 mmBtu/hr boiler;
B007 - boiler (Amesteam, gas fired) - 2.0 mmBtu/hr boiler;
B009 - boiler (Cleaver Brooks) - 4.2 mmBtu/hr boiler;
B011 - entrained combustion boiler (9F2-C) #7 boiler - 1.0 mmBtu/hr oven;
B014 - WIC heat generator - 1.5 mmBtu;
F002 - roadways and parking lots;
P011 - mix tanks & raw material stoarage;
P025 - 9212 generator - 750 hp diesel generator; and
R001 - small maintenance paint booth.

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Furnace 9211 (P001)

Activity Description: Direct Melt Recuperative Furnace - Melter+Forehearth+Forming (installation/startup dates estimated)

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
8.0 ton/hr glass melting furnace with natural gas oxyfuel firing and electric boost, controlled by wet caustic scrubber and fabric filter (modification)	OAC rule 3745-31-05(A)(3) (PTI 04-01345)	0.01 pound of carbon monoxide (CO) per ton of glass pull 0.35 ton per rolling, 12-month period of CO 1.71 pounds of nitrogen oxides (NOx) per ton of glass pull 60 tons per rolling, 12-month period of NOx 17.34 tons of filterable particulate emissions (PE) per year 1.87 pounds of particulate emissions as PM10 per ton of glass pull

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
		66 tons per rolling, 12-month period of PM10
		2.02 pounds of sulfur dioxide (SO2) per ton of glass pull
		71 tons per rolling, 12-month period of SO2
		0.04 pound of volatile organic compounds (VOC) per ton of glass pull
		1.4 tons per rolling, 12-month period of VOC
		0.36 pound of fluorides (F-) per ton of glass pull
		13 tons per rolling, 12-month period of F-
		See sections A.I.2.a and A.I.2.b.
	OAC rule 3745-17-07(A)(1)	See section A.I.2.c.
	OAC rule 3745-17-11(A)(2)	See section A.I.2.c.
	OAC rule 3745-18-06(E)(2)	See section A.I.2.c.
	OAC rule 3745-21-07(B)	See section A.I.2.d.
	OAC rule 3745-21-08(B)	See section A.I.2.e.
	OAC rule 3745-23-06(B)	See section A.I.2.f.
	OAC rule 3745-31-02(A)(2)	See section A.I.2.g.
	OAC rule 3745-31-05(C)	See section A.I.2.h.
	OAC rule 3745-31-10 thru 20	See section A.I.2.i.
	40 CFR Part 60, Subpart CC	0.50 pound of filterable particulate emissions (PE) per ton of glass pull.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
Fiberglass forehearth area with natural gas over firing and no controls (modification)	OAC rule 3745-31-05(A)(3) (PTI 04-01345)	1.8 pounds of carbon monoxide (CO) per hour 7.9 tons per rolling, 12-month period of CO 2.1 pounds of nitrogen oxides (NOx) per hour 9.2 tons per rolling, 12-month period of NOx 0.20 pound of filterable particulate emissions (PE) per hour 0.88 ton per year of PE 0.011 pound of particulate emissions as PM10 per ton of glass pull 0.39 ton per rolling, 12-month period of PM10 0.02 pound of sulfur dioxide (SO2) per hour 0.09 ton per rolling, 12-month period of SO2 0.12 pound of volatile organic compounds (VOC) per hour 0.53 ton per rolling, 12-month period of VOC 0.038 pound of fluorides (F-) per ton of glass pull 1.32 tons per rolling, 12-month period of F- See sections A.I.2.j and A.I.2.k.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
	OAC rule 3745-17-07(B)(1)	20% opacity as a 3-minute average
	OAC rule 3745-17-08(B)	See section A.I.2.c.
	OAC rule 3745-18-06(E)(2)	See section A.I.2.c.
	OAC rule 3745-21-07(B)	See section A.I.2.d.
	OAC rule 3745-21-08(B)	See section A.I.2.e.
	OAC rule 3745-23-06(B)	See section A.I.2.f.
	OAC rule 3745-31-02(A)(2)	See section A.I.2.l.
	OAC rule 3745-31-05(C)	See section A.I.2.m.
	OAC rule 3745-31-10 thru 20	See section A.I.2.n.
Fiberglass forming area with rolled-on binder application and no controls (modification)	OAC rule 3745-31-05(A)(3) (PTI 04-01345)	0.50 pound of filterable particulate emissions (PE) per hour 2.2 tons per year of PE 0.20 pound of particulate emissions as PM10 per ton of glass pull 7.0 tons per rolling, 12-month period of PM10 0.09 pound of volatile organic compounds (VOC) per ton of glass pull 3.2 tons per rolling, 12-month period of VOC 0.021 pound of fluorides (F-) per ton of glass pull 0.73 ton per rolling, 12-month period of F- See sections A.I.2.k and A.I.2.r.
	OAC rule 3745-17-07(B)(1)	20% opacity as a 3-minute average
	OAC rule 3745-17-08(B)	See section A.I.2.c.
	OAC rule 3745-21-07(B)	See section A.I.2.d.
	OAC rule 3745-31-02(A)(2)	See section A.I.2.o.
	OAC rule 3745-31-05(C)	See section A.I.2.p.
	OAC rule 3745-31-10 thru 20	See section A.I.2.q.

2. Additional Terms and Conditions

2.a The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(B), OAC rule 3745-21-08(B), OAC rule 3745-23-06(B), OAC rule 3745-31-02(A)(2), OAC rule 3745-31-05(C), 3745-31-10 thru 20, and 40 CFR Part 60, Subpart CC.

2.b Visible particulate emissions from the furnace stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average.

2.c 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.d The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-07(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).

2.e The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by complying with all applicable rules.

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.f 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).

2.g The combined emissions from P001 and P013, measured at the glass melting furnace baghouse exhaust, shall not exceed 0.71 ton of CO per rolling, 12-month period.

2.h The combined emissions from P001 and P013, measured at the glass melting furnace baghouse exhaust, shall not exceed 121.71 tons of NOx, 142.77 tons of SO2 and 2.85 tons of VOC per rolling, 12-month period.

2.i The combined emissions from P001 and P013, measured at the glass melting furnace baghouse exhaust, shall not exceed 133.10 tons of PM10 and 25.62 tons of fluorides per rolling, 12-month period.

2.j The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(B)(1), OAC rule 3745-21-07(B), OAC rule 3745-21-08(B), OAC rule 3745-23-06(B), OAC rule 3745-31-02(A)(2), OAC rule 3745-31-05(C) and OAC rules 3745-31-10 thru 20.

2.k The permittee shall install best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust. Such equipment shall meet the following requirements:

i. the collection efficiency shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design; and

ii. there shall be no visible particulate emissions from the exhaust stack(s).

2.l The combined emissions from P001 and P013, measured as a summation of the emissions for all vents serving both forehearth areas, shall not exceed 13.36 tons of CO per rolling, 12-month period.

2.m The combined emissions from P001 and P013, measured as a summation of the emissions for all vents serving both forehearth areas, shall not exceed 15.91 tons of NOx, 0.78 ton of PM10, 0.10 ton of SO2 and 0.87 ton of VOC per rolling, 12-month period.

2.n The combined emissions from P001 and P013, measured as a summation of the emissions for all vents serving both forehearth areas, shall not exceed 0.78 ton of PM10 and 2.70 tons of fluorides per rolling, 12-month period.

2.o The combined emissions from P001 and P013, measured as a summation of the emissions for all exhaust stacks serving both forming areas, shall not exceed 5.18 tons of methanol per rolling, 12-month period.

2. Additional Terms and Conditions (continued)

2.p The combined emissions from P001 and P013, measured as a summation of the emissions for all exhaust stacks serving both forming areas, shall not exceed 6.41 tons of VOC per rolling, 12-month period.

2.q The combined emissions from P001 and P013, measured as a summation of the emissions for all exhaust stacks serving both forming areas, shall not exceed 14.24 tons of PM10 and 1.49 tons of fluorides per rolling, 12-month period.

2.r The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(B)(1), OAC rule 3745-21-07(B), OAC rule 3745-31-02(A)(2), OAC rule 3745-31-05(C) and OAC rules 3745-31-10 thru 20.

II. Operational Restrictions

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

2. The glass pull rate shall not be more than the minimum glass pull rate established during the most recent emissions tests that demonstrated compliance with the emissions limitations from the glass furnace, the forehearth, and the forming area.

3. The rate of glass pull from this emissions unit shall not exceed 69,350 tons per rolling, 12-month period, based upon a rolling, 12-month summation of the daily pull rates.

4. The NaOH addition rate to the quench tower shall not be less than the minimum addition rate established during the most recent emissions tests that demonstrated compliancee with the F- emissions limitations from the glass furnace, the forehearth, and the forming area.

5. The fluorspar addition rate to the batch mixer, as a weight percent of the batch, shall not exceed the rate established during the most recent performance test that demonstrated compliance with the F- emissions limitations from the glass furnace, the forehearth, and the forming area.

6. The permittee shall develop and implement written standard operating procedures (SOP) to be followed in order to maintain the emissions unit in compliance with the limitations contained in this permit and to minimize emissions during startup and shutdown of the unit. The SOP shall include, but shall not be limited to the following:

a. Startup and shutdown procedures, developed to consider and minimize emissions.

b. Procedures to determine, record, and report the cause of and remedy to a malfunction of any control device and any deviations from the compliant range of operating parameters being monitored and used to demonstrate compliance, including the date and time the malfunction/deviation began and ended.

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

d. The corrective actions or procedures to be taken in the event of a malfunction of a control device and/or a parameter monitor, and during any abnormal process modifications.

e. The corrective actions to be followed when a monitored parameter is outside the compliant range established during the most recent emissions tests that demonstrated compliance. Provisions shall be included for records to be maintained of the time, date, parameter's deviation data, the corrective actions conducted, and if standard operating procedures were followed. The SOP shall be implemented for the following occurrences:

i. The permittee shall initiate corrective actions within 1 hour following any 3-hour block of time in which the NaOH addition rate is less than the minimum addition rate established during the most recent emissions tests that demonstrated compliance. Corrective actions shall be conducted in a timely manner according to the procedures defined in the SOP.

II. Operational Restrictions (continued)

ii. The permittee shall initiate corrective action within 1 hour of an alarm from the bag leak detection system and complete corrective actions in a timely manner according to the procedures documented in this SOP. Examples of corrective actions that might be included in the SOP for the baghouse/fabric filter include:

(1) inspecting the baghouse for air leaks, torn or broken bags or filter media, or any other conditions that may cause an increase in emission;

(2) sealing off defective bags or filter media;

(3) replacing defective bags or filter media, or otherwise repairing the control device;

(4) sealing off a defective baghouse compartment;

(5) cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system; and

(6) shutting down the process producing the particulate emissions.

iii. The permittee shall initiate corrective action within 1 hour following any discovery that the glass pull rate exceeds the glass pull rate established during the most recent emissions tests that demonstrate the emissions unit to be in compliance. Corrective actions shall be conducted in a timely manner according to the procedures documented in the SOP.

iv. The permittee shall initiate corrective action within 1 hour following discovery that the fluorspar addition rate to the batch mixer, as a weight percent of the batch, is greater than the addition rate established during the most recent emissions tests that demonstrated compliance with the F- emissions limitations for the glass furnace, the forehearth, and the forming area. Corrective actions shall be conducted in a timely manner according to the procedures documented in the SOP.

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 keep records of each startup, shutdown, and malfunction event, as well as, a record of any actions taken during a startup, shutdown, or malfunction that are not consistent with the procedures in the SOP, as described in Section A.II.4. of this permit.

3. The permittee shall operate and maintain equipment to continuously monitor the NaOH addition rate to the spray tower while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals. The following hourly records shall be maintained from the data documented by this monitor:

a. the concentration of the NaOH solution pumped to the spray tower system (in % by volume);

b. the flow rate (in gallons) of the NaOH solution pumped to the spray tower system;

c. the addition rate of NaOH to the spray tower system, in gallons per hour, calculated as the concentration of the NaOH solution multiplied by the volume of the NaOH solution, i.e., (a)x(b); and

d. each 3-hour block of time in which the addition rate of NaOH was less that the minimum addition rate established during the most recent emissions tests that demonstrated compliance, and a record of the amount of time taken for corrective action to be initiated.

The records shall include the date and time of each exceedance/deviation, when corrective actions were initiated, the cause of each exceedance, the corrective actions taken and if they were the same as those documented in the SOP, and when the cause of each exceedance/deviation was corrected.

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

4. The permittee shall calibrate, maintain, and continuously operate a bag leak detection system when the emissions unit is in operation.

a. A triboelectric bag leak detection system shall be installed, operated, adjusted, and maintained in a manner consistent with the U.S. Environmental Protection Agency guidance, "Fabric Filter Bag Leak Detection Guidance" (EPA-454/R-98-015, September 1997). Other bag leak detection systems including, but not limited to, devices using light scattering and other effects, shall be installed, operated, adjusted, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.

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

c. The bag leak detection system sensor shall produce an output of relative particulate emissions.

d. The bag leak detection system shall 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 shall be located such that it can be heard by the appropriate plant personnel.

e. The bag leak detection system shall be installed downstream of the baghouse. Where multiple bag leak detection systems are required, the system instrumentation and alarm may be shared among the monitors.

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

g. Following the initial adjustment, the permittee shall not adjust the range, averaging period, alarm setpoints, or alarm delay time except as detailed in the operations, maintenance, and monitoring plan. In no event shall the range be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless a responsible official certifies, by written report, that the baghouse has been inspected and found to be in good operating condition.

The permittee shall maintain records of each bag leak detection system alarm, including the date and time of the alarm, the amount of time taken for corrective action to be initiated, the cause of the alarm, an explanation of the corrective actions taken and if they were the same as those documented in the SOP, and when the cause of the alarm was corrected.

5. The permittee shall monitor and record the glass pull rate on an daily basis. The following records shall be maintained from the data documented by this monitor:

a. records of the daily glass pull rate;

b. the daily hours of operation;

c. the average hourly glass pull rate, (a)/(b), in tons per hour; and

d. each day in which the average hourly glass pull rate exceeded the average hourly glass pull rate established during the most recent emissions tests that demonstrated compliance, along with the amount of time taken for corrective action to be initiated.

The records shall include the date and time of each exceedance/deviation, when corrective actions were initiated, the cause of each exceedance, the corrective actions taken and if they were the same as those documented in the SOP, and when the cause of each exceedance/deviation was corrected.

6. The permittee shall monitor and record daily the average fluorspar addition rate to the batch mixer, as a weight percent of the batch. The records shall include the date and time of each exceedance/deviation, when corrective actions were initiated, the cause of each exceedance, the corrective actions taken and if they were the same as those documented in the SOP, and when the cause of each exceedance/deviation was corrected.

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

7. For purposes of determining the total annual emissions from this emissions unit:

a. the permittee shall maintain monthly records of the volume of natural gas burned in the forehearth, in millions of standard cubic feet; and

b. the permittee shall maintain monthly records of the volume of natural gas burned in the forehearth as a rolling, 12-month summation of the monthly records above, in millions of standard cubic feet per rolling, 12-month period.

8. Each month the permittee shall calculate and maintain the following records:

a. the glass pull rate during the calendar month calculated as a summation of the daily pull rates recorded above;

b. the rolling, 12-month summation of the monthly glass pull rates, including a record of any month in which the pull rate exceeded the allowable, rolling, 12-month glass pull rate;

c. the total emissions from P001 and P013, including the glass melting furnaces baghouse exhaust, all vents serving both forehearth areas and all exhaust stacks serving both forming areas, in tons of CO, tons of NOx, tons of PM10, tons of SO2, tons of VOC, and tons of fluorides, calculated by multiplying the glass pull rate (in tons per month) by the emissions factor for each process (in pounds per ton of glass pull) as determined during the most recent stack test which demonstrated compliance with the applicable emissions limitation, dividing by 2000 pounds per ton, and then summing the emissions from all the processes; and

d. the total rolling, 12-month summation of the combined emissions from P001 and P013, including the glass melting furnace baghouse exhaust, all vents serving both forehearth areas and for all exhaust stacks serving both forming areas, in tons of CO, tons of NOx, tons of PM10, tons of SO2, tons of VOC, and tons of fluorides per rolling, 12-month period, calculated as a rolling 12-month summation of the monthly total emissions from P001 and P013 as calculated above.

9. Following the receipt of compliant emissions test results, conducted as required in Section V.1, the permittee shall maintain a record of the following parameter values, that will be used to monitor continuous compliance (a record of these parameters shall be maintained following each required emissions compliance test):

a. the average glass pull rate recorded during the compliance tests;

b. the minimum and average NaOH addition rate recorded during the compliance tests (the average shall be calculated using each reading of the meter, as recorded during each of the three compliance test runs); and

c. the average fluorspar addition rate recorded during the compliance tests.

10. The permittee shall perform daily checks, when the associated operation is in use and when the weather conditions allow, for any visible particulate emissions from the fabric filter and for any visible emissions of fugitive dust. 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 eliminate the visible emissions.

If the daily checks show no visible emissions for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check by the permittee or an Ohio EPA inspector indicates visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of no visible emissions.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit.

2. The permittee shall submit quarterly deviation (excursion) reports that identify any action(s) taken during a startup, shutdown, or malfunction and/or during operations, maintenance, or monitoring that were inconsistent with the procedures documented in the SOP as described in Section A.II.4. of this permit.

3. The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. any month in which records documented an exceedance of the maximum allowable rolling, 12-month glass pull rate limitation of 69,350 tons;

b. all periods of time during which the glass pull rate exceeded the glass pull rate established during the most recent emissions tests that demonstrated compliance;

c. all periods of time during which the NaOH addition rate to the spray tower was less than the minimum addition rate established during the most recent emissions tests that demonstrated compliance;

d. all periods of time during which the fluorspar content as a weight percentage of the batch exceeded the content established during the most recent emissions tests that demonstrated compliance with the F- emissions limitations for the glass furnace, the forehearth, and/or the forming area; and

e. all periods of time in which the bag leak detection alarm system was triggered.

4. The permittee shall submit quarterly deviation reports that identify the following:

a. any period of time (including the date) in which the permittee did not initiate corrective actions, as defined in the standard operating procedures, within 1 hour following any 3-hour block of time in which the NaOH addition rate is less than the minimum addition rate established during the most recent emissions tests that demonstrated compliance;

b. any period of time (including the date) in which the permittee did not initiate corrective actions, as defined in the standard operating procedures, within 1 hour of an alarm from the bag leak detection system;

c. any period of time (including the date) in which the permittee did not initiate corrective actions, as defined in the standard operating procedures, within 1 hour following discovery that the glass pull rate exceeded the glass pull rate established during the most recent emissions tests that demonstrated compliance; and

d. any period of time (including the date) in which the permittee did not initiate corrective actions, as defined in the standard operating procedures, within 1 hour following discovery that the fluorspar content as a weight percentage of the batch is greater than the content established during the most recent emissions tests that demonstrated compliance with the F- emissions limitations for the glass furnace, the forehearth, and/or the forming area.

5. The permittee shall submit quarterly deviation (excursion) reports that identify each month during which the combined emissions from P001 and P013, as a rolling 12-month summation, from the glass melting furnaces baghouse exhaust, from all vents serving both forehearth areas and from all exhaust stacks serving both forming areas, exceeded the applicable emission limitations in tons of CO, tons of NOx, tons of PM10, tons of SO2, tons of VOC, and/or tons of fluorides per rolling, 12-month period.

6. The permittee shall submit quarterly written reports that (a) identify all days during which any visible particulate emissions were observed from any stack serving the furnace baghouse, (b) identify all days during which any visible emissions of fugitive dust were observed, and (c) describe any corrective actions taken to eliminate the visible emissions. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year.

7. Except as otherwise specified above, all deviation reports required in this permit shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.

V. Testing Requirements

1. Compliance with the glass melting furnace emission limitation(s) in section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):

1.a Emission Limitation:

20% opacity, as a 6-minute average

Applicable Compliance Method:

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

1.b Emission Limitation:

0.01 pound of carbon monoxide (CO) per ton of glass pull

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in Method 10 of 40 CFR Part 60, Appendix A, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

1.c Emission Limitation:

0.35 ton per rolling, 12-month period of CO

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable CO emission limitation (0.01 pound of CO per ton of glass pull) by the maximum hourly averaged glass pull rate (8.0 tons per hour), and by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

1.d Emission Limitation:

1.71 pounds of NOx per ton of glass pull

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in Method 7 of 40 CFR Part 60, Appendix A, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

1.e Emission Limitation:

60 tons per rolling, 12-month period of NOx

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable NOx emission limitation (1.71 pounds of NOx per ton of glass pull) by the maximum hourly averaged glass pull rate (8.0 tons per hour), and by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

V. Testing Requirements (continued)

1.f Emission Limitation:

0.50 pound of filterable particulate emissions (PE) per ton of glass pull

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in Method 5 of 40 CFR Part 60, Appendix A using the methods and procedures specified in 40 CFR 60.296.

1.g Emission Limitation:

17.34 tons PE per year

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable PE emission limitation (0.50 pound of PE per ton of glass pull) by the maximum annual glass pulled (69,350 tons), and then dividing by 2,000 pounds per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

1.h Emission Limitation:

1.87 pounds of PM10 per ton of glass pull

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

1.i Emission Limitation:

66 tons per rolling, 12-month period of PM10

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable PM10 emission limitation (1.87 pounds of PM10 per ton of glass pull) by the maximum hourly averaged glass pull rate (8.0 tons per hour), and by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

1.j Emission Limitation:

2.02 pounds of SO_2 per ton of glass pull

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Method 6 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-18-04, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

V. Testing Requirements (continued)

1.k Emission Limitation:

71 tons per rolling, 12-month period of SO2

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable SO2 emission limitation (2.02 pounds of SO2 per ton of glass pull) by the maximum hourly averaged glass pull rate (8.0 tons per hour), and by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

1.l Emission Limitation:

0.04 pound of VOC per ton of glass pull

Applicable Compliance Method:

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

1.m Emission Limitation:

1.4 tons per rolling, 12-month period of VOC

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable VOC emission limitation (0.04 pound of VOC per ton of glass pull) by the maximum hourly averaged glass pull rate (8.0 tons per hour), and by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

1.n Emission Limitation:

0.36 pound of F- per ton of glass pull

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Method 13B of 40 CFR Part 60 Appendix A, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

1.o Emission Limitation:

13 tons per rolling, 12-month period of F-

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable F- emission limitation (0.36 pound of F- per ton of glass pull) by the maximum hourly averaged glass pull rate (8.0 tons per hour), and by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

V. Testing Requirements (continued)

1.p Emission Limitation:

The combined emissions from P001 and P013, measured at the glass melting furnace baghouse exhaust, shall not exceed 0.71 ton of CO per rolling, 12-month period.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation by multiplying the maximum allowed throughput of P001 and P013 combined (142,350 tons per rolling,12-month period) by the emission factor for CO (in pounds per ton of glass pulled) determined during the most recent emissions testing which demonstrated compliance with the CO emission limitation, and then dividing by 2,000 pounds per ton.

1.q Emission Limitation:

The combined emissions from P001 and P013, measured at the glass melting furnace baghouse exhaust, shall not exceed 25.62 tons of F- per rolling, 12-month period.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation by multiplying the maximum allowed throughput of P001 and P013 combined (142,350 tons per rolling,12-month period) by the emission factor for F- (in pounds per ton of glass pulled) determined during the most recent emissions testing which demonstrated compliance with the F- emission limitation, and then dividing by 2,000 pounds per ton.

1.r Emission Limitation:

The combined emissions from P001 and P013, measured at the glass melting furnace baghouse exhaust, shall not exceed 121.71 tons of NOx per rolling, 12-month period.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation by multiplying the maximum allowed throughput of P001 and P013 combined (142,350 tons per rolling,12-month period) by the emission factor for NOx (in pounds per ton of glass pulled) determined during the most recent emissions testing which demonstrated compliance with the NOx emission limitation, and then dividing by 2,000 pounds per ton.

1.s Emission Limitation:

The combined emissions from P001 and P013, measured at the glass melting furnace baghouse exhaust, shall not exceed 133.10 tons of PM10 per rolling, 12-month period.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation by multiplying the maximum allowed throughput of P001 and P013 combined (142,350 tons per rolling,12-month period) by the emission factor for PM10 (in pounds per ton of glass pulled) determined during the most recent emissions testing which demonstrated compliance with the PM10 emission limitation, and then dividing by 2,000 pounds per ton.

1.t Emission Limitation:

The combined emissions from P001 and P013, measured at the glass melting furnace baghouse exhaust, shall not exceed 142.77 tons of SO2 per rolling, 12-month period.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation by multiplying the maxiimum allowed throughput of P001 and P013 combined (142,350 tons per rolling,12-month period) by the emissions factor for SO2 (in pounds per ton of glass pulled) determined during the most recent emissions testing which demonstrated compliance with the SO2 emission limtation.

V. Testing Requirements (continued)

1.u Emission Limitation:

The combined emissions from P001 and P013, measured at the glass melting furnace baghouse exhaust, shall not exceed 2.85 tons of VOC per rolling, 12-month period.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation by multiplying the maximum allowed throughput of P001 and P013 combined (142,350 tons per rolling,12-month period) by the emission factor for VOC (in pounds per ton of glass pulled) determined during the most recent emissions testing which demonstrated compliance with the VOC emission limitation, and then dividing by 2,000 pounds per ton.

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

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

2.b The emission testing shall be conducted to demonstrate compliance with the allowable combined mass emission rates from P001 and P013, for NOx, PM10, SO2, F- and opacity, in pounds per ton of glass pull, measured at the glass melting furnace baghouse exhaust.

2.c The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

i. for NOx, Method 7 of 40 CFR Part 60, Appendix A;

ii. for PM10, Methods 201 and 202 of 40 CFR Part 51, Appendix M, and procedures specified in OAC rule 3745-17-03(B)(9);

iii. for SO2, Method 6 of 40 CFR Part 60, Appendix A using the procedures specified in OAC rule 3745-18-04

iv. for F-, Method 13B of 40 CFR Part 60 Appendix A; and

v. for opacity, Method 9 of 40 CFR Part 60, Appendix A.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

2.d 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 Toledo Division of Environmental Services.

2.e If both P001 and P013 are in simultaneous operation, compliance shall be demonstrated when the emission rate of the pollutant is equal to or less than the combined total of the applicable emission limits for each emissions unit.

2.f All monitoring systems and equipment shall be installed, operational, and calibrated prior to the performance test.

2.g Unless a different frequency is specified in this section, the permittee shall 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 shall be calculated using all of the recorded measurements for the parameter.

2.h The permittee shall monitor and record the daily glass pull rate for each glass-melting furnace during any performance test required. The permittee shall determine the hourly average of the recorded measurements.

2.i The permittee shall monitor and record the daily fluorspar addition rate to the batch mixer, as a weight percent of the batch for each glass-melting furnace during any performance test required.

V. Testing Requirements (continued)

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

Personnel from the Toledo Division of Environmental Services 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 Toledo Division of Environmental Services 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 Toledo Division of Environmental Services.

3. Compliance with the forehearth limitation(s) in section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):

3.a Emission Limitation:

No visible particulate emissions from the exhaust stack(s)

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with Method 22 of 40 CFR Part 60, Appendix A, using the methods and procedures specified in OAC rule 3745-17-03(B)(3), or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

3.b Emission Limitation:

1.8 pounds of carbon monoxide (CO) per hour

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1 dated 7/98, as follows: multiply the emission factor of 84 pounds of CO emissions per million standard cubic feet by the maximum volumetric fuel input capacity of 0.021 MMscf per hour.

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

3.c Emission Limitation:

7.9 tons CO per rolling, 12-month period

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable CO emission limitation (1.8 pounds per hour) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

V. Testing Requirements (continued)

3.d Emission Limitation:

2.1 pounds of NOx per hour

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1 dated 7/98, as follows: multiply the emission factor of 100 pounds of NOx emissions per million standard cubic feet by the maximum volumetric fuel input capacity of 0.021 MMscf per hour.

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

3.e Emission Limitation:

9.2 tons of NOx per rolling, 12-month period

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable NOx emission limitation (2.1 pounds of NOx per hour) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

3.f Emission Limitation:

0.20 pound of filterable particulate emissions (PE) per hour

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A, using the methods and procedures specified in OAC rule 3745-17-03(B)(10), or other U.S. EPA approved test method, with prior approval from the Ohio EPA.

3.g Emission Limitation:

0.88 ton PE per year

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable PE emission limitation (0.20 lb/hr) by the number of hours in a year (8760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

3.h Emission Limitation:

0.011 pound of particulate emissions as PM10 per ton of glass pull

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

V. Testing Requirements (continued)

3.i Emission Limitation:

0.39 ton PM10 per rolling, 12-month period

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable PM10 emission limitation (0.011 pound of PM10 per ton of glass pull) by the maximum hourly averaged glass pull rate (8.0 tons per hour), and by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

3.j Emission Limitation:

0.02 pound of SO2 per hour

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: multiply the emission factor of 0.6 pound of SO2 emissions per million standard cubic feet by the maximum volumetric fuel input capacity of 0.021 MMscf per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 6 of 40 CFR Part 60 Appendix A, using the methods and procedures specified in OAC rule 3745-18-04, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

3.k Emission Limitation:

0.09 ton SO2 per rolling, 12-month period

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable SO2 emission limitation (0.02 pound of SO2 per hour) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

3.l Emission Limitation:

0.12 pound of VOC per hour

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: multiply the emission factor of 5.5 pounds of VOC emissions per million standard cubic feet by the maximum volumetric fuel input capacity of 0.021 MMscf per hour.

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

V. Testing Requirements (continued)

3.m Emission Limitation:

0.53 ton VOC per rolling, 12-month period

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable VOC emission limitation (0.12 pound of VOC per hour) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

3.n Emission Limitation:

1.32 tons F- per rolling, 12-month period

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable F- emission limitation (0.038 pound of F- per ton of glass pull) by the maximum hourly averaged glass pull rate (8.0 tons per hour), and by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

3.o Emission Limitation:

0.038 pound of F- per ton of glass pull

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with Method 13B of 40 CFR Part 60 Appendix A, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

3.p Emission Limitation:

The combined emissions from P001 and P013, measured as a summation of the emissions for all vents serving both forehearth areas, shall not exceed 13.36 tons of CO per rolling, 12-month period.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation by multiplying the maximum allowed throughput of P001 and P013 combined (142,350 tons per rolling,12-month period) by the emission factor for CO (in pounds per ton of glass pulled) determined during the most recent emissions testing which demonstrated compliance with the CO emission limitation, and then dividing by 2,000 pounds per ton.

3.q Emission Limitation:

The combined emissions from P001 and P013, measured as a summation of the emissions for all vents serving both forehearth areas, shall not exceed 2.70 tons of F- per rolling, 12-month period

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation by multiplying the maximum allowed throughput of P001 and P013 combined (142,350 tons per rolling,12-month period) by the emission factor for F- (in pounds per ton of glass pulled) determined during the most recent emissions testing which demonstrated compliance with the F- emission limitation, and then dividing by 2,000 pounds per ton.

V. Testing Requirements (continued)

3.r Emission Limitation:

The combined emissions from P001 and P013, measured as a summation of the emissions for all vents serving both forehearth areas, shall not exceed 15.91 tons of NOx per rolling, 12-month period.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation by multiplying the maximum allowed throughput of P001 and P013 combined (142,350 tons per rolling,12-month period) by the emission factor for NOx (in pounds per ton of glass pulled) determined during the most recent emissions testing which demonstrated compliance with the NOx emission limitation, and then dividing by 2,000 pounds per ton.

3.s Emission Limitation:

The combined emissions from P001 and P013, measured as a summation of the emissions for all vents serving both forehearth areas, shall not exceed 0.78 ton of PM10 per rolling, 12-month period.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation by multiplying the maximum allowed throughput of P001 and P013 combined (142,350 tons per rolling,12-month period) by the emission factor for PM10 (in pounds per ton of glass pulled) determined during the most recent emissions testing which demonstrated compliance with the PM10 emission limitation, and then dividing by 2,000 pounds per ton.

3.t Emission Limitation:

The combined emissions from P001 and P013, measured as a summation of the emissions for all vents serving both forehearth areas, shall not exceed 0.10 ton of SO2 per rolling, 12-month period.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation by multiplying the maximum allowed throughput of P001 and P013 combined (142,350 tons per rolling,12-month period) by the emission factor for SO2 (in pounds per ton of glass pulled) determined during the most recent emissions testing which demonstrated compliance with the SO2 emission limitation, and then dividing by 2,000 pounds per ton.

3.u Emission Limitation:

The combined emissions from P001 and P013, measured as a summation of the emissions for all vents serving both forehearth areas, shall not exceed 0.87 ton of VOC per rolling, 12-month period.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation by multiplying the maximum allowed throughput of P001 and P013 combined (142,350 tons per rolling,12-month period) by the emission factor for VOC (in pounds per ton of glass pulled) determined during the most recent emissions testing which demonstrated compliance with the VOC emission limitation, and then dividing by 2,000 pounds per ton.

4. Compliance with the fiberglass forming area limitation(s) in section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):

4.a Emission Limitation:

No visible particulate emissions from the exhaust stack(s)

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with Method 22 of 40 CFR Part 60, Appendix A, using the methods and procedures specified in OAC rule 3745-17-03(B)(3), or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

V. Testing Requirements (continued)

4.b Emission Limitation:

0.50 pound of filterable PE per hour

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A, using the methods and procedures specified in OAC rule 3745-17-03(B)(10), or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

4.c Emission Limitation:

2.2 tons PE per year

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable PE emission limitation (0.50 lb/hr) by the number of hours in a year (8760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

4.d Emission Limitation:

0.20 pound of particulate emissions as PM10 per ton of glass pull

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

4.e Emission Limitation:

7.0 tons PM10 per rolling, 12-month period

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable PM10 emission limitation (0.20 pound of PM10 per ton of glass pull) by the maximum hourly averaged glass pull rate (8.0 tons per hour), and by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

4.f Emission Limitation:

0.09 pound of VOC per ton of glass pull

Applicable Compliance Method:

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

V. Testing Requirements (continued)

4.g Emission Limitation:

3.2 tons VOC per rolling, 12-month period

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable VOC emission limitation (0.09 pound of VOC per ton of glass pull) by the maximum hourly averaged glass pull rate (8.0 tons per hour), and by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

4.h Emission Limitation:

0.021 pound of F- per ton of glass pull

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with Method 13B of 40 CFR Part 60 Appendix A, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

4.i Emission Limitation:

0.73 ton F- per rolling, 12-month period

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable F- emission limitation (0.021 pound of F- per ton of glass pull) by the maximum hourly averaged glass pull rate (8.0 tons per hour), and by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

4.j Emission Limitation:

The combined emissions from P001 and P013, measured as a summation of the emissions for all exhaust stacks serving both forming areas, shall not exceed 1.49 tons of F- per rolling, 12-month period.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation by multiplying the maximum allowed throughput of P001 and P013 combined (142,350 tons per rolling,12-month period) by the emission factor for F- (in pounds per ton of glass pulled) determined during the most recent emissions testing which demonstrated compliance with the F- emission limitation, and then dividing by 2,000 pounds per ton.

4.k Emission Limitation:

The combined emissions from P001 and P013, measured as a summation of the emissions for all exhaust stacks serving both forming areas, shall not exceed 5.18 tons of methanol per rolling, 12-month period.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Method 18 of 40 CFR Part 60 Appendix A, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

V. Testing Requirements (continued)

4.l Emission Limitation:

The combined emissions from P001 and P013, measured as a summation of the emissions for all exhaust stacks serving both forming areas, shall not exceed 14.24 tons of PM10 per rolling, 12-month period.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation by multiplying the maximum allowed throughput of P001 and P013 combined (142,350 tons per rolling,12-month period) by the emission factor for PM10 (in pounds per ton of glass pulled) determined during the most recent emissions testing which demonstrated compliance with the PM10 emission limitation, and then dividing by 2,000 pounds per ton.

4.m Emission Limitation:

The combined emissions from P001 and P013, measured as a summation of the emissions for all exhaust stacks serving both forming areas, shall not exceed 6.41 tons of VOC per rolling, 12-month period.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation by multiplying the maximum allowed throughput of P001 and P013 combined (142,350 tons per rolling,12-month period) by the emission factor for VOC (in pounds per ton of glass pulled) determined during the most recent emissions testing which demonstrated compliance with the VOC emission limitation, and then dividing by 2,000 pounds per ton.

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: Furnace 9212 (P013)

Activity Description: Direct Melt Recuperative Furnace - Melter+Forehearth+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
8.4 ton/hr glass melting furnace with natural gas oxyfuel firing and electric boost, controlled by wet caustic scrubber and fabric filter (modification)	OAC rule 3745-31-05(A)(3) (PTI 04-01345)	0.01 pound of carbon monoxide (CO) per ton of glass pull 0.37 ton per rolling, 12-month period of CO 1.71 pounds of nitrogen oxides (NOx) per ton of glass pull 63 tons per rolling, 12-month period of NOx 18.25 tons of filterable particulate emissions (PE) per year 1.87 pounds of particulate emissions as PM10 per ton of glass pull

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
		69 tons per rolling, 12-month period of PM10
		2.02 pounds of sulfur dioxide (SO2) per ton of glass pull
		75 tons per rolling, 12-month period of SO2
		0.04 pound of volatile organic compounds (VOC) per ton of glass pull
		1.5 tons per rolling, 12-month period of VOC
		0.36 pound of fluorides (F-) per ton of glass pull
		14 tons per rolling, 12-month period of F-
		See sections A.I.2.a and A.I.2.b.
	OAC rule 3745-17-07(A)(1)	See section A.I.2.c.
	OAC rule 3745-17-11(A)(2)	See section A.I.2.c.
	OAC rule 3745-18-06(E)(2)	See section A.I.2.c.
	OAC rule 3745-21-07(B)	See section A.I.2.d.
	OAC rule 3745-21-08(B)	See section A.I.2.e.
	OAC rule 3745-23-06(B)	See section A.I.2.f.
	OAC rule 3745-31-02(A)(2)	See section A.I.2.g.
	OAC rule 3745-31-05(C)	See section A.I.2.h.
	OAC rule 3745-31-10 thru 20	See section A.I.2.i.
	40 CFR Part 60, Subpart CC	0.50 pound of filterable particulate emissions (PE) per ton of glass pull.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
Fiberglass forehearth area with natural gas over firing and no controls (modification)	OAC rule 3745-31-05(A)(3) (PTI 04-01345)	1.9 pounds of carbon monoxide (CO) per hour 8.3 tons per rolling, 12-month period of CO 2.2 pounds of nitrogen oxides (NOx) per hour 9.6 tons per rolling, 12-month period of NOx 0.20 pound of filterable particulate emissions (PE) per hour 0.88 ton per year of PE 0.011 pound of particulate emissions as PM10 per ton of glass pull 0.41 ton per rolling, 12-month period of PM10 0.02 pound of sulfur dioxide (SO2) per hour 0.09 ton per rolling, 12-month period of SO2 0.13 pound of volatile organic compounds (VOC) per hour 0.57 ton per rolling, 12-month period of VOC 0.038 pound of fluorides (F-) per ton of glass pull 1.39 tons per rolling, 12-month period of F- See sections A.I.2.j and A.I.2.k.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
	OAC rule 3745-17-07(B)(1)	See section A.I.2.c.
	OAC rule 3745-17-08(B)	See section A.I.2.c.
	OAC rule 3745-18-06(E)(2)	See section A.I.2.c.
	OAC rule 3745-21-07(B)	See section A.I.2.d.
	OAC rule 3745-21-08(B)	See section A.I.2.e.
	OAC rule 3745-23-06(B)	See section A.I.2.f.
	OAC rule 3745-31-02(A)(2)	See section A.I.2.l.
	OAC rule 3745-31-05(C)	See section A.I.2.m.
	OAC rule 3745-31-10 thru 20	See section A.I.2.n.
Fiberglass forming area with rolled-on binder application and no controls (modification)	OAC rule 3745-31-05(A)(3) (PTI 04-01345)	0.50 pound of filterable particulate emissions (PE) per hour 2.2 tons per year of PE 0.20 pound of particulate emissions as PM10 per ton of glass pull 7.3 tons per rolling, 12-month period of PM10 0.09 pound of volatile organic compounds (VOC) per ton of glass pull 3.3 tons per rolling, 12-month period of VOC 0.021 pound of fluorides (F-) per ton of glass pull 0.77 ton per rolling, 12-month period of F- See sections A.I.2.k and A.I.2.r.
	OAC rule 3745-17-07(B)(1)	See section A.I.2.c.
	OAC rule 3745-17-08(B)	See section A.I.2.c.
	OAC rule 3745-21-07(B)	See section A.I.2.d.
	OAC rule 3745-31-02(A)(2)	See section A.I.2.o.
	OAC rule 3745-31-05(C)	See section A.I.2.p.
	OAC rule 3745-31-10 thru 20	See section A.I.2.q.

2. Additional Terms and Conditions

2.a The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(B), OAC rule 3745-21-08(B), OAC rule 3745-23-06(B), OAC rule 3745-31-02(A)(2), OAC rule 3745-31-05(C), 3745-31-10 thru 20, and 40 CFR Part 60, Subpart CC.

2.b Visible particulate emissions from the furnace stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average.

2.c 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.d The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-07(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).

2.e The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by complying with all applicable rules.

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.f 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).

2.g The combined emissions from P001 and P013, measured at the glass melting furnace baghouse exhaust, shall not exceed 0.71 ton of CO per rolling, 12-month period.

2.h The combined emissions from P001 and P013, measured at the glass melting furnace baghouse exhaust, shall not exceed 121.71 tons of NOx, 142.77 tons of SO2 and 2.85 tons of VOC per rolling, 12-month period.

2.i The combined emissions from P001 and P013, measured at the glass melting furnace baghouse exhaust, shall not exceed 133.10 tons of PM10 and 25.62 tons of fluorides per rolling, 12-month period.

2.j The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(B), OAC rule 3745-21-08(B), OAC rule 3745-23-06(B), OAC rule 3745-31-02(A)(2), OAC rule 3745-31-05(C) and OAC rules 3745-31-10 thru 20.

2.k The permittee shall install best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust. Such equipment shall meet the following requirements:

i. the collection efficiency shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design; and

ii. there shall be no visible particulate emissions from the exhaust stack(s).

2.l The combined emissions from P001 and P013, measured as a summation of the emissions for all vents serving both forehearth areas, shall not exceed 13.36 tons of CO per rolling, 12-month period.

2.m The combined emissions from P001 and P013, measured as a summation of the emissions for all vents serving both forehearth areas, shall not exceed 15.91 tons of NOx, 0.78 ton of PM10, 0.10 ton of SO2 and 0.87 ton of VOC per rolling, 12-month period.

2.n The combined emissions from P001 and P013, measured as a summation of the emissions for all vents serving both forehearth areas, shall not exceed 0.78 ton of PM10 and 2.70 tons of fluorides per rolling, 12-month period.

2.o The combined emissions from P001 and P013, measured as a summation of the emissions for all exhaust stacks serving both forming areas, shall not exceed 5.18 tons of methanol per rolling, 12-month period.

2. Additional Terms and Conditions (continued)

2.p The combined emissions from P001 and P013, measured as a summation of the emissions for all exhaust stacks serving both forming areas, shall not exceed 6.41 tons of VOC per rolling, 12-month period.

2.q The combined emissions from P001 and P013, measured as a summation of the emissions for all exhaust stacks serving both forming areas, shall not exceed 14.24 tons of PM10 and 1.49 tons of fluorides per rolling, 12-month period.

2.r The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(B), OAC rule 3745-31-02(A)(2), OAC rule 3745-31-05(C) and OAC rules 3745-31-10 thru 20.

II. Operational Restrictions

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

2. The glass pull rate shall not be more than the minimum glass pull rate established during the most recent emissions tests that demonstrated compliance with the emissions limitations from the glass furnace, the forehearth, and the forming area.

3. The rate of glass pull from this emissions unit shall not exceed 73,000 tons per rolling, 12-month period, based upon a rolling, 12-month summation of the daily pull rates.

4. The NaOH addition rate to the quench tower shall not be less than the minimum addition rate established during the most recent emissions tests that demonstrated compliancee with the F- emissions limitations from the glass furnace, the forehearth, and the forming area.

5. The fluorspar addition rate to the batch mixer, as a weight percent of the batch, shall not exceed the rate established during the most recent performance test that demonstrated compliance with the F- emissions limitations from the glass furnace, the forehearth, and the forming area.

6. The permittee shall develop and implement written standard operating procedures (SOP) to be followed in order to maintain the emissions unit in compliance with the limitations contained in this permit and to minimize emissions during startup and shutdown of the unit. The SOP shall include, but shall not be limited to the following:

a. Startup and shutdown procedures, developed to consider and minimize emissions.

b. Procedures to determine, record, and report the cause of and remedy to a malfunction of any control device and any deviations from the compliant range of operating parameters being monitored and used to demonstrate compliance, including the date and time the malfunction/deviation began and ended.

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

d. The corrective actions or procedures to be taken in the event of a malfunction of a control device and/or a parameter monitor, and during any abnormal process modifications.

e. The corrective actions to be followed when a monitored parameter is outside the compliant range established during the most recent emissions tests that demonstrated compliance. Provisions shall be included for records to be maintained of the time, date, parameter's deviation data, the corrective actions conducted, and if standard operating procedures were followed. The SOP shall be implemented for the following occurrences:

i. The permittee shall initiate corrective actions within 1 hour following any 3-hour block of time in which the NaOH addition rate is less than the minimum addition rate established during the most recent emissions tests that demonstrated compliance. Corrective actions shall be conducted in a timely manner according to the procedures defined in the SOP.

II. Operational Restrictions (continued)

ii. The permittee shall initiate corrective action within 1 hour of an alarm from the bag leak detection system and complete corrective actions in a timely manner according to the procedures documented in this SOP. Examples of corrective actions that might be included in the SOP for the baghouse/fabric filter include:

(1) inspecting the baghouse for air leaks, torn or broken bags or filter media, or any other conditions that may cause an increase in emission;

(2) sealing off defective bags or filter media;

(3) replacing defective bags or filter media, or otherwise repairing the control device;

(4) sealing off a defective baghouse compartment;

(5) cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system; and

(6) shutting down the process producing the particulate emissions.

iii. The permittee shall initiate corrective action within 1 hour following any discovery that the glass pull rate exceeds the glass pull rate established during the most recent emissions tests that demonstrate the emissions unit to be in compliance. Corrective actions shall be conducted in a timely manner according to the procedures documented in the SOP.

iv. The permittee shall initiate corrective action within 1 hour following discovery that the fluorspar addition rate to the batch mixer, as a weight percent of the batch, is greater than the addition rate established during the most recent emissions tests that demonstrated compliance with the F- emissions limitations for the glass furnace, the forehearth, and the forming area. Corrective actions shall be conducted in a timely manner according to the procedures documented in the SOP.

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 keep records of each startup, shutdown, and malfunction event, as well as, a record of any actions taken during a startup, shutdown, or malfunction that are not consistent with the procedures in the SOP, as described in Section A.II.4. of this permit.

3. The permittee shall operate and maintain equipment to continuously monitor the NaOH addition rate to the spray tower while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals. The following hourly records shall be maintained from the data documented by this monitor:

a. the concentration of the NaOH solution pumped to the spray tower system (in % by volume);

b. the flow rate (in gallons) of the NaOH solution pumped to the spray tower system;

c. the addition rate of NaOH to the spray tower system, in gallons per hour, calculated as the concentration of the NaOH solution multiplied by the volume of the NaOH solution, i.e., (a)x(b); and

d. each 3-hour block of time in which the addition rate of NaOH was less that the minimum addition rate established during the most recent emissions tests that demonstrated compliance, and a record of the amount of time taken for corrective action to be initiated.

The records shall include the date and time of each exceedance/deviation, when corrective actions were initiated, the cause of each exceedance, the corrective actions taken and if they were the same as those documented in the SOP, and when the cause of each exceedance/deviation was corrected.

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

4. The permittee shall calibrate, maintain, and continuously operate a bag leak detection system when the emissions unit is in operation.

a. A triboelectric bag leak detection system shall be installed, operated, adjusted, and maintained in a manner consistent with the U.S. Environmental Protection Agency guidance, "Fabric Filter Bag Leak Detection Guidance" (EPA-454/R-98-015, September 1997). Other bag leak detection systems including, but not limited to, devices using light scattering and other effects, shall be installed, operated, adjusted, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.

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

c. The bag leak detection system sensor shall produce an output of relative particulate emissions.

d. The bag leak detection system shall 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 shall be located such that it can be heard by the appropriate plant personnel.

e. The bag leak detection system shall be installed downstream of the baghouse. Where multiple bag leak detection systems are required, the system instrumentation and alarm may be shared among the monitors.

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

g. Following the initial adjustment, the permittee shall not adjust the range, averaging period, alarm setpoints, or alarm delay time except as detailed in the operations, maintenance, and monitoring plan. In no event shall the range be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless a responsible official certifies, by written report, that the baghouse has been inspected and found to be in good operating condition.

The permittee shall maintain records of each bag leak detection system alarm, including the date and time of the alarm, the amount of time taken for corrective action to be initiated, the cause of the alarm, an explanation of the corrective actions taken and if they were the same as those documented in the SOP, and when the cause of the alarm was corrected.

5. The permittee shall monitor and record the glass pull rate on an daily basis. The following records shall be maintained from the data documented by this monitor:

a. records of the daily glass pull rate;

b. the daily hours of operation;

c. the average hourly glass pull rate, (a)/(b), in tons per hour; and

d. each day in which the average hourly glass pull rate exceeded the average hourly glass pull rate established during the most recent emissions tests that demonstrated compliance, along with the amount of time taken for corrective action to be initiated.

The records shall include the date and time of each exceedance/deviation, when corrective actions were initiated, the cause of each exceedance, the corrective actions taken and if they were the same as those documented in the SOP, and when the cause of each exceedance/deviation was corrected.

6. The permittee shall monitor and record daily the average fluorspar addition rate to the batch mixer, as a weight percent of the batch. The records shall include the date and time of each exceedance/deviation, when corrective actions were initiated, the cause of each exceedance, the corrective actions taken and if they were the same as those documented in the SOP, and when the cause of each exceedance/deviation was corrected.

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

7. For purposes of determining the total annual emissions from this emissions unit:

a. the permittee shall maintain monthly records of the volume of natural gas burned in the forehearth, in millions of standard cubic feet; and

b. the permittee shall maintain monthly records of the volume of natural gas burned in the forehearth as a rolling, 12-month summation of the monthly records above, in millions of standard cubic feet per rolling, 12-month period.

8. Each month the permittee shall calculate and maintain the following records:

a. the glass pull rate during the calendar month calculated as a summation of the daily pull rates recorded above;

b. the rolling, 12-month summation of the monthly glass pull rates, including a record of any month in which the pull rate exceeded the allowable, rolling, 12-month glass pull rate;

c. the total emissions from P001 and P013, including the glass melting furnaces baghouse exhaust, all vents serving both forehearth areas and all exhaust stacks serving both forming areas, in tons of CO, tons of NOx, tons of PM10, tons of SO2, tons of VOC, and tons of fluorides, calculated by multiplying the glass pull rate (in tons per month) by the emissions factor for each process (in pounds per ton of glass pull) as determined during the most recent stack test which demonstrated compliance with the applicable emissions limitation, dividing by 2000 pounds per ton, and then summing the emissions from all the processes; and

d. the total rolling, 12-month summation of the combined emissions from P001 and P013, including the glass melting furnace baghouse exhaust, all vents serving both forehearth areas and for all exhaust stacks serving both forming areas, in tons of CO, tons of NOx, tons of PM10, tons of SO2, tons of VOC, and tons of fluorides per rolling, 12-month period, calculated as a rolling 12-month summation of the monthly total emissions from P001 and P013 as calculated above.

9. Following the receipt of compliant emissions test results, conducted as required in Section V.1, the permittee shall maintain a record of the following parameter values, that will be used to monitor continuous compliance (a record of these parameters shall be maintained following each required emissions compliance test):

a. the average glass pull rate recorded during the compliance tests;

b. the minimum and average NaOH addition rate recorded during the compliance tests (the average shall be calculated using each reading of the meter, as recorded during each of the three compliance test runs); and

c. the average fluorspar addition rate recorded during the compliance tests.

10. The permittee shall perform daily checks, when the associated operation is in use and when the weather conditions allow, for any visible particulate emissions from the fabric filter and for any visible emissions of fugitive dust. 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 eliminate the visible emissions.

If the daily checks show no visible emissions for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check by the permittee or an Ohio EPA inspector indicates visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of no visible emissions.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit.

2. The permittee shall submit quarterly deviation (excursion) reports that identify any action(s) taken during a startup, shutdown, or malfunction and/or during operations, maintenance, or monitoring that were inconsistent with the procedures documented in the SOP as described in Section A.II.4. of this permit.

3. The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. any month in which records documented an exceedance of the maximum allowable rolling, 12-month glass pull rate limitation of 69,350 tons;

b. all periods of time during which the glass pull rate exceeded the glass pull rate established during the most recent emissions tests that demonstrated compliance;

c. all periods of time during which the NaOH addition rate to the spray tower was less than the minimum addition rate established during the most recent emissions tests that demonstrated compliance;

d. all periods of time during which the fluorspar content as a weight percentage of the batch exceeded the content established during the most recent emissions tests that demonstrated compliance with the F- emissions limitations for the glass furnace, the forehearth, and/or the forming area; and

e. all periods of time in which the bag leak detection alarm system was triggered.

4. The permittee shall submit quarterly deviation reports that identify the following:

a. any period of time (including the date) in which the permittee did not initiate corrective actions, as defined in the standard operating procedures, within 1 hour following any 3-hour block of time in which the NaOH addition rate is less than the minimum addition rate established during the most recent emissions tests that demonstrated compliance;

b. any period of time (including the date) in which the permittee did not initiate corrective actions, as defined in the standard operating procedures, within 1 hour of an alarm from the bag leak detection system;

c. any period of time (including the date) in which the permittee did not initiate corrective actions, as defined in the standard operating procedures, within 1 hour following discovery that the glass pull rate exceeded the glass pull rate established during the most recent emissions tests that demonstrated compliance; and

d. any period of time (including the date) in which the permittee did not initiate corrective actions, as defined in the standard operating procedures, within 1 hour following discovery that the fluorspar content as a weight percentage of the batch is greater than the content established during the most recent emissions tests that demonstrated compliance with the F- emissions limitations for the glass furnace, the forehearth, and/or the forming area.

5. The permittee shall submit quarterly deviation (excursion) reports that identify each month during which the combined emissions from P001 and P013, as a rolling 12-month summation, from the glass melting furnaces baghouse exhaust, from all vents serving both forehearth areas and from all exhaust stacks serving both forming areas, exceeded the applicable emission limitations in tons of CO, tons of NOx, tons of PM10, tons of SO2, tons of VOC, and/or tons of fluorides per rolling, 12-month period.

6. The permittee shall submit quarterly written reports that (a) identify all days during which any visible particulate emissions were observed from any stack serving the furnace baghouse, (b) identify all days during which any visible emissions of fugitive dust were observed, and (c) describe any corrective actions taken to eliminate the visible emissions. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year.

7. Except as otherwise specified above, all deviation reports required in this permit shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.

V. Testing Requirements

1. Compliance with the glass melting furnace emission limitation(s) in section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):

1.a Emission Limitation:

20% opacity, as a 6-minute average

Applicable Compliance Method:

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

1.b Emission Limitation:

0.01 pound of carbon monoxide (CO) per ton of glass pull

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in Method 10 of 40 CFR Part 60, Appendix A, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

1.c Emission Limitation:

0.37 ton per rolling, 12-month period of CO

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable CO emission limitation (0.01 pound of CO per ton of glass pull) by the maximum hourly averaged glass pull rate (8.4 tons per hour), and by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

1.d Emission Limitation:

1.71 pounds of NOx per ton of glass pull

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in Method 7 of 40 CFR Part 60, Appendix A, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

1.e Emission Limitation:

63 tons per rolling, 12-month period of NOx

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable NOx emission limitation (1.71 pounds of NOx per ton of glass pull) by the maximum hourly averaged glass pull rate (8.4 tons per hour), and by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

V. Testing Requirements (continued)

1.f Emission Limitation:

0.50 pound of filterable particulate emissions (PE) per ton of glass pull

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in Method 5 of 40 CFR Part 60, Appendix A using the methods and procedures specified in 40 CFR 60.296.

1.g Emission Limitation:

18.25 tons PE per year

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable PE emission limitation (0.50 pound of PE per ton of glass pull) by the maximum annual glass pulled (73,000 tons), and then dividing by 2,000 pounds per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

1.h Emission Limitation:

1.87 pounds of PM10 per ton of glass pull

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

1.i Emission Limitation:

69 tons per rolling, 12-month period of PM10

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable PM10 emission limitation (1.87 pounds of PM10 per ton of glass pull) by the maximum hourly averaged glass pull rate (8.4 tons per hour), and by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

1.j Emission Limitation:

2.02 pounds of SO_2 per ton of glass pull

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Method 6 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-18-04, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

V. Testing Requirements (continued)

1.k Emission Limitation:

75 tons per rolling, 12-month period of SO2

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable SO2 emission limitation (2.02 pounds of SO2 per ton of glass pull) by the maximum hourly averaged glass pull rate (8.4 tons per hour), and by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

1.l Emission Limitation:

0.04 pound of VOC per ton of glass pull

Applicable Compliance Method:

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

1.m Emission Limitation:

1.5 tons per rolling, 12-month period of VOC

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable VOC emission limitation (0.04 pound of VOC per ton of glass pull) by the maximum hourly averaged glass pull rate (8.4 tons per hour), and by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

1.n Emission Limitation:

0.36 pound of F- per ton of glass pull

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Method 13B of 40 CFR Part 60 Appendix A, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

1.o Emission Limitation:

14 tons per rolling, 12-month period of F-

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable F- emission limitation (0.36 pound of F- per ton of glass pull) by the maximum hourly averaged glass pull rate (8.4 tons per hour), and by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

V. Testing Requirements (continued)

1.p Emission Limitation:

The combined emissions from P001 and P013, measured at the glass melting furnace baghouse exhaust, shall not exceed 0.71 ton of CO per rolling, 12-month period.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation by multiplying the maximum allowed throughput of P001 and P013 combined (142,350 tons per rolling,12-month period) by the emission factor for CO (in pounds per ton of glass pulled) determined during the most recent emissions testing which demonstrated compliance with the CO emission limitation, and then dividing by 2,000 pounds per ton.

1.q Emission Limitation:

The combined emissions from P001 and P013, measured at the glass melting furnace baghouse exhaust, shall not exceed 25.62 tons of F- per rolling, 12-month period.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation by multiplying the maximum allowed throughput of P001 and P013 combined (142,350 tons per rolling,12-month period) by the emission factor for F- (in pounds per ton of glass pulled) determined during the most recent emissions testing which demonstrated compliance with the F- emission limitation, and then dividing by 2,000 pounds per ton.

1.r Emission Limitation:

The combined emissions from P001 and P013, measured at the glass melting furnace baghouse exhaust, shall not exceed 121.71 tons of NOx per rolling, 12-month period.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation by multiplying the maximum allowed throughput of P001 and P013 combined (142,350 tons per rolling,12-month period) by the emission factor for NOx (in pounds per ton of glass pulled) determined during the most recent emissions testing which demonstrated compliance with the NOx emission limitation, and then dividing by 2,000 pounds per ton.

1.s Emission Limitation:

The combined emissions from P001 and P013, measured at the glass melting furnace baghouse exhaust, shall not exceed 133.10 tons of PM10 per rolling, 12-month period.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation by multiplying the maximum allowed throughput of P001 and P013 combined (142,350 tons per rolling,12-month period) by the emission factor for PM10 (in pounds per ton of glass pulled) determined during the most recent emissions testing which demonstrated compliance with the PM10 emission limitation, and then dividing by 2,000 pounds per ton.

1.t Emission Limitation:

The combined emissions from P001 and P013, measured at the glass melting furnace baghouse exhaust, shall not exceed 142.77 tons of SO2 per rolling, 12-month period.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation by multiplying the maximum allowed throughput of P001 and P013 combined (142,350 tons per rolling,12-month period) by the emission factor for SO2 (in pounds per ton of glass pulled) determined during the most recent emissions testing which demonstrated compliance with the SO2 emission limitation, and then dividing by 2,000 pounds per ton.

V. Testing Requirements (continued)

1.u Emission Limitation:

The combined emissions from P001 and P013, measured at the glass melting furnace baghouse exhaust, shall not exceed 2.85 tons of VOC per rolling, 12-month period.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation by multiplying the maximum allowed throughput of P001 and P013 combined (142,350 tons per rolling,12-month period) by the emission factor for VOC (in pounds per ton of glass pulled) determined during the most recent emissions testing which demonstrated compliance with the VOC emission limitation, and then dividing by 2,000 pounds per ton.

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

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

2.b The emission testing shall be conducted to demonstrate compliance with the allowable combined mass emission rates from P001 and P013, for NOx, PM10, SO2, F- and opacity, in pounds per ton of glass pull, measured at the glass melting furnace baghouse exhaust.

2.c The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

i. for NOx, Method 7 of 40 CFR Part 60, Appendix A;

ii. for PM10, Methods 201 and 202 of 40 CFR Part 51, Appendix M, and procedures specified in OAC rule 3745-17-03(B)(9);

iii. for SO2, Method 6 of 40 CFR Part 60, Appendix A using the procedures specified in OAC rule 3745-18-04

iv. for F-, Method 13B of 40 CFR Part 60 Appendix A; and

v. for opacity, Method 9 of 40 CFR Part 60, Appendix A.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

2.d 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 Toledo Division of Environmental Services.

2.e If both P001 and P013 are in simultaneous operation, compliance shall be demonstrated when the emission rate of the pollutant is equal to or less than the combined total of the applicable emission limits for each emissions unit.

2.f All monitoring systems and equipment shall be installed, operational, and calibrated prior to the performance test.

2.g Unless a different frequency is specified in this section, the permittee shall 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 shall be calculated using all of the recorded measurements for the parameter.

2.h The permittee shall monitor and record the daily glass pull rate for each glass-melting furnace during any performance test required. The permittee shall determine the hourly average of the recorded measurements.

2.i The permittee shall monitor and record the daily fluorspar addition rate to the batch mixer, as a weight percent of the batch for each glass-melting furnace during any performance test required.

V. Testing Requirements (continued)

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

Personnel from the Toledo Division of Environmental Services 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 Toledo Division of Environmental Services 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 Toledo Division of Environmental Services.

3. Compliance with the forehearth limitation(s) in section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):

3.a Emission Limitation:

No visible particulate emissions from the exhaust stack(s).

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with Method 22 of 40 CFR Part 60, Appendix A, using the methods and procedures specified in OAC rule 3745-17-03(B)(3), or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

3.b Emission Limitation:

1.9 pounds of carbon monoxide (CO) per hour

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1 dated 7/98, as follows: multiply the emission factor of 84 pounds of CO emissions per million standard cubic feet by the maximum volumetric fuel input capacity of 0.022 MMscf per hour.

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

3.c Emission Limitation:

8.3 tons CO per rolling, 12-month period

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable CO emission limitation (1.9 pounds per hour) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

V. Testing Requirements (continued)

3.d Emission Limitation:

2.2 pounds of NOx per hour

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1 dated 7/98, as follows: multiply the emission factor of 100 pounds of NOx emissions per million standard cubic feet by the maximum volumetric fuel input capacity of 0.022 MMscf per hour.

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

3.e Emission Limitation:

9.6 tons of NOx per rolling, 12-month period

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable NOx emission limitation (2.2 pounds of NOx per hour) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

3.f Emission Limitation:

0.20 pound of filterable particulate emissions (PE) per hour

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A, using the methods and procedures specified in OAC rule 3745-17-03(B)(10), or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

3.g Emission Limitation:

0.88 ton PE per year

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable PE emission limitation (0.20 lb/hr) by the number of hours in a year (8760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

3.h Emission Limitation:

0.011 pound of particulate emissions as PM10 per ton of glass pull

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

V. Testing Requirements (continued)

3.i Emission Limitation:

0.41 ton PM10 per rolling, 12-month period

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable PM10 emission limitation (0.011 pound of PM10 per ton of glass pull) by the maximum hourly averaged glass pull rate (8.4 tons per hour), and by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 pounds per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

3.j Emission Limitation:

0.02 pound of SO2 per hour

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: multiply the emission factor of 0.6 pound of SO2 emissions per million standard cubic feet by the maximum volumetric fuel input capacity of 0.022 MMscf per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 6 of 40 CFR Part 60 Appendix A, using the methods and procedures specified in OAC rule 3745-18-04, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

3.k Emission Limitation:

0.09 ton SO2 per rolling, 12-month period

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable SO2 emission limitation (0.02 pound of SO2 per hour) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

3.l Emission Limitation:

0.13 pound of VOC per hour

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: multiply the emission factor of 5.5 pounds of VOC emissions per million standard cubic feet by the maximum volumetric fuel input capacity of 0.022 MMscf per hour.

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

V. Testing Requirements (continued)

3.m Emission Limitation:

0.57 ton VOC per rolling, 12-month period

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable VOC emission limitation (0.13 pound of VOC per hour) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 pounds per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

3.n Emission Limitation:

1.39 tons F- per rolling, 12-month period

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable F- emission limitation (0.038 pound of F- per ton of glass pull) by the maximum hourly averaged glass pull rate (8.4 tons per hour), and by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 pounds per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

3.o Emission Limitation:

0.038 pound of F- per ton of glass pull

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with Method 13B of 40 CFR Part 60 Appendix A, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

3.p Emission Limitation:

The combined emissions from P001 and P013, measured as a summation of the emissions for all vents serving both forehearth areas, shall not exceed 13.36 tons of CO per rolling, 12-month period.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation by multiplying the maximum allowed throughput of P001 and P013 combined (142,350 tons per rolling,12-month period) by the emission factor for CO (in pounds per ton of glass pulled) determined during the most recent emissions testing which demonstrated compliance with the CO emission limitation, and then dividing by 2,000 pounds per ton.

3.q Emission Limitation:

The combined emissions from P001 and P013, measured as a summation of the emissions for all vents serving both forehearth areas, shall not exceed 2.70 tons of F- per rolling, 12-month period

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation by multiplying the maximum allowed throughput of P001 and P013 combined (142,350 tons per rolling,12-month period) by the emission factor for F- (in pounds per ton of glass pulled) determined during the most recent emissions testing which demonstrated compliance with the F- emission limitation, and then dividing by 2,000 pounds per ton.

V. Testing Requirements (continued)

3.r Emission Limitation:

The combined emissions from P001 and P013, measured as a summation of the emissions for all vents serving both forehearth areas, shall not exceed 15.91 tons of NOx per rolling, 12-month period.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation by multiplying the maximum allowed throughput of P001 and P013 combined (142,350 tons per rolling,12-month period) by the emission factor for NOx (in pounds per ton of glass pulled) determined during the most recent emissions testing which demonstrated compliance with the NOx emission limitation, and then dividing by 2,000 pounds per ton.

3.s Emission Limitation:

The combined emissions from P001 and P013, measured as a summation of the emissions for all vents serving both forehearth areas, shall not exceed 0.78 ton of PM10 per rolling, 12-month period.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation by multiplying the maximum allowed throughput of P001 and P013 combined (142,350 tons per rolling,12-month period) by the emission factor for PM10 (in pounds per ton of glass pulled) determined during the most recent emissions testing which demonstrated compliance with the PM10 emission limitation, and then dividing by 2,000 pounds per ton.

3.t Emission Limitation:

The combined emissions from P001 and P013, measured as a summation of the emissions for all vents serving both forehearth areas, shall not exceed 0.10 ton of SO2 per rolling, 12-month period.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation by multiplying the maximum allowed throughput of P001 and P013 combined (142,350 tons per rolling,12-month period) by the emission factor for SO2 (in pounds per ton of glass pulled) determined during the most recent emissions testing which demonstrated compliance with the SO2 emission limitation, and then dividing by 2,000 pounds per ton.

3.u Emission Limitation:

The combined emissions from P001 and P013, measured as a summation of the emissions for all vents serving both forehearth areas, shall not exceed 0.87 ton of VOC per rolling, 12-month period.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation by multiplying the maximum allowed throughput of P001 and P013 combined (142,350 tons per rolling,12-month period) by the emission factor for VOC (in pounds per ton of glass pulled) determined during the most recent emissions testing which demonstrated compliance with the VOC emission limitation, and then dividing by 2,000 pounds per ton.

4. Compliance with the fiberglass forming area limitation(s) in section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):

4.a Emission Limitation:

No visible particulate emissions from the exhaust stack(s).

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with Method 22 of 40 CFR Part 60, Appendix A, using the methods and procedures specified in OAC rule 3745-17-03(B)(3), or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

V. Testing Requirements (continued)

4.b Emission Limitation:

0.50 pound of filterable PE per hour

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A, using the methods and procedures specified in OAC rule 3745-17-03(B)(10), or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

4.c Emission Limitation:

2.2 tons PE per year

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable PE emission limitation (0.50 pound per hour) by the number of hours in a year (8760 hours), and then dividing by 2,000 pounds per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

4.d Emission Limitation:

0.20 pound of particulate emissions as PM10 per ton of glass pull

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

4.e Emission Limitation:

7.3 tons PM10 per rolling, 12-month period

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable PM10 emission limitation (0.20 pound of PM10 per ton of glass pull) by the maximum hourly averaged glass pull rate (8.4 tons per hour), and by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 pounds per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

4.f Emission Limitation:

0.09 pound of VOC per ton of glass pull

Applicable Compliance Method:

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

V. Testing Requirements (continued)

4.g Emission Limitation:

3.3 tons VOC per rolling, 12-month period

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable VOC emission limitation (0.09 pound of VOC per ton of glass pull) by the maximum hourly averaged glass pull rate (8.4 tons per hour), and by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 pounds per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

4.h Emission Limitation:

0.021 pound of F- per ton of glass pull

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with Method 13B of 40 CFR Part 60 Appendix A, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

4.i Emission Limitation:

0.77 ton F- per rolling, 12-month period

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable F- emission limitation (0.021 pound of F- per ton of glass pull) by the maximum hourly averaged glass pull rate (8.4 tons per hour), and by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 pounds per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

4.j Emission Limitation:

The combined emissions from P001 and P013, measured as a summation of the emissions for all exhaust stacks serving both forming areas, shall not exceed 1.49 tons of F- per rolling, 12-month period.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation by multiplying the maximum allowed throughput of P001 and P013 combined (142,350 tons per rolling,12-month period) by the emission factor for F- (in pounds per ton of glass pulled) determined during the most recent emissions testing which demonstrated compliance with the F- emission limitation, and then dividing by 2,000 pounds per ton.

4.k Emission Limitation:

The combined emissions from P001 and P013, measured as a summation of the emissions for all exhaust stacks serving both forming areas, shall not exceed 5.18 tons of methanol per rolling, 12-month period.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Method 18 of 40 CFR Part 60 Appendix A, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

V. Testing Requirements (continued)

4.l Emission Limitation:

The combined emissions from P001 and P013, measured as a summation of the emissions for all exhaust stacks serving both forming areas, shall not exceed 14.24 tons of PM10 per rolling, 12-month period.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation by multiplying the maximum allowed throughput of P001 and P013 combined (142,350 tons per rolling,12-month period) by the emission factor for PM10 (in pounds per ton of glass pulled) determined during the most recent emissions testing which demonstrated compliance with the PM10 emission limitation, and then dividing by 2,000 pounds per ton.

4.m Emission Limitation:

The combined emissions from P001 and P013, measured as a summation of the emissions for all exhaust stacks serving both forming areas, shall not exceed 6.41 tons of VOC per rolling, 12-month period.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation by multiplying the maximum allowed throughput of P001 and P013 combined (142,350 tons per rolling,12-month period) by the emission factor for VOC (in pounds per ton of glass pulled) determined during the most recent emissions testing which demonstrated compliance with the VOC emission limitation, and then dividing by 2,000 pounds per ton.

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: Wet Process Fiberglass Mat Oven (P015)

Activity Description: Fiber blend mat line - produces bonded non-woven fiberous mat.

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
curing oven for the 9214 mat line controlled by a regenerative catalytic/thermal-hybrid oxidizer (RCO) (modification)	OAC rule 3745-31-05(A)(3) (PTI 04-306)	2.35 pounds per hour of particulate emissions when AGF mat is processed
		10.29 tons per year of particulate emissions when AGF mat is processed
		See sections A.I.2.a and A.I.2.h.
	OAC rule 3745-17-07(A)(1)	See section A.I.2.b.
	OAC rule 3745-17-11(B)(1)	See section A.I.2.c.
	OAC rule 3745-18-06(E)	496.8 pounds per hour of sulfur dioxide (SO2)
		See section A.I.2.d.
	OAC rule 3745-21-07(G)(3)	See section A.I.2.e.
	OAC rule 3745-21-07(G)(6)	See section A.I.2.f.
	OAC rule 3745-21-08(B)	See section A.I.2.i.
	OAC rule 3745-23-06(B)	See section A.I.2.j.
	40 CFR Part 63, Subpart HHHH	See section A.I.2.g.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
edge trimming for the 9214 mat line controlled by a fabric filter (modification)	OAC rule 3745-31-05(A)(3) (PTI 04-264)	0.20 pound per hour of particulate emissions 0.88 ton per year of particulate emissions See section A.I.2.a.
	OAC rule 3745-17-07(A)(1)	See section A.I.2.b.
	OAC rule 3745-17-11(B)(1)	See section A.I.2.c.

2. Additional Terms and Conditions

2.a When AGF mat is not being processed, the permittee shall comply with requirements of OAC rule 3745-17-11(B)(1), as follows: the combined emissions of particulate from all stacks serving this emissions unit shall not exceed 13 pounds per hour.

2.b Visible particulate emissions from any stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

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

2.d The actual SO2 emissions are the result of the combustion of natural gas, and are negligible.

2.e The permittee shall maintain the OC capture and control efficiency of the RCO such that overall emissions of OC are reduced by at least 85% whenever the emissions unit is in operation.

2.f The permittee shall maintain the OC destruction efficiency of the regenerative catalytic/thermal-hybrid oxidizer (RCO) such that 90% or more of the carbon in the organic material being incinerated is oxidized to carbon dioxide whenever the emissions unit is in operation.

2.g i. This requirement becomes applicable when 40 CFR Part 63, Subpart HHHH becomes effective on April 11, 2005.

[40 CFR 63.2982(a)]
ii. The affected source (the portion of your plant covered by this subpart) is each wet-formed fiberglass mat drying and curing oven.

[40 CFR 63.2983]
iii. The permittee shall reduce uncontrolled formaldehyde emissions from the mat oven by at least 96%.

2.h The requirements of this rule include compliance with the requirements of OAC rule 3745-17-07(A)(1), OAC rule 3745-18-06(E), OAC rule 3745-21-08(B), and OAC rule 3745-23-06(B).

2.i The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by complying with all applicable rules.

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.j 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).

II. Operational Restrictions

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

2. The permittee shall operate the fabric filter whenever this emissions unit is in operation.

3. The pressure drop across the baghouse shall be maintained within the range of 2 to 6 inches of water while the emissions unit is in operation.

4. The permittee shall maintain and operate an OC capture and control system with a regenerative catalytic/thermal-hybrid oxidizer (RCO).

5. The average temperature of the gases immediately before the catalyst beds (i.e. the combustion chamber temperature), for any 3-hour block of time when the emissions unit is in operation, shall not fall below the average temperature established during the most recent emission test that demonstrated the emissions unit was in compliance.

6. The permittee shall establish a site specific parameter and parameter concentration level that will assure a proper activity level for the catalyst in the RCO. This parameter shall be established by means of intermittent readings of the RCO outlet VOC (or formaldehyde) concentration with an approved VOC (or formaldehyde specific) measuring device, calibrated to this emissions unit during performance testing which demonstrates the emissions unit is in compliance. One such acceptable device is a Drager tube. Approval requests for alternate measuring devices shall be submitted in writing to the Director of the Ohio EPA and sent to the Toledo Division of Environmental Services.

7. This term and condition shall become applicable when 40 CFR Part 63, Subpart HHHH becomes effective on April 11, 2005. Beginning on that date, the permittee shall also comply with this section (A.II.7.).

7.a [40 CFR 63.2984(a)]
The permittee shall maintain operating parameters within the established limits or ranges specified in the operation, maintenance, and monitoring (OMM) plan as described in 40 CFR 63.2987. If there is a deviation of any of the specified parameters from the limit or range specified in the OMM plan, the permittee shall address the deviation according to section A.II.8.f. The permittee shall comply with the operating limits specified in sections A.II.8.b. through A.II.8.h.

7.b [40 CFR 63.2984(a)(1)]
The permittee shall operate the catalytic thermal oxidizer so that the average operating temperature in any 3-hour block period does not fall below the temperature established during the performance test and specified in the OMM plan.

7.c [40 CFR 63.2984(a)(2)]
The permittee shall not use a resin with a free-formaldehyde content greater than that of the resin used during the most recent performance test that demonstrated compliance and as specified in the OMM plan.

7.d [40 CFR 63.2984(a)(3)]
The permittee shall operate the wet-formed fiberglass mat production process so that the average urea formaldehyde resin solids application rate in any 3-hour block period does not exceed the average application rate achieved during the most recent performance test that demonstrated compliance and as specified in the OMM plan.

7.e [40 CFR 63.2984(a)(4)]
If the permittee uses an add-on control device other than a thermal oxidizer or wish to monitor an alternative parameter and comply with a different operating limit, the permittee shall obtain approval for the alternative monitoring under 40 CFR 63.8(f). The permittee shall include the approved alternative monitoring and operating limits in the OMM plan as specified in 40 CFR 63.2987.

7.f [40 CFR 63.2984(b)]
When during a period of normal operations the permittee detects that an operating parameter deviates from the limit or range established in section A.II.8.a., the permittee shall initiate corrective actions within 1 hour according to the provisions of the OMM plan. During periods of start up, shut down, or malfunction the permittee shall follow the startup, shutdown, and malfunction plan (SSMP). The corrective action actions shall be completed in an expeditious manner as specified in the OMM plan or SSMP.

II. Operational Restrictions (continued)

7.g [40 CFR 63.2984(d)]
The permittee shall include the operating limits or ranges specified in sections A.II.8.b. through A.II.8.e. in the OMM plan. The permittee shall develop an OMM plan and operate according to the OMM plan at all times.

7.h [40 CFR 63.2984(e)]
If the permittee uses a thermal oxidizer or other control device to achieve the emission limits in 40 CFR 63.2983, the permittee shall capture and convey the formaldehyde emissions from each drying and curing oven according to the procedures in chapters 3 and 5 of "Industrial Ventilation: A Manual of Recommended Practice" (23rd Edition). This publication is incorporated by reference in 40 CFR 63.3003.

7.i [40 CFR 63.2986(b)]
The permittee shall comply with the limits specified in 40 CFR 63.2984. The operating limits in 40 CFR 63.2984 prescribe the requirements for demonstrating continuous compliance based on the OMM plan. The permittee shall begin complying with the operating limits on the date by which the permittee must complete the initial performance test.

7.j [40 CFR 63.2986(e)]
The permittee shall prepare and follow a written OMM plan as specified in section A.III.10.n. (40 CFR 63.2987).

7.k [40 CFR 63.2986(g)]
The permittee shall comply with the requirements specified below.

i. The permittee shall be in compliance with the emission limit in section A.I.2.g. (40 CFR 63.2983) and the operating limits in sections A.II.8.a. through A.II.8.h. (40 CFR 63.2984) at all times, except during periods of startup, shutdown, or malfunction.

ii. The permittee shall always operate and maintain this emissions unit, including air pollution control and monitoring equipment, according to the provisions in 40 CFR 63.6(e)(1).

iii. The permittee shall develop and implement a written SSMP according to the provisions in 40 CFR 63.6(e)(3). The SSMP must address the startup, shutdown, and corrective actions taken for malfunctioning process and air pollution control equipment.

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 daily records that document any time periods when the fabric filter was not in service when the emissions unit was in operation.

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).

4. The permittee shall monitor and record the pressure drop across the baghouse once every day that the emissions unit is in operation.

5. The permittee shall operate and maintain continuous temperature monitors and recorder(s) which measure and record(s) the temperature immediately upstream of the incinerator's catalyst bed (in the combustion chamber) when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitors and recorder(s) shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

6. When the emissions unit is in operation, the permittee shall continuously monitor the temperature of the combustion chamber and determine and record the average temperature in 3-hour block averages.

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

7. The permittee shall collect and record the following information each day:

a. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the gases immediately before the catalyst bed was below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance;

b. the results of any catalyst activity testing, any changes made to the combustion chamber temperature set point, when the laboratory report was received and when the changes to the set point temperature were made; and

c. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

8. The permittee shall sample the catalyst bed annually, and within 1 week of any deviation deterimined by outlet VOC (or formaldehyde) concentration parametric monitoring, to ensure the activity level of the catalyst:

a. If the catalyst activity laboratory report indicates a change in the catalyst activity level which allows a decrease in the combustion chamber set point temperature, the permittee may reduce the combustion chamber set point temperature co-current with stack testing demonstrating compliance with the OC limitations at the new set point.

b. If the catalyst activity laboratory report indicates a change in the catalyst activity level which requires an increase in the combustion chamber set point, the permittee shall incorporate this increase in the combustion chamber set point temperature within one working day of receipt of the laboratory report. Stack testing demonstrating compliance with the OC limitations at the new set point shall be performed within 180 days of reciept of the report, unless the Director of the Ohio EPA determines that such stack testing is unnecessary. Requests to wave the testing requirements shall be submitted in writing to the Director of the Ohio EPA and sent to the Toledo Division of Environmental Services.

iii. Copies of any catalyst activity reports will be submitted to the Toledo Division of Environmenal Services with the quarterly reports for period in which they are received.

9. The permittee monitor and record, on a daily basis, the RCO outlet VOC (or formaldehyde) concentration. If the daily checks show no deviations from those limits or ranges established during performance testing for 30 consecutive operating days, the required frequency of monitoring may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check by the permittee or an Ohio EPA inspector indicates deviations, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of no deviations.

10. This term and condition shall become applicable when 40 CFR Part 63, Subpart HHHH becomes effective on April 11, 2005. Beginning on that date, the permittee shall also comply with this section (A.III.10.a. thru q.).

10.a [40 CFR 63.2996]
The permittee shall monitor the urea-formaldehyde resin solids application rate. On each day of operation, the permittee shall calculate and record the average lb/hr application rate for each product manufactured during that day.

10.b [40 CFR 63.2996]
The permittee shall monitor the resin free-formaldehyde content for each lot of resin purchased. The permittee shall measure (in accordance with 40 CFR Part 63, Subpart HHHH, Appendix A) and record the value for each lot used during the operating day.

10.c [40 CFR 63.2996]
The permittee shall monitor the loss-on-ignition (as defined in 40 CFR 63.3004). The permittee shall measure (in accordance with 40 CFR Part 63, Subpart HHHH, Appendix B) and record the loss-on-ignition at least once per day, for each product manufactured during that day.

10.d [40 CFR 63.2996]
The permittee shall monitor the UF-to-latex ratio in the binder. The permittee shall measure and record, for each batch of binder prepared during the operating day, the value of the UF-to-latex ratio.

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

10.e [40 CFR 63.2996]
The permittee shall monitor the weight of the final mat produced per square (lb/roofing square). The permittee shall measure and record this parameter for each product manufactured during the operating day.

10.f [40 CFR 63.2996]
The permittee shall monitor the average nonwoven wet-formed fiberglass mat production rate (roofing squares per the hour). The average value for each product shall be recorded for each product manufactured during the operating day.

10.g [40 CFR 63.2996]
The permittee shall monitor any other parameters, in addition to sections A.III.10.a. through A.III.10.f., that are specified in the OMM plan.

10.h [40 CFR 63.2984(c)]
The permittee shall maintain and inspect control devices according to the procedures specified in the OMM plan.

10.i [40 CFR 63.2998]
i. The permittee shall maintain records according to the procedures specified in 40 CFR 63.10.

ii The permittee shall maintain the following records for this emissions unit:

(A) All records required by 40 CFR 63.10. Table 2 of 40 CFR Part 63, Subpart HHHH presents the applicable requirements of the general provisions.

(B) The OMM plan.

(C) Records of values of monitored parameters listed in table 1 of 40 CFR Part 63, Subpart HHHH to show continuous compliance with each operating limit specified in table 1 of 40 CFR Part 63, Subpart HHHH.

(D) Records of maintenance and inspections performed on the control devices.

(E) If an operating parameter deviation occurs, the permittee shall record the following information:

(I) the date, time, and duration of the operating parameter deviation;
(II) a brief description of the cause of the operating parameter deviation;
(III) the dates and times at which corrective actions were initiated and completed;
(IV) a brief description of the corrective actions taken to return the parameter to the limit or to within the range specified in the OMM plan; and
(V) a record of whether the deviation occurred during a period of startup, shutdown, or malfunction.

(F) The permittee shall maintain all of the records specified in 40 CFR 63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

(G) If you operate your process or control device under alternative operating condition and have established operating limits for each condition as specified in 40 CFR 63.2989(c), then you must keep records of the date and time you changed operations from one condition to another, the condition under which you are operating, and the applicable operating limits for that condition.

10.j [40 CFR 63.2999]
i. The permittee shall maintain each record required by this permit and 40 CFR Part 63, Subpart HHHH for 5 years. The permittee shall maintain the most recent 2 years of records at the facility. The remaining 3 years of records may be retained offsite.

ii. The permittee shall maintain records in a readily available format that can be easily inspected and reviewed. The permittee may keep the records on paper or an alternative media, such as microfilm, computer, computer disks, magnetic tape, or on microfiche.

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

10.k [40 CFR 63.2986(a)]
The permittee shall maintain and operate a thermal oxidizer or other control device or implement a process modification that reduces formaldehyde emissions from each drying and curing oven to the emission limits specified in section A.I.2.g.iii. (40 CFR 63.2983).

10.l [40 CFR 63.2986(d)]
The permittee shall install, calibrate, maintain, and operate devices that monitor the parameters specified in the OMM plan at the frequency specified in the plan. All continuous parameter monitoring systems must be installed and operating no later than the applicable compliance date specified in section A.II.8. (40 CFR 63.2985).

10.m [40 CFR 63.2986(f)]
The permittee shall comply with the monitoring, record keeping, notification, and reporting requirements of 40 CFR Part 63, Subpart HHHH as specified in sections A.III.10. and A.IV.8. and as required by 40 CFR 63.2996 through 63.3000.

10.n [40 CFR 63.2987(a)]
i. The permittee shall, in the OMM, prescribe the monitoring that will be performed to ensure compliance with the emission limitations. Minimum monitoring requirements are listed in table 1 of 40 CFR Part 63, Subpart HHHH. The OMM plan must specify the items listed below:

(A) Each process and control device to be monitored, the type of monitoring device that will be used, and the operating parameters that will be monitored.

(B) A monitoring schedule that specifies the frequency that the parameter values will be determined and recorded.

(C) The operating limits or ranges for each parameter that represent continuous compliance with the emission limit in section A.I.2.g.iii. (40 CFR 63.2983). Operating limits and ranges must be based on values of the monitored parameters recorded during performance tests.

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

[40 CFR 63.2987(b)]
ii. The permittee shall establish routine and long-term maintenance and inspection schedules for each control device. The permittee shall incorporate in the schedules the control device manufacturer's recommendations for maintenance and inspections or equivalent procedures. If a thermal oxidizer is used, the maintenance schedule must include procedures for annual or more frequent inspection of the thermal oxidizer to ensure that the structural and design integrity of the combustion chamber is maintained. At a minimum, the permittee shall meet the requirements specified below:

(A) Inspect all burners, pilot assemblies, and pilot sensing devices for proper operation. Clean pilot sensor if necessary.

(B) Ensure proper adjustment of combustion air and adjust if necessary.

(C) Inspect, when possible, all internal structures (such as baffles) to ensure structural integrity per the design specifications.

(D) Inspect dampers, fans, and blowers for proper operation.

(E) Inspect motors for proper operation.

(F) Inspect, when possible, combustion chamber refractory lining. Clean and repair or replace lining if necessary.

(G) Inspect the thermal oxidizer shell for proper sealing, corrosion, and hot spots.

(H) For the burn cycle that follows the inspection, document that the thermal oxidizer is operating properly and make any necessary adjustments.

(I) Generally observe whether the equipment is maintained in good operating condition.

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

[40 CFR 63.2987(c)]
iii. The permittee shall establish procedures for responding to operating parameter deviations. At a minimum, the procedures must include the information specified below:

(A) Procedures for determining the cause of the operating parameter deviation.

(B) Actions for correcting the deviation and returning the operating parameters to the allowable ranges or limits.

(C) Procedures for recording the date and time that the deviation began and ended, and the times corrective actions were initiated and completed.

[40 CFR 63.2987(d)]
iv. The OMM plan must specify the record keeping procedures to document compliance with the emissions and operating limits. Table 1 of 40 CFR Part 63, Subpart HHHH establishes the minimum record keeping requirements.

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

10.o [40 CFR 63.2989a]
Changes to the operating limits or ranges in the OMM plan require a new performance test.

i. In order to revise the ranges or levels established for the operating limits specified in sections A.II.8.a. through A.II.8.h. (40 CFR 63.2984), the permittee shall meet the following:

(A) Submit a notification of performance test to the Administrator as specified in 40 CFR 63.7(b) to revise the operating ranges or limits.

(B) After completing the performance test to demonstrate that compliance with the emission limit can be achieved at the revised levels of the operating limits, the permittee shall submit the performance test results and the revised operating limits as part of the notification of compliance status required under 40 CFR 63.9(h).

[40 CFR 63.2989b]
ii. If the permittee is only revising the inspection and maintenance procedures in the OMM plan that are specified in section A.III.10.n.ii. (40 CFR 63.2987(b)), there is no need to conduct a new performance test.

[40 CFR 63.2989c]
iii. If the permittee plans to operate this emissions unit or control device under alternative operating conditions and does not wish to revise the OMM plan for this emissions unit when a change in operating conditions is made, the permittee shall perform a separate compliance test to establish operating limits for each condition. The permittee can then include the operating limits for each condition in the OMM plan. After completing the performance tests, the permittee shall record the date and time when the change in operations from one condition to another was made, the condition under which the emissions unit is operating, and the operating limits that apply under that condition. If the permittee can perform a single performance test that establishes the most stringent operating limits that cover all alternative operating conditions, then the permittee does not need to comply with the provisions of this paragraph.

10.p [40 CFR 63.2994(a)]
i. Before conducting the performance test, the permittee shall take the steps listed in paragraphs (A) and (B) below:

(A) Install and calibrate all process equipment, control devices, and monitoring equipment.

(B) Conduct a performance evaluation of the continuous monitoring system (CMS) according to 40 CFR 63.8(e) which specifies the general requirements and requirements for notifications, the site-specific performance evaluation plan, conduct of the performance evaluation, and reporting of performance evaluation results.

[40 CFR 63.2994(b)]
ii. If this emissions unit is controlled by use of a thermal oxidizer, the temperature monitoring device must meet the performance and equipment specifications listed in paragraphs (A) thru (C) below:

(A) The temperature monitoring device must be installed either at the exit of the combustion zone of each thermal oxidizer, or at the location specified by the manufacturer. The temperature monitoring device must also be installed in a location before any heat recovery or heat exchange equipment, and it must remain in the same location for both the performance test and the continuous monitoring of temperature.

(B) The recorder response range must include zero and 1.5 times the average temperature required in section A.II.8. (40 CFR 63.2984(a)(1)).

(C) The measurement method or reference method for calibration must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or an alternate reference subject to the approval of the Administrator.

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

10.q [40 CFR 63.2997(a)]
i. If formaldehyde emissions are controlled using a thermal oxidizer, the permittee shall meet the requirements in paragraphs (A) and (B) below:

(A) Install, calibrate, maintain, and operate a device to monitor and record continuously the thermal oxidizer temperature at the exit of the combustion zone before any substantial heat exchange occurs or at the location consistent with the manufacturer's recommendations.

(B) Continuously monitor the thermal oxidizer temperature and determine and record the average temperature in 15-minute and 3-hour block averages. The permittee may determine the average temperature more frequently than every 15 minutes and every 3 hours, but not less frequently.

[40 CFR 63.2997(b)]
ii. If formaldehyde emissions are controlled by process modifications or a control device other than a thermal oxidizer, the permittee shall install, calibrate, maintain, and operate devices to monitor the parameters established in the OMM plan at the frequency established in the plan.

11. 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 baghouse and uncontrolled stacks 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 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 eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit.

2. The permittee shall submit quarterly deviation (excursion) reports that identify each day when the fabric filter was not in service when the emissions unit was in operation.

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

4. The permittee shall submit quarterly deviation (excursion) reports that identify all 3-hour blocks of time when the emissions unit was in operation during which the average temperature of the combustion chamber fell below the average temperature established during the most recent emission test that demonstrated the emissions unit was in compliance.

5. The permittee shall submit quarterly summary reports indicating the date of receipt and results of any catalyst activity testing, and date of any resultant increases in the combustion chamber temperature set point.

6. The permittee shall submit quarterly deviation (excursion) reports that identify each day when the RCO capture and control system was not in service when the emissions unit was in operation.

7. The permittee shall submit quarterly deviation (excursion) reports that identify each day when the RCO outlet VOC (or formaldehyde) concentration, when the emissions unit was in operation, deviates from those limits or ranges established during performance testing.

8. This term and condition shall become applicable when 40 CFR Part 63, Subpart HHHH becomes effective on April 11, 2005. Beginning on that date, the permittee shall also comply with this section (A.IV.8.a thru f.).

8.a [40 CFR 63.3000]
The permittee shall submit all notifications and reports required by the applicable general provisions and this section. Table 2 of 40 CFR Part 63, Subpart HHHH presents the applicable requirements of the general provisions.

IV. Reporting Requirements (continued)

8.b [40 CFR 63.3000]
The permittee shall submit the notification of compliance status, including the performance test results, the operating limits or ranges as determined during the performance test, and other information specified in 40 CFR 63.9(h), before the close of business on the 60th calendar day after completing the performance test according to 40 CFR 63.10(d)(2).

8.c [40 CFR 63.3000]
The permittee shall submit semiannual compliance reports according to the requirements of i. through v. below.

i. Unless the Administrator has agreed to a different schedule for submitting reports under 40 CFR 63.10(a), the permittee shall deliver or postmark each semiannual compliance report no later than 30 days following the end of each semiannual reporting period. The first semiannual reporting period begins on the compliance date for the affected source and ends on June 30 or December 31, whichever date immediately follows the compliance date. Each subsequent semiannual reporting period for which the permittee shall submit a semiannual compliance report begins on July 1 or January 1 and ends 6 calendar months later. As required by 40 CFR 63.10(e)(3), the permittee shall begin submitting quarterly compliance reports if the permittee deviates from the emission limit in section A.I.2.g (40 CFR 63.2983) or the operating limits in section A.II.8. (40 CFR 63.2984).

ii. For each affected source that is subject to permitting regulations pursuant to 40 CFR Part 70 or 71, and for which the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A), the permittee may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates in section A.IV.6.a.

iii. The semiannual compliance report must contain the information in paragraphs (A) through (F) below:

(A) company name and address;

(B) statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report;

(C) date of the report and beginning and ending dates of the reporting period;

(D) a summary of the total duration of continuous parameter monitoring system downtime during the semiannual reporting period and the total duration of continuous parameter monitoring system downtime as a percent of the total source operating time during that semiannual reporting period;

(E) the date of the latest continuous parameter monitoring system certification or audit; and

(F) a description of any changes in the wet-formed fiberglass mat manufacturing process, continuous parameter monitoring system, or add-on control device since the last semiannual reporting period.

iv. If there were no deviations from the emission limit in section A.I.2.g. (40 CFR 63.2983) or the operating limits in section A.II.8. (40 CFR 63.2984), the semiannual compliance report must include a statement to that effect. If there were no periods during which the continuous parameter monitoring systems were out-of-control as specified in 40 CFR 63.8(c)(7), the semiannual compliance report must include a statement to that effect.

IV. Reporting Requirements (continued)

v. If there was a deviation from the emission limit in section A.I.2.g. (40 CFR 63.2983) or an operating limit in section A.II.8. (40 CFR 63.2984), the semiannual compliance report must contain the information specified in paragraphs (A) through (I) below:

(A) the date and time that each malfunction started and stopped;

(B) the date and time that each continuous parameter monitoring system was inoperative, except for zero (low-level) and high-level checks;

(C) the date, time, and duration that each continuous parameter monitoring system was out-of-control, including the information in 40 CFR 63.8(c)(8);

(D) the date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period;

(E) the date and time that corrective actions were taken, a description of the cause of the deviation, and a description of the corrective actions taken;

(F) a summary of the total duration of each deviation during the semiannual reporting period and the total duration as a percent of the total source operating time during that semiannual reporting period;

(G) a breakdown of the total duration of the deviations during the semiannual reporting period into those that were due to startup, shutdown, control equipment problems, process problems, other known causes and other unknown causes;

(H) a brief description of the process units; and

(I) a brief description of the continuous parameter monitoring system.

8.d [40 CFR 63.3000]
The permittee shall submit reports of performance test results for add-on control devices no later than 60 days after completing the tests as specified in 40 CFR 63.10(d)(2). The permittee shall include in the performance test reports the values measured during the performance test for the parameters listed in table 1 of 40 CFR Part 63, Subpart HHHH and the operating limits or ranges to be included in the OMM plan for this emissions unit. If the permittee complies by use of a thermal oxidizer, the permittee shall include 15-minute thermal oxidizer temperature averages and the average for the three 1-hour test runs.

8.e [40 CFR 63.3000]
If this emissions unit has a startup, shutdown, or malfunction during the semiannual reporting period, the permittee shall submit the reports specified in 40 CFR 63.10(d)(5).

8.f [40 CFR 63.2990]
With the approval of the Administrator, the permittee may conduct short-term experimental production runs during which this emissions unit's operating parameters deviate from the operating limits. Experimental runs may include, but are not limited to, runs using resin with a higher free-formaldehyde content than specified in the OMM plan, or using experimental pollution prevention techniques. To conduct a short-term experimental production run, the permittee shall complete the requirements specified in sections A.IV.8.f.i. and ii. below.

IV. Reporting Requirements (continued)

[40 CFR 63.2990a]

i. Prepare an application to the Administrator for approval to conduct the experimental production runs. This application must include the items listed in paragraphs (A) through (F) below:

(A) the purpose of the experimental production run;

(B) identification of the affected line;

(C) an explanation of how the operating parameters will deviate from the previously approved ranges and limits;

(D) the duration of the experimental production run;

(E) the date and time of the experimental production run; and

(F) a description of any emission testing to be performed during the experimental production run.

[40 CFR 63.2990b]
ii. The permittee shall submit the application to the Administrator for approval at least 30 days before the permittee conducts the experimental production run.

[40 CFR 63.2990c]
iii. If the permittee conducts such experimental production runs without first receiving approval from the Administrator, then the permittee shall conduct a performance test under those same experimental production run conditions to show that the permittee was in compliance with the formaldehyde emission limit in section A.I.2.g. (40 CFR 63.2983).

9. The permittee shall submit quarterly written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse and/or uncontrolled stacks serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year.

V. Testing Requirements

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

1.a Emission Limitation:

20% opacity as a 6-minute average

Applicable Compliance Method:

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

1.b Emission Limitation:

2.35 pounds per hour of particulate emissions

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A.

V. Testing Requirements (continued)

1.c Emission Limitation:

10.29 tons per year of particulate emissions

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable particulate emission limitation (2.35 lbs/hr) by the maximum annual hours of operation (8760 hrs), and then dividing by 2000 lbs/ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

1.d Emission Limitation:

0.20 pound per hour of particulate emissions

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60 Appendix A.

1.e Emission Limitation:

0.88 ton per year of particulate emissions

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable particulate emission limitation (0.20 lbs/hr) by the maximum annual hours of operation (8760 hrs), and then dividing by 2000 lbs/ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

1.f Emission Limitation:

13 pounds per hour of particulate emissions

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A.

1.g Emission Limitation:

496.8 pounds per hour of SO2

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6.

V. Testing Requirements (continued)

1.h Emission Limitation:

overall emissions of OC are reduced by at least 85%.

Applicable Compliance Method:

If required, the capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.)

If required, the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in Methods 1 through 4 and Method 25 or 25A of 40 CFR Part 60, Appendix A. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases." Alternative U.S. EPA-approved test methods may be used with prior written approval from the Ohio EPA.

1.i Emission Limitation:

maintain the OC destruction efficiency of the RCO such that 90% or more of the carbon in the organic material being incinerated is oxidized to carbon dioxide.

Applicable Compliance Method:

If required, the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in Methods 1 through 4 and Method 25 or 25A of 40 CFR Part 60, Appendix A. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases." Alternative U.S. EPA-approved test methods may be used with prior written approval from the Ohio EPA.

1.j Emission Limitation:

uncontrolled formaldehyde emissions from the mat oven reduced by at least 96%

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon the emission testing requirements specified in 40 CFR 63.2993.

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

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

b. The emission testing shall be conducted for the mat line to demonstrate compliance with the 85% overall OC control efficiency requirement, and compliance with the 90% OC destruction efficiency requirement for the thermal catalytic oxidizer.

c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates:

i. Methods 1 through 4 and Method 25 or 25A of 40 CFR Part 60, Appendix A. The test method(s) which must be employed to demonstrate compliance with the overall controll efficiency limitation for VOC are specified below. Alternative U.S. EPA-approved test methods may be used with prior written approval from the Ohio EPA.

V. Testing Requirements (continued)

ii. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

iii. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.)

iv. Alternate, USEPA-approved testing methods may be used with prior written approval from the Ohio EPA.

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

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the TDOES. 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 TDOES's refusal to accept the results of the emission test(s).

Personnel from the TDOES 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 TDOES 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 TDOES.

3. [40 CFR 63.2991]
The permittee shall conduct or have conducted a performance test for each drying and curing oven subject to 40 CFR Part 63, Subpart HHHH according to the following provisions:

a. The permittee shall conduct, or have conducted, an initial performance test no later than 180 days after the applicable compliance date specified in section A.II.8. (40 CFR 63.2985). The initial performance test shall be used to demonstrate initial compliance and establish operating parameter limits and ranges to be used to demonstrate continuous compliance with the emission standards.

b. The permittee shall conduct, or have conducted, a performance test every 5 years as part of renewing the 40 CFR Part 70 operating permit.

c. The permittee shall conduct, or have conducted, a performance test according to the requirements specified in section A.V.3.d. (40 CFR 63.2992) below, to change the limit or range for any operating limit specified in the OMM plan established during a previous compliance test.

V. Testing Requirements (continued)

d. [40 CFR 63.2992]

i. The permittee shall verify the performance of monitoring equipment as specified in section A.III.8.p. (40 CFR 63.2994) before performing the test.

ii. The permittee shall conduct the performance test according to the procedures in 40 CFR 63.7.

iii. The permittee shall conduct the performance test under the following conditions:

(A) The resin must have the highest specified free-formaldehyde content that will be used.

(B) The permittee shall operate at the maximum feasible urea-formaldehyde resin solids application rate (pounds urea-formaldehyde resin solids applied per hour) that will be used.

iv. During the performance test, the permittee shall monitor and record the operating parameters that will be used to demonstrate continuous compliance after the test. These parameters are listed in table 1 of 40 CFR Part 63, Subpart HHHH.

v. The permittee shall not conduct performance tests during periods of startup, shutdown, or malfunction as specified in 40 CFR 63.7(e)(1).

vi. The permittee shall conduct three separate test runs for each performance test as specified in 40 CFR 63.7(e)(3), and each test run shall last at least 1 hour.

[40 CFR 63.2993]
e. The permittee shall:

i. use EPA Method 1 (40 CFR Part 60, Appendix A) for selecting the sampling port location and the number of sampling ports;

ii. use EPA Method 2 (40 CFR Part 60, Appendix A) for measuring the volumetric flow rate;

iii. use EPA Method 316 or 318 (40 CFR Part 63, Appendix A) for measuring the concentration of formaldehyde;

iv. use the method contained in Appendix A of 40 CFR Part 63, Subpart HHHH or the resin purchase specification and the vendor specification sheet for each resin lot for determining the free-formaldehyde content in the urea-formaldehyde resin; and

v. use the method in Appendix B of 40 CFR Part 63, Supart HHHH for determining product loss-on-ignition.

f. [40 CFR 63.2995a]
i. Percent reduction for formaldehyde. To determine compliance with the percent reduction formaldehyde emission standard, the permitte shall use equation 1 of 40 CFR 63.2995 as follows:

$Ef = [(Mi - Mo)/Mi]* 100$ (Eq.1)

where:

Ef = formaldehyde control efficiency, in percent;

Mi = mass flow rate of formaldehyde entering the control device, in kilograms (pounds) per hour; and

Mo = mass flow rate of formaldehyde exiting the control device, in kilograms (pounds) per hour.

V. Testing Requirements (continued)

3.d [40 CFR 63.2995b]
ii. Formaldehyde mass emissions rate. To determine compliance with the kilogram per megagram (pound per ton) formaldehyde emission standard, the permittee shall use equation 2 of 40 CFR 63.2995 as follows:

E = M/P (Eq.2)

where:

E = formaldehyde mass emissions rate, in kilograms (pounds) of formaldehyde per megagram (ton) of fiberglass mat produced;

M = formaldehyde mass emissions rate, in kilograms (pounds) per hour; and

P = the wet-formed fiberglass mat production rate during the emissions sampling period, including any material trimmed from the final product, in megagrams (tons) per hour.

[40 CFR 63.2995c]
iii. Urea-formaldehyde (UF) resin solids application rate. To determine the UF resin solids application rate, the permittee shall use equation 3 of 40 CFR 63.2995 as follows:

(UF Solids)/Hour = LOI * UFL * MW * SQ (Eq.3)

where:

UF solids/hour = UF resin solids application rate, in pounds per hour;

LOI = loss on ignition (weight faction), or pound of organic binder per pound of mat;

UFL = UF-to-latex ratio in the binder (mass fraction of UF resin solids in total combined resin solids for UF and latex), or pound of UF solids per pound of total resin solids (UF and latex);

MW = weight of the final mat per square, in pounds per roofing square; and

SQ = roofing squares produced per hour.

VI. Miscellaneous Requirements

1. This term and condition shall become applicable when 40 CFR Part 63, Subpart HHHH becomes effective on April 11, 2005. Beginning on that date, the permittee shall also comply with this section (A.VI.1.a. thru c.).

[40 CFR 63.2984(d)]
a. The permittee shall develop an OMM plan according to 40 CFR 63.2987 and operate this emissions unit at all times according to this plan.

[40 CFR 63.2986(g)]
b. The permittee shall develop and implement a written SSMP according to the provisions in 40 CFR 63.6(e)(3). The SSMP must address the startup, shutdown, and corrective actions taken for malfunctioning process and air pollution control equipment.

[40 CFR 63.3001]
c. The permittee shall comply with the requirements of the general provisions of 40 CFR Part 63, Subpart A, as specified in table 2 of 40 CFR Part 63, Subpart HHHH.

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: Recycling Oven Shredder and Dryer (P017)

Activity Description: 5.8 mmBtu/hr dryer used in recycling area for direct melt furnace 9212, (installation/startup dates estimated)

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
recycling shredder and 2.7 mmBtu per hour direct fired, natural gas dryer, both vented to a fabric filter (modification)	OAC rule 3745-31-05(A)(3) (PTI 04-01345)	0.23 pound per hour of carbon monoxide (CO) 0.27 pound per hour of nitrogen oxides (NOx) 1.5 pounds per hour of filterable particulate emissions (PE) 3.8 tons per year of PE 0.002 pound per hour of sulfur dioxide (SO2) 0.01 pound per hour of volatile organic compounds (VOC) See sections A.I.2.a, A.I.2.b, and A.I.2.f.
	OAC rule 3745-17-07(A)(1)	See section A.I.2.c.
	OAC rule 3745-17-11(B)(1)	See section A.I.2.c.
	OAC rule 3745-18-06(E)	See section A.I.2.c.
	OAC rule 3745-21-07(B)	See section A.I.2.d.
	OAC rule 3745-21-08(B)	See section A.I.2.e.
	OAC rule 3745-23-06(B)	See section A.I.2.d.
	OAC rule 3745-31-02(A)(2)	0.66 ton per year CO.
	OAC rule 3745-31-05(C)	0.79 ton per year NOx 0.006 ton per year SO2 0.04 ton per year VOC

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
	OAC rule 3745-31-10 thru 20	1.11 pounds per hour of particulate matter as PM10 4.85 tons per year of PM10.

2. Additional Terms and Conditions

2.a The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the requirements of OAC rule 3745-21-07(B), OAC rule 3745-21-08(B), OAC rule 3745-23-06(B), OAC rule 3745-31-02(A)(2), 3745-31-05(C), and OAC rule 3745-31-10 thru 20.

2.b The hourly emission limitations for the products of combustion were established for PTI purposes to reflect the potentials to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limitations.

2.c 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.d The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-07(B) and 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).

2.e The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by complying with all applicable rules.

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.f Visible particulate emissions from the stack serving this emissions unit (stack 338) shall not exceed 10% opacity as a 6-minute average.

II. Operational Restrictions

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

2. The pressure drop across the baghouse shall be maintained within the range of 2 to 6 inches of water while the emissions unit is in operation.

3. This emissions unit shall operate for no more than 5,800 hours per rolling, 12-month period.

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).

3. The permittee shall record the pressure drop across the baghouse on a daily basis.

4. The permittee shall maintain records, on a monthly basis, of the total number of hours of operation for this emissions unit, as a rolling, 12-month summation.

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

5. 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 stacks 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 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 eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit.

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

3. The permittee shall submit quarterly deviation (excursion) reports that identify any exceedence of the rolling, 12-month limitation for total hours of operation specified above.

4. The permittee shall submit quarterly written reports that (a) identify all days during which any visible particulate emissions were observed from the stacks serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year.

V. Testing Requirements

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

1.a Emission Limitation:

10% opacity as a 6-minute average

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A.

1.b Emission Limitation:

0.23 pound of CO per hour

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1 dated 7/98, as follows: divide the emission factor of 84 pounds of CO emissions per million standard cubic feet by a heating value of 1,020 Btu per standard cubic foot and multiply the result by the maximum heat input capacity of 2.7 MMBtu per hour.

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

V. Testing Requirements (continued)

1.c Emission Limitation:

0.66 ton of CO per year

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable CO emission limitation (0.23 pound per hour) by the actual annual hours of operation (section A.III.4), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

1.d Emission Limitation:

0.27 pound of NOx per hour

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1 dated 7/98, as follows: divide the emission factor of 100 pounds of NOx emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 2.7 MMBtu per hour.

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

1.e Emission Limitation:

0.79 ton of NOx per year

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable NOx emission limitation (0.27 pound per hour) by the actual annual hours of operation (section A.III.4), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

1.f Emission Limitation:

1.5 pounds per hour of filterable particulate (PE)

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(10), or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

1.g Emission Limitation:

3.8 tons per year of PE

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable PE emission limitation (1.5 pounds per hour) by the actual annual hours of operation (section A.III.4), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

V. Testing Requirements (continued)

1.h Emission Limitation:

1.11 lbs/hr of PM10

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon emission testing performed in accordance with Methods 1 through 4 and 201 and 202 of 40 CFR Part 60, Appendix A, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

1.i Emission Limitation:

4.85 tons of PM10 per year

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable PM10 emission limitation (1.11 pounds per hour) by the actual annual hours of operation (section A.III.4), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

1.j Emission Limitation:

0.002 pound of SO2 per hour

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 0.6 pound of SO2 emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 2.7 MMBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 6 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-18-04, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

1.k Emission Limitation:

0.006 ton of SO2 per year

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable SO2 emission limitation (0.002 pound per hour) by the actual annual hours of operation (section A.III.4), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

V. Testing Requirements (continued)

1.l Emission Limitation:

0.01 pound of VOC per hour

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 5.5 pounds of VOC emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 2.7 MMBtu per hour.

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

1.m Emission Limitation:

0.04 ton of VOC per year

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable VOC emission limitation (0.01 pound per hour) by the actual annual hours of operation (section A.III.4), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

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: Chop Dryer #1 (P026)

Activity Description: TP Chop - 1.9 mmBtu/hr Chopped Fiber Dryer #1/2

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
chopper process (stack 90), controlled by a fabric filter (modification)	OAC rule 3745-31-05(A)(3) (PTI 04-01345)	0.88 pound per hour of filterable particulate emissions (PE)
		3.9 tons per year of PE
		0.038 pound per hour of PM10
		0.17 ton per year of PM10
		0.24 pound per hour of volatile organic compounds (VOC)
		1.1 tons per year of VOC
		See sections A.I.2.a and A.I.2.b.
		See section A.I.2.c for VOC.
	OAC rule 3745-17-07(A)(1)	See section A.I.2.d.
	OAC rule 3745-17-11(B)(1)	See section A.I.2.d.
	OAC rule 3745-31-02(A)(2)	See section A.I.2.e.
	OAC rule 3745-31-05(C)	See section A.I.2.f.
	OAC rules 3745-31-10 thru 20	See section A.I.2.g.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
1.5 mmBtu per hour, indirect fired, natural gas dryer oven (stacks 68 & 70), with no control (modification)	OAC rule 3745-31-05(A)(3) (PTI 04-01345)	0.124 pound per hour of carbon monoxide (CO)
		0.55 ton per year of CO
		0.149 pound per hour of nitrogen oxides (NOx)
		0.66 ton per year NOx
		0.003 pound per hour of filterable PE
		0.014 ton per year of PE
		0.011 pound per hour of PM10
		0.049 ton per year of PM10
		0.0009 pound per hour of sulfur dioxide (SO2)
		0.004 ton per year of SO2
		0.009 pound per hour of VOC
		0.04 ton per year of VOC
		See sections A.I.2.b, A.I.2.c, and A.I.2k.
	OAC rule 3745-17-07(A)(1)	See section A.I.2.d.
	OAC rule 3745-17-10(B)(1)	See section A.I.2.d.
	OAC rule 3745-18-06(E)	See section A.I.2.h.
	OAC rule 3745-21-07(B)	See section A.I.2.i.
	OAC rule 3745-21-08(B)	See section A.I.2.j.
	OAC rule 3745-23-06(B)	See section A.I.2.i.
	OAC rule 3745-31-02(A)(2)	See section A.I.2.e.
	OAC rule 3745-31-05(C)	See section A.I.2.f.
	OAC rules 3745-31-10 thru 20	See section A.I.2.g.

2. Additional Terms and Conditions

2.a The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the requirements of OAC rule 3745-31-02(A)(2), OAC rule 3745-31-05(C) and OAC rules 3745-31-10 thru 20.

2.b Visible particulate emissions from any stack serving this emissions unit (stacks 68, 70 and 90) shall not exceed 10% opacity as a 6-minute average.

2. Additional Terms and Conditions (continued)

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

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

2.e The combined emissions of P026 and P028 (stacks 68-71 & 90) per rolling, 12-month period shall not exceed 0.1207 ton of CO.

2.f The combined emissions of P026 and P028 (stacks 68-71 & 90) per rolling, 12-month period shall not exceed 0.1437 ton of NOx, 0.0009 ton of SO2 or 0.4275 ton of VOC.

2.g The combined emissions of P026 and P028 (stacks 68-71 & 90) per rolling, 12-month period shall not exceed 0.0484 ton of PM10.

2.h Exempt, burner capacity is less than 10 mmBtu.

2.i The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-07(B) and 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).

2.j The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by complying with all applicable rules.

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.k The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the requirements of OAC rule 3745-21-07(B), OAC rule 3745-21-08(B), OAC rule 3745-23-06(B), OAC rule 3745-31-02(A)(2), OAC rule 3745-31-05(C) and OAC rules 3745-31-10 thru 20.

II. Operational Restrictions

1. The permittee shall operate the fabric filter whenever this emissions unit is in operation.

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

3. The combined volume of natural gas combusted in emissions units P026 and P028 shall not exceed 2.874 MMscf per rolling, 12-month period.

4. The combined amount of glass dried in P026 and P028 shall not exceed 1250 tons per rolling, 12-month period.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain daily records that document any time periods when the fabric filter was not in service when the emissions unit was in operation.

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

2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the fabric filter (stack 90). 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 the daily checks show no visible emissions for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check by the permittee or an Ohio EPA inspector indicates visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of no visible emissions.

3. The permittee shall maintain monthly records of the combined volume of natural gas combusted in emissions units P026 and P028 as a rolling, 12-month summation.

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.

5. The permittee shall maintain monthly records of the combined glass dried, in tons, in emissions units P026 and P028 as a rolling, 12-month summation.

IV. Reporting Requirements

1. The permittee shall notify the Toledo Division of Environmental Services in writing of any daily record showing that the fabric filter 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 Toledo Division of Environmental Services within 30 days after the event occurs.

2. The permittee shall submit quarterly written reports that (a) identify all days during which any visible particulate emissions were observed from the fabric filter (stack 90) and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 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 deviation (excursion) reports that identify each exceedence of the rolling, 12-month limits specified in Sections A.II.3. and A.II.4. above.

V. Testing Requirements

1. Compliance with the allowable emission limitations from chopper process baghouse (stack 90) shall be determined according to the following methods:

1.a Emission Limitation;

10% opacity, as a 6-minute average

Applicable Compliance Method;

If required, compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A.

V. Testing Requirements (continued)

1.b Emission Limitation:

0.88 lb filterable PM/hr

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(10), or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

1.c Emission Limitation:

3.9 tons per year of PE

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable emission limitation (0.88 pound of PE per hour) by the maximum annual hours of operation (8760 hrs), and then dividing by 2000 lbs/ton and, therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

1.d Emission Limitation:

0.038 lb/hr PM10

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures of Methods 1 through 4 of 40 CFR Part 60, Appendix A and 201 and 202 of 40 CFR Part 51, Appendix M. Alternate, USEPA approved testing, may be used with prior written approval from the Ohio EPA.

1.e Emission Limitation:

0.17 ton per year of PM10

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable emission limitation (0.038 pound per hour of particulate emissions as PM10) by the maximum annual hours of operation (8760 hrs), and then dividing by 2000 lbs/ton and, therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

1.f Emission Limitation:

0.24 lb/hr VOC

Applicable Compliance Method:

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

V. Testing Requirements (continued)

1.g Emission Limitation:

1.1 tons per year of VOC

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable emission limitation (0.24 pound per hour of volatile organic compounds) by the maximum annual hours of operation (8760 hrs), and then dividing by 2000 lbs/ton and, therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

[Note: P026 and P028 share a common control device and compliance stack testing must combine the allowable emissions limitations from both emissions units operating at the maximum production rate of each unit.]

2. Compliance with the allowable emission limitations for the dryer oven burners (stacks 68 & 70) shall be determined according to the following methods:

2.a Emission Limitation:

10% opacity, as a 6-minute average

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A.

2.b Emission Limitation:

0.124 pound of CO per hour

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1 dated 7/98, as follows: divide the emission factor of 84 pounds of CO emissions per million standard cubic feet(MMscf) by a heating value of 1,020 Btu per standard cubic foot and multiply the result by the maximum heat input capacity of 1.5 MMBtu per hour.

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

2.c Emission Limitation:

0.55 ton of CO per year

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable emission limitation (0.124 pound of CO per hour) by the maximum annual hours of operation (8760 hrs), and then dividing by 2000 lbs/ton and, therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

V. Testing Requirements (continued)

2.d Emission Limitation:

0.149 pound of NOx per hour

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1 dated 7/98, as follows: divide the emission factor of 100 pounds of NOx emissions per MMscf by a heating value of 1,020 Btu per standard cubic foot and multiply the result by the maximum heat input capacity of 1.5 MMBtu per hour.

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

2.e Emission Limitation:

0.66 ton of NOx per year

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable emission limitation (0.149 pound of NOx per hour) by the maximum annual hours of operation (8760 hrs), and then dividing by 2000 lbs/ton and, therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

2.f Emission Limitation:

0.011 pound of PM10 per hour

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 7.6 pounds of PM10 per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 1.5 MMBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 of 40 CFR Part 60, Appendix A and Methods 201 and 202 of 40 CFR Part 51, Appendix M, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

2.g Emission Limitation:

0.049 ton per year of PM10

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable emission limitation (0.011 pound per hour of particulate matter as PM10) by the maximum annual hours of operation (8760 hrs), and then dividing by 2000 lbs/ton and, therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

V. Testing Requirements (continued)

2.h Emission Limitation:

0.003 pound of filterable PM per hour

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 1.9 pounds of PM10 per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 1.5 MMBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(9), or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

2.i Emission Limitation:

0.014 ton of PE per year

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable emission limitation (0.003 pound of PE per hour) by the maximum annual hours of operation (8760 hrs), and then dividing by 2000 lbs/ton and, therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

2.j Emission Limitation:

0.0009 pound of SO2 per hour

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 0.6 pound of SO2 emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 1.5 MMBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 6 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-18-04, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

2.k Emission Limitation:

0.004 ton of SO2 per year

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable emission limitation (0.0009 pound of SO2 per hour) by the maximum annual hours of operation (8760 hrs), and then dividing by 2000 lbs/ton and, therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

V. Testing Requirements (continued)

2.l Emission Limitation:

0.009 pound of VOC per hour

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 5.5 pounds of VOC per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 1.5 MMBtu per hour.

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

2.m Emission Limitation:

0.04 ton of VOC per year

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable emission limitation (0.009 pound of VOC per hour) by the maximum annual hours of operation (8760 hrs), and then dividing by 2000 lbs/ton and, therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

3. Compliance with the allowable emission limitations for P026 and P028 combined (stacks 68-71 & 90) shall be determined according to the following methods:

3.a Emission Limitation:

Combined emissions from P026 and P028 shall not exceed 0.1207 ton CO per rolling, 12-month period

Applicable Compliance Method:

Multiply the emission factor specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1 dated 7/98 (84 pounds of CO emissions per million standard cubic feet (MMscf)) by the actual MMscf of gas combusted (as recorded in section A.III.3 above) and divide by 2000 pounds per ton.

3.b Emission Limitation:

Combined emissions from P026 and P028 shall not exceed 0.1437 ton NOx per rolling, 12-month period

Applicable Compliance Method:

Multiply the emission factor specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1 dated 7/98 (100 pounds of NOx emissions per million standard cubic feet (MMscf)) by the actual MMscf of gas combusted (as recorded in section A.III.3 above) and divide by 2000 pounds per ton.

V. Testing Requirements (continued)

3.c Emission Limitation:

Combined from P026 and P028 shall not exceed 0.0484 ton of PM10 per rolling, 12-month period

Applicable Compliance Method:

Multiply the emission factor specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98 (7.6 pounds of PM10 emissions per million standard cubic feet (MMscf)) by the actual MMscf of gas combusted (as recorded in section A.III.3 above) and divide by 2000 pounds per ton. To this add the actual tons of throughput of dried glass per rolling, 12-month period (as recorded in section A.III.5 above) multiplied by 0.06 lb PM10 per ton of glass and divided by 2000 pounds per ton.

3.d Emission Limitation:

Combined emissions from P026 and P028 shall not exceed 0.0009 ton SO2 per rolling, 12-month period

Applicable Compliance Method:

Multiply the emission factor specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98 (0.6 pound of SO2 emissions per million standard cubic feet (MMscf)) by the actual MMscf of gas combusted (as recorded in section A.III.3 above) and divide by 2000 pounds per ton.

3.e Emission Limitation:

Combined from P026 and P028 shall not exceed 0.4275 ton VOC per rolling, 12-month period

Applicable Compliance Method:

Multiply the emission factor specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98 (5.5 pounds of VOC emissions per million standard cubic feet (MMscf)) by the actual MMscf of gas combusted (as recorded in section A.III.3 above) and divide by 2000 pounds per ton. To this add the actual tons throughput of dried glass per rolling, 12-month period (as recorded in section A.III.5 above) multiplied by 0.672 lb VOC per ton of glass, and divided by 2000 pounds per ton.

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: Direct Chop Oven #1 (P037)

Activity Description: Dryer Line #5 - 3.0 mmBtu/hr (Carrier LK 1593)

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
direct fired, 2 mmBtu/hr, natural gas drying oven for chopped fiberglass, equipped with a fabric filter (modification)	OAC rule 3745-31-05(A)(3) (PTI 04-01345)	0.165 pound per hour of carbon monoxide (CO) 0.73 ton per year CO 0.196 pound per hour of nitrogen oxides (NOx) 0.86 ton per year NOx 0.12 pound per hour of filterable particulate emissions (PE) 0.53 ton per year of PE 0.088 pound per hour of particulate matter as PM10 0.39 ton per year of PM10 0.0013 pound per hour of sulfur dioxide (SO2) 0.006 ton per year SO2 0.99 pound per hour of volatile organic compounds (VOC) 4.34 tons per year of VOC See sections A.I.2.a, A.I.2.b, and A.I.2.c.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
	OAC rule 3745-17-07(A)(1)	See section A.I.2.d.
	OAC rule 3745-17-11(B)(1)	See section A.I.2.d.
	OAC rule 3745-18-06(E)	See section A.I.2.d.
	OAC rule 3745-21-07(B)	See section A.I.2.e.
	OAC rule 3745-21-08(B)	See section A.I.2.f.
	OAC rule 3745-23-06(B)	See section A.I.2.e.
	OAC rule 3745-31-02(A)(2)	See section A.I.2.g.
	OAC rule 3745-31-05(C)	See section A.I.2.h.
	OAC rules 3745-31-10 thru 20	See section A.I.2.i.

2. Additional Terms and Conditions

2.a The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the requirements of OAC rule 3745-21-07(B), OAC rule 3745-21-08(B), OAC rule 3745-23-06(B), OAC rule 3745-31-02(A)(2), OAC rule 3745-31-05(C) and OAC rules 3745-31-10 thru 20.

2.b The hourly and annual emission limitations for the by-products of combustion (i.e., CO, NOx, SO2 and VOC), were established for PTI purposes to reflect the potentials to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limitations.

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

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

2.e The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-07(B) and 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).

2.f The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by complying with all applicable rules.

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.g Combined annual emissions from P037 through P044 shall not exceed 2.99 tons CO per rolling, 12-month period.

2.h Combined annual emissions from P037 through P044 shall not exceed 0.020 ton SO2, 3.56 tons NOx, and 10.33 tons VOC per rolling, 12-month period.

2.i The combined emissions of P037 through P044 shall not exceed 2.08 tons of PM10 as a rolling, 12-month summation.

II. Operational Restrictions

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

2. The combined volume of natural gas combusted in emissions units P037 through P040 shall not exceed 71.106 mmscf per rolling, 12-month period.

3. The combined throughput of glass fibers in emissions units P037 through P040 shall not exceed 30,165.2 tons per rolling, 12-month period.

4. The permittee shall initiate corrective action within 1 hour of an alarm from a bag leak detection system and complete corrective actions in a timely manner. Example corrective actions may include:

i. inspecting the baghouse for air leaks, torn or broken bags or filter media, or 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; and

vi. shutting down the process producing the 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 maintain records, on a monthly basis, of the combined volume of natural gas combusted, in mmscf, in emissions units P037 through P040 as a rolling, 12-month summation.

3. The permittee shall maintain records, on a monthly basis, of the combined throughput of glass fibers, in tons, for emissions units P037 through P040 as a rolling, 12-month summation.

4. The permittee shall install, calibrate, maintain, and continuously operate a bag leak detection system.

i. A triboelectric bag leak detection system shall be installed, operated, adjusted, and maintained in a manner consistent with the U.S. Environmental Protection Agency guidance, "Fabric Filter Bag Leak Detection Guidance" (EPA-454/R-98-015, September 1997). Other bag leak detection systems including, but not limited to, devices using light scattering and other effects, shall be installed, operated, adjusted, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.

ii. The bag leak detection system shall be certified by the manufacturer to be capable of detecting PE emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grain per actual cubic foot) or less.

iii. The bag leak detection system sensor shall produce an output of relative particulate emissions.

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

v. The bag leak detection system shall be installed downstream of the baghouse. Where multiple bag leak detection systems are required, the system instrumentation and alarm may be shared among the monitors.

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

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

vii. Following the initial adjustment, the permittee shall not adjust the range, averaging period, alarm setpoints, or alarm delay time. In no event shall the range be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless a responsible official certifies, by written report, that the baghouse has been inspected and found to be in good operating condition.

The permittee shall maintain records of any bag leak detection system alarms, including the date and time of the alarm, when corrective actions were initiated, the cause of the alarm, an explanation of the corrective actions taken, and when the cause of the alarm was corrected.

5. 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 baghouse 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 each day when a fuel other than natural gas was burned in this emissions unit.

2. The permittee shall submit quarterly deviation (excursion) reports that identify each exceedence of the rolling, 12-month limitation for the combined volume of natural gas combusted in emissions units P037 through P040.

3. The permittee shall submit quarterly deviation (excursion) reports that identify each exceedance of the rolling, 12-month limitation for the combined throughput of glass fibers in emissions units P037 through P040.

4. The permittee shall submit semiannual deviation (excursion) reports that identify all periods of time during which any bag leak detection system alarms were sounded. The reports shall include a summary of the date and time of the alarm(s), when corrective actions were initiated, the cause of the alarm(s), an explanation of the corrective actions taken, and when the cause of the alarm(s) was corrected.

5. The permittee shall submit quarterly written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year.

V. Testing Requirements

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

1.a Emission Limitation:

10% opacity, as a 6-minute average

Applicable Compliance Method;

If required, compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A.

V. Testing Requirements (continued)

1.b Emission Limitation:

0.165 pound of CO per hour

Applicable Compliance Method:

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

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

1.c Emission Limitation:

0.73 ton of CO per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.165 pound of CO per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.d Emission Limitation:

0.196 pound of NOx per hour

Applicable Compliance Method:

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

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

1.e Emission Limitation:

0.86 ton of NOx per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.196 pound of NOx per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

V. Testing Requirements (continued)

1.f Emission Limitation:

0.12 pound of filterable particulate emissions (PE) per hour

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60 Appendix A, using the methods and procedures specified in OAC rule 3745-17-03(B)(10), or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

1.g Emission Limitation:

0.53 ton of PE per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated by multiplying the short term emission rate of 0.12 pound of PE per hour by 8,760 hours per year and dividing by 2,000 pounds per ton.

1.h Emission Limitation:

0.088 pound of PM10 per hour

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 of 40 CFR Part 60, Appendix A and Methods 201 and 202 of 40 CFR Part 51, Appendix M, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

1.i Emission Limitation:

0.39 ton of PM10 per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.088 pound of PM10 per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.j Emission Limitation:

0.0013 pound of SO2 per hour

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 0.6 pound of SO2 emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 2 MMBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 6 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-18-04, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

V. Testing Requirements (continued)

1.k Emission Limitation:

0.006 ton of SO2 per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.0013 pound of SO2 per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.l Emission Limitation:

0.99 pound of VOC per hour

Applicable Compliance Method:

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

1.m Emission Limitation:

4.34 tons of VOC per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.99 pound of VOC per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

2. Compliance with the combined emission limitations for emissions units P037 thru P044 shall be determined according to the following methods:

2.a Emission Limitation:

The combined emissions from P037 through P044 shall not exceed 2.99 tons of CO per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1 dated 7/98 (84 pounds of CO emissions per mmscf) by the actual volume of natural gas combusted in emissions units P037 through P040 (in mmscft, as recorded in section A.III.2 above), and then dividing by 2000 pounds per ton.

2.b Emission Limitation:

The combined emissions from P037 through P044 shall not exceed 3.56 ton NOx per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1 dated 7/98 (100 pounds of NOx per mmscf) by the actual volume of natural gas combusted in emissions units P037 through P040 (in mmscft, as recorded in section A.III.2 above), and then dividing by 2000 pounds per ton.

V. Testing Requirements (continued)

2.c Emission Limitation:

The combined emissions from P037 through P044 shall not exceed 2.08 tons of PM10 per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor determined during the most recent stack test(s) which demonstrated compliance with this emission limitation for PM10 (in tons PM10 per ton of glass throughput) by the combined throughput of glass fibers, in tons, for emissions units P037 through P040 (in tons, as recorded in section A.III.3 above).

2.d Emission Limitation:

The combined emissions from P037 through P044 shall not exceed 0.02 ton SO2, per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98 (0.6 pound of SO2 per mmscf) by the actual volume of natural gas combusted in emissions units P037 through P040 (in mmscft, as recorded in section A.III.2 above), and then dividing by 2000 pounds per ton.

2.e Emission Limitation:

The combined emissions from P037 through P044 shall not exceed 10.33 tons VOC per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor determined during the most recent stack test which demonstrated compliance with this emission limitation for VOC (in tons VOC per ton of glass throughput) by the combined throughput of glass fibers, in tons, for emissions units P037 through P040 (in tons, as recorded in section A.III.3 above).

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: Direct Chop Oven #2 (P038)

Activity Description: Dryer Line #6 - 3.0 mmBtu/hr (Carman FBP-540)

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
direct fired, 2 mmBtu/hr, natural gas drying oven for chopped fiberglass, equipped with a fabric filter (modification)	OAC rule 3745-31-05(A)(3) (PTI 04-01345)	0.165 pound per hour of carbon monoxide (CO) 0.73 ton per year CO 0.196 pound per hour of nitrogen oxides (NOx) 0.86 ton per year NOx 0.12 pound per hour of filterable particulate emissions (PE) 0.53 ton per year of PE 0.088 pound per hour of particulate matter as PM10 0.39 ton per year of PM10 0.0013 pound per hour of sulfur dioxide (SO2) 0.006 ton per year SO2 0.99 pound per hour of volatile organic compounds (VOC) 4.34 tons per year of VOC See sections A.I.2.a, A.I.2.b, and A.I.2.c.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
	OAC rule 3745-17-07(A)(1)	See section A.I.2.d.
	OAC rule 3745-17-11(B)(1)	See section A.I.2.d.
	OAC rule 3745-18-06(E)	See section A.I.2.d.
	OAC rule 3745-21-07(B)	See section A.I.2.e.
	OAC rule 3745-21-08(B)	See section A.I.2.f.
	OAC rule 3745-23-06(B)	See section A.I.2.e.
	OAC rule 3745-31-02(A)(2)	See section A.I.2.g.
	OAC rule 3745-31-05(C)	See section A.I.2.h.
	OAC rules 3745-31-10 thru 20	See section A.I.2.i.

2. Additional Terms and Conditions

2.a The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the requirements of OAC rule 3745-21-07(B), OAC rule 3745-21-08(B), OAC rule 3745-23-06(B), OAC rule 3745-31-02(A)(2), OAC rule 3745-31-05(C) and OAC rules 3745-31-10 thru 20.

2.b The hourly and annual emission limitations for the by-products of combustion (i.e., CO, NOx, SO2 and VOC), were established for PTI purposes to reflect the potentials to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limitations.

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

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

2.e The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-07(B) and 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).

2.f The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by complying with all applicable rules.

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.g Combined annual emissions from P037 through P044 shall not exceed 2.99 tons CO per rolling, 12-month period.

2.h Combined annual emissions from P037 through P044 shall not exceed 0.020 ton SO2, 3.56 tons NOx, and 10.33 tons VOC per rolling, 12-month period.

2.i The combined emissions of P037 through P044 shall not exceed 2.08 tons of PM10 as a rolling, 12-month summation.

II. Operational Restrictions

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

2. The combined volume of natural gas combusted in emissions units P037 through P040 shall not exceed 71.106 mmscf per rolling, 12-month period.

3. The combined throughput of glass fibers in emissions units P037 through P040 shall not exceed 30,165.2 tons per rolling, 12-month period.

4. The permittee shall initiate corrective action within 1 hour of an alarm from a bag leak detection system and complete corrective actions in a timely manner. Example corrective actions may include:

i. inspecting the baghouse for air leaks, torn or broken bags or filter media, or 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; and

vi. shutting down the process producing the 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 maintain records, on a monthly basis, of the combined volume of natural gas combusted, in mmscf, in emissions units P037 through P040 as a rolling, 12-month summation.

3. The permittee shall maintain records, on a monthly basis, of the combined throughput of glass fibers, in tons, for emissions units P037 through P040 as a rolling, 12-month summation.

4. The permittee shall install, calibrate, maintain, and continuously operate a bag leak detection system.

i. A triboelectric bag leak detection system shall be installed, operated, adjusted, and maintained in a manner consistent with the U.S. Environmental Protection Agency guidance, "Fabric Filter Bag Leak Detection Guidance" (EPA-454/R-98-015, September 1997). Other bag leak detection systems including, but not limited to, devices using light scattering and other effects, shall be installed, operated, adjusted, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.

ii. The bag leak detection system shall be certified by the manufacturer to be capable of detecting PE emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grain per actual cubic foot) or less.

iii. The bag leak detection system sensor shall produce an output of relative particulate emissions.

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

v. The bag leak detection system shall be installed downstream of the baghouse. Where multiple bag leak detection systems are required, the system instrumentation and alarm may be shared among the monitors.

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

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

vii. Following the initial adjustment, the permittee shall not adjust the range, averaging period, alarm setpoints, or alarm delay time. In no event shall the range be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless a responsible official certifies, by written report, that the baghouse has been inspected and found to be in good operating condition.

The permittee shall maintain records of any bag leak detection system alarms, including the date and time of the alarm, when corrective actions were initiated, the cause of the alarm, an explanation of the corrective actions taken, and when the cause of the alarm was corrected.

5. 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 baghouse 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 each day when a fuel other than natural gas was burned in this emissions unit.

2. The permittee shall submit quarterly deviation (excursion) reports that identify each exceedence of the rolling, 12-month limitation for the combined volume of natural gas combusted in emissions units P037 through P040.

3. The permittee shall submit quarterly deviation (excursion) reports that identify each exceedance of the rolling, 12-month limitation for the combined throughput of glass fibers in emissions units P037 through P040.

4. The permittee shall submit semiannual deviation (excursion) reports that identify all periods of time during which any bag leak detection system alarms were sounded. The reports shall include a summary of the date and time of the alarm(s), when corrective actions were initiated, the cause of the alarm(s), an explanation of the corrective actions taken, and when the cause of the alarm(s) was corrected.

5. The permittee shall submit quarterly written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year.

V. Testing Requirements

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

1.a Emission Limitation:

10% opacity, as a 6-minute average

Applicable Compliance Method;

If required, compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A.

V. Testing Requirements (continued)

1.b Emission Limitation:

0.165 pound of CO per hour

Applicable Compliance Method:

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

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

1.c Emission Limitation:

0.73 ton of CO per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.165 pound of CO per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.d Emission Limitation:

0.196 pound of NOx per hour

Applicable Compliance Method:

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

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

1.e Emission Limitation:

0.86 ton of NOx per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.196 pound of NOx per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

V. Testing Requirements (continued)

1.f Emission Limitation:

0.12 pound of filterable particulate emissions (PE) per hour

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60 Appendix A, using the methods and procedures specified in OAC rule 3745-17-03(B)(10), or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

1.g Emission Limitation:

0.53 ton of PE per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated by multiplying the short term emission rate of 0.12 pound of PE per hour by 8,760 hours per year and dividing by 2,000 pounds per ton.

1.h Emission Limitation:

0.088 pound of PM10 per hour

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 of 40 CFR Part 60, Appendix A and Methods 201 and 202 of 40 CFR Part 51, Appendix M, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

1.i Emission Limitation:

0.39 ton of PM10 per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.088 pound of PM10 per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.j Emission Limitation:

0.0013 pound of SO2 per hour

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 0.6 pound of SO2 emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 2 MMBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 6 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-18-04, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

V. Testing Requirements (continued)

1.k Emission Limitation:

0.006 ton of SO2 per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.0013 pound of SO2 per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.l Emission Limitation:

0.99 pound of VOC per hour

Applicable Compliance Method:

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

1.m Emission Limitation:

4.34 tons of VOC per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.99 pound of VOC per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

2. Compliance with the combined emission limitations for emissions units P037 thru P044 shall be determined according to the following methods:

2.a Emission Limitation:

The combined emissions from P037 through P044 shall not exceed 2.99 tons of CO per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1 dated 7/98 (84 pounds of CO emissions per mmscf) by the actual volume of natural gas combusted in emissions units P037 through P040 (in mmscft, as recorded in section A.III.2 above), and then dividing by 2000 pounds per ton.

2.b Emission Limitation:

The combined emissions from P037 through P044 shall not exceed 3.56 ton NOx per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1 dated 7/98 (100 pounds of NOx per mmscf) by the actual volume of natural gas combusted in emissions units P037 through P040 (in mmscft, as recorded in section A.III.2 above), and then dividing by 2000 pounds per ton.

V. Testing Requirements (continued)

2.c Emission Limitation:

The combined emissions from P037 through P044 shall not exceed 2.08 tons of PM10 per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor determined during the most recent stack test(s) which demonstrated compliance with this emission limitation for PM10 (in tons PM10 per ton of glass throughput) by the combined throughput of glass fibers, in tons, for emissions units P037 through P040 (in tons, as recorded in section A.III.3 above).

2.d Emission Limitation:

The combined emissions from P037 through P044 shall not exceed 0.02 ton SO2, per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98 (0.6 pound of SO2 per mmscf) by the actual volume of natural gas combusted in emissions units P037 through P040 (in mmscft, as recorded in section A.III.2 above), and then dividing by 2000 pounds per ton.

2.e Emission Limitation:

The combined emissions from P037 through P044 shall not exceed 10.33 tons VOC per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor determined during the most recent stack test which demonstrated compliance with this emission limitation for VOC (in tons VOC per ton of glass throughput) by the combined throughput of glass fibers, in tons, for emissions units P037 through P040 (in tons, as recorded in section A.III.3 above).

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: Direct Chop Oven #3 (P039)

Activity Description: Dryer Line #7 - 3.0 mmBtu/hr (Carman FBP-540)

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
direct fired, 2 mmBtu/hr, natural gas drying oven for chopped fiberglass, equipped with a fabric filter (modification)	OAC rule 3745-31-05(A)(3) (PTI 04-01345)	0.165 pound per hour of carbon monoxide (CO) 0.73 ton per year CO 0.196 pound per hour of nitrogen oxides (NOx) 0.86 ton per year NOx 0.12 pound per hour of filterable particulate emissions (PE) 0.53 ton per year of PE 0.088 pound per hour of particulate matter as PM10 0.39 ton per year of PM10 0.0013 pound per hour of sulfur dioxide (SO2) 0.006 ton per year SO2 0.99 pound per hour of volatile organic compounds (VOC) 4.34 tons per year of VOC See sections A.I.2.a, A.I.2.b, and A.I.2.c.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
	OAC rule 3745-17-07(A)(1)	See section A.I.2.d.
	OAC rule 3745-17-11(B)(1)	See section A.I.2.d.
	OAC rule 3745-18-06(E)	See section A.I.2.d.
	OAC rule 3745-21-07(B)	See section A.I.2.e.
	OAC rule 3745-21-08(B)	See section A.I.2.f.
	OAC rule 3745-23-06(B)	See section A.I.2.e.
	OAC rule 3745-31-02(A)(2)	See section A.I.2.g.
	OAC rule 3745-31-05(C)	See section A.I.2.h.
	OAC rules 3745-31-10 thru 20	See section A.I.2.i.

2. Additional Terms and Conditions

2.a The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the requirements of OAC rule 3745-21-07(B), OAC rule 3745-21-08(B), OAC rule 3745-23-06(B), OAC rule 3745-31-02(A)(2), OAC rule 3745-31-05(C) and OAC rules 3745-31-10 thru 20.

2.b The hourly and annual emission limitations for the by-products of combustion (i.e., CO, NOx, SO2 and VOC), were established for PTI purposes to reflect the potentials to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limitations.

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

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

2.e The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-07(B) and 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).

2.f The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by complying with all applicable rules.

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.g Combined annual emissions from P037 through P044 shall not exceed 2.99 tons CO per rolling, 12-month period.

2.h Combined annual emissions from P037 through P044 shall not exceed 0.020 ton SO2, 3.56 tons NOx, and 10.33 tons VOC per rolling, 12-month period.

2.i The combined emissions of P037 through P044 shall not exceed 2.08 tons of PM10 as a rolling, 12-month summation.

II. Operational Restrictions

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

2. The combined volume of natural gas combusted in emissions units P037 through P040 shall not exceed 71.106 mmscf per rolling, 12-month period.

3. The combined throughput of glass fibers in emissions units P037 through P040 shall not exceed 30,165.2 tons per rolling, 12-month period.

4. The permittee shall initiate corrective action within 1 hour of an alarm from a bag leak detection system and complete corrective actions in a timely manner. Example corrective actions may include:

i. inspecting the baghouse for air leaks, torn or broken bags or filter media, or 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; and

vi. shutting down the process producing the 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 maintain records, on a monthly basis, of the combined volume of natural gas combusted, in mmscf, in emissions units P037 through P040 as a rolling, 12-month summation.

3. The permittee shall maintain records, on a monthly basis, of the combined throughput of glass fibers, in tons, for emissions units P037 through P040 as a rolling, 12-month summation.

4. The permittee shall install, calibrate, maintain, and continuously operate a bag leak detection system.

i. A triboelectric bag leak detection system shall be installed, operated, adjusted, and maintained in a manner consistent with the U.S. Environmental Protection Agency guidance, "Fabric Filter Bag Leak Detection Guidance" (EPA-454/R-98-015, September 1997). Other bag leak detection systems including, but not limited to, devices using light scattering and other effects, shall be installed, operated, adjusted, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.

ii. The bag leak detection system shall be certified by the manufacturer to be capable of detecting PE emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grain per actual cubic foot) or less.

iii. The bag leak detection system sensor shall produce an output of relative particulate emissions.

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

v. The bag leak detection system shall be installed downstream of the baghouse. Where multiple bag leak detection systems are required, the system instrumentation and alarm may be shared among the monitors.

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

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

vii. Following the initial adjustment, the permittee shall not adjust the range, averaging period, alarm setpoints, or alarm delay time. In no event shall the range be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless a responsible official certifies, by written report, that the baghouse has been inspected and found to be in good operating condition.

The permittee shall maintain records of any bag leak detection system alarms, including the date and time of the alarm, when corrective actions were initiated, the cause of the alarm, an explanation of the corrective actions taken, and when the cause of the alarm was corrected.

5. 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 baghouse 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 each day when a fuel other than natural gas was burned in this emissions unit.

2. The permittee shall submit quarterly deviation (excursion) reports that identify each exceedence of the rolling, 12-month limitation for the combined volume of natural gas combusted in emissions units P037 through P040.

3. The permittee shall submit quarterly deviation (excursion) reports that identify each exceedance of the rolling, 12-month limitation for the combined throughput of glass fibers in emissions units P037 through P040.

4. The permittee shall submit semiannual deviation (excursion) reports that identify all periods of time during which any bag leak detection system alarms were sounded. The reports shall include a summary of the date and time of the alarm(s), when corrective actions were initiated, the cause of the alarm(s), an explanation of the corrective actions taken, and when the cause of the alarm(s) was corrected.

5. The permittee shall submit quarterly written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year.

V. Testing Requirements

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

1.a Emission Limitation:

10% opacity, as a 6-minute average.

Applicable Compliance Method;

If required, compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A.

V. Testing Requirements (continued)

1.b Emission Limitation:

0.165 pound of CO per hour.

Applicable Compliance Method:

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

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

1.c Emission Limitation:

0.73 ton of CO per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.165 pound of CO per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.d Emission Limitation:

0.196 pound of NOx per hour.

Applicable Compliance Method:

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

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

1.e Emission Limitation:

0.86 ton of NOx per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.196 pound of NOx per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

V. Testing Requirements (continued)

1.f Emission Limitation:

0.12 pound of filterable particulate emissions (PE) per hour

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60 Appendix A, using the methods and procedures specified in OAC rule 3745-17-03(B)(10), or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

1.g Emission Limitation:

0.53 ton of PE per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated by multiplying the short term emission rate of 0.12 pound of PE per hour by 8,760 hours per year and dividing by 2,000 pounds per ton.

1.h Emission Limitation:

0.088 pound of PM10 per hour.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 of 40 CFR Part 60, Appendix A and Methods 201 and 202 of 40 CFR Part 51, Appendix M, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

1.i Emission Limitation:

0.39 ton of PM10 per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.088 pound of PM10 per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.j Emission Limitation:

0.0013 pound of SO2 per hour.

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 0.6 pound of SO2 emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 2 MMBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 6 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-18-04, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

V. Testing Requirements (continued)

1.k Emission Limitation:

0.006 ton of SO2 per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.0013 pound of SO2 per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.l Emission Limitation:

0.99 pound of VOC per hour.

Applicable Compliance Method:

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

1.m Emission Limitation:

4.34 tons of VOC per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.99 pound of VOC per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

2. Compliance with the combined emission limitations for emissions units P037 thru P044 shall be determined according to the following methods:

2.a Emission Limitation:

The combined emissions from P037 through P044 shall not exceed 2.99 tons of CO per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1 dated 7/98 (84 pounds of CO emissions per mmscf) by the actual volume of natural gas combusted in emissions units P037 through P040 (in mmscft, as recorded in section A.III.2 above), and then dividing by 2000 pounds per ton.

2.b Emission Limitation:

The combined emissions from P037 through P044 shall not exceed 3.56 ton NOx per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1 dated 7/98 (100 pounds of NOx per mmscf) by the actual volume of natural gas combusted in emissions units P037 through P040 (in mmscft, as recorded in section A.III.2 above), and then dividing by 2000 pounds per ton.

V. Testing Requirements (continued)

2.c Emission Limitation:

The combined emissions from P037 through P044 shall not exceed 2.08 tons of PM10 per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor determined during the most recent stack test(s) which demonstrated compliance with this emission limitation for PM10 (in tons PM10 per ton of glass throughput) by the combined throughput of glass fibers, in tons, for emissions units P037 through P040 (in tons, as recorded in section A.III.3 above).

2.d Emission Limitation:

The combined emissions from P037 through P044 shall not exceed 0.02 ton SO2, per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98 (0.6 pound of SO2 per mmscf) by the actual volume of natural gas combusted in emissions units P037 through P040 (in mmscft, as recorded in section A.III.2 above), and then dividing by 2000 pounds per ton.

2.e Emission Limitation:

The combined emissions from P037 through P044 shall not exceed 10.33 tons VOC per rolling, 12-month period

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor determined during the most recent stack test which demonstrated compliance with this emission limitation for VOC (in tons VOC per ton of glass throughput) by the combined throughput of glass fibers, in tons, for emissions units P037 through P040 (in tons, as recorded in section A.III.3 above).

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: Direct Chop Oven #4 (P040)

Activity Description: Dryer Line #8 - 3.0 mmBtu/hr (Carman FBP-540)

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
direct fired, 2 mmBtu/hr, natural gas drying oven for chopped fiberglass, equipped with a fabric filter (modification)	OAC rule 3745-31-05(A)(3) (PTI 04-01345)	0.165 pound per hour of carbon monoxide (CO) 0.73 ton per year CO 0.196 pound per hour of nitrogen oxides (NOx) 0.86 ton per year NOx 0.12 pound per hour of filterable particulate emissions (PE) 0.53 ton per year of PE 0.088 pound per hour of particulate matter as PM10 0.39 ton per year of PM10 0.0013 pound per hour of sulfur dioxide (SO2) 0.006 ton per year SO2 0.99 pound per hour of volatile organic compounds (VOC) 4.34 tons per year of VOC See sections A.I.2.a, A.I.2.b, and A.I.2.c.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
	OAC rule 3745-17-07(A)(1)	See section A.I.2.d.
	OAC rule 3745-17-11(B)(1)	See section A.I.2.d.
	OAC rule 3745-18-06(E)	See section A.I.2.d.
	OAC rule 3745-21-07(B)	See section A.I.2.e.
	OAC rule 3745-21-08(B)	See section A.I.2.f.
	OAC rule 3745-23-06(B)	See section A.I.2.e.
	OAC rule 3745-31-02(A)(2)	See section A.I.2.g.
	OAC rule 3745-31-05(C)	See section A.I.2.h.
	OAC rules 3745-31-10 thru 20	See section A.I.2.i.

2. Additional Terms and Conditions

2.a The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the requirements of OAC rule 3745-21-07(B), OAC rule 3745-21-08(B), OAC rule 3745-23-06(B), OAC rule 3745-31-02(A)(2), OAC rule 3745-31-05(C) and OAC rules 3745-31-10 thru 20.

2.b The hourly and annual emission limitations for the by-products of combustion (i.e., CO, NOx, SO2 and VOC), were established for PTI purposes to reflect the potentials to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limitations.

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

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

2.e The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-07(B) and 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).

2.f The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by complying with all applicable rules.

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.g Combined annual emissions from P037 through P044 shall not exceed 2.99 tons CO per rolling, 12-month period.

2.h Combined annual emissions from P037 through P044 shall not exceed 0.020 ton SO2, 3.56 tons NOx, and 10.33 tons VOC per rolling, 12-month period.

2.i The combined emissions of P037 through P044 shall not exceed 2.08 tons of PM10 as a rolling, 12-month summation.

II. Operational Restrictions

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

2. The combined volume of natural gas combusted in emissions units P037 through P040 shall not exceed 71.106 mmscf per rolling, 12-month period.

3. The combined throughput of glass fibers in emissions units P037 through P040 shall not exceed 30,165.2 tons per rolling, 12-month period.

4. The permittee shall initiate corrective action within 1 hour of an alarm from a bag leak detection system and complete corrective actions in a timely manner. Example corrective actions may include:

i. inspecting the baghouse for air leaks, torn or broken bags or filter media, or 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; and

vi. shutting down the process producing the 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 maintain records, on a monthly basis, of the combined volume of natural gas combusted, in mmscf, in emissions units P037 through P040 as a rolling, 12-month summation.

3. The permittee shall maintain records, on a monthly basis, of the combined throughput of glass fibers, in tons, for emissions units P037 through P040 as a rolling, 12-month summation.

4. The permittee shall install, calibrate, maintain, and continuously operate a bag leak detection system.

i. A triboelectric bag leak detection system shall be installed, operated, adjusted, and maintained in a manner consistent with the U.S. Environmental Protection Agency guidance, "Fabric Filter Bag Leak Detection Guidance" (EPA-454/R-98-015, September 1997). Other bag leak detection systems including, but not limited to, devices using light scattering and other effects, shall be installed, operated, adjusted, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.

ii. The bag leak detection system shall be certified by the manufacturer to be capable of detecting PE emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grain per actual cubic foot) or less.

iii. The bag leak detection system sensor shall produce an output of relative particulate emissions.

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

v. The bag leak detection system shall be installed downstream of the baghouse. Where multiple bag leak detection systems are required, the system instrumentation and alarm may be shared among the monitors.

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

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

vii. Following the initial adjustment, the permittee shall not adjust the range, averaging period, alarm setpoints, or alarm delay time. In no event shall the range be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless a responsible official certifies, by written report, that the baghouse has been inspected and found to be in good operating condition.

The permittee shall maintain records of any bag leak detection system alarms, including the date and time of the alarm, when corrective actions were initiated, the cause of the alarm, an explanation of the corrective actions taken, and when the cause of the alarm was corrected.

5. 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 baghouse 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 each day when a fuel other than natural gas was burned in this emissions unit.

2. The permittee shall submit quarterly deviation (excursion) reports that identify each exceedence of the rolling, 12-month limitation for the combined volume of natural gas combusted in emissions units P037 through P040.

3. The permittee shall submit quarterly deviation (excursion) reports that identify each exceedance of the rolling, 12-month limitation for the combined throughput of glass fibers in emissions units P037 through P040.

4. The permittee shall submit semiannual deviation (excursion) reports that identify all periods of time during which any bag leak detection system alarms were sounded. The reports shall include a summary of the date and time of the alarm(s), when corrective actions were initiated, the cause of the alarm(s), an explanation of the corrective actions taken, and when the cause of the alarm(s) was corrected.

5. The permittee shall submit quarterly written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year.

V. Testing Requirements

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

1.a Emission Limitation:

10% opacity, as a 6-minute average.

Applicable Compliance Method;

If required, compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A.

V. Testing Requirements (continued)

1.b Emission Limitation:

0.165 pound of CO per hour.

Applicable Compliance Method:

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

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

1.c Emission Limitation:

0.73 ton of CO per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.165 pound of CO per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.d Emission Limitation:

0.196 pound of NOx per hour.

Applicable Compliance Method:

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

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

1.e Emission Limitation:

0.86 ton of NOx per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.196 pound of NOx per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

V. Testing Requirements (continued)

1.f Emission Limitation:

0.12 pound of filterable particulate emissions (PE) per hour

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60 Appendix A, using the methods and procedures specified in OAC rule 3745-17-03(B)(10), or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

1.g Emission Limitation:

0.53 ton of PE per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated by multiplying the short term emission rate of 0.12 pound of PE per hour by 8,760 hours per year and dividing by 2,000 pounds per ton.

1.h Emission Limitation:

0.088 pound of PM10 per hour.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 of 40 CFR Part 60, Appendix A and Methods 201 and 202 of 40 CFR Part 51, Appendix M, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

1.i Emission Limitation:

0.39 ton of PM10 per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.088 pound of PM10 per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.j Emission Limitation:

0.0013 pound of SO2 per hour.

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98, as follows: divide the emission factor of 0.6 pound of SO2 emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 2 MMBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 6 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-18-04, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

V. Testing Requirements (continued)

1.k Emission Limitation:

0.006 ton of SO2 per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.0013 pound of SO2 per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.l Emission Limitation:

0.99 pound of VOC per hour.

Applicable Compliance Method:

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

1.m Emission Limitation:

4.34 tons of VOC per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.99 pound of VOC per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

2. Compliance with the combined emission limitations for emissions units P037 thru P044 shall be determined according to the following methods:

2.a Emission Limitation:

The combined emissions from P037 through P044 shall not exceed 2.99 tons of CO per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1 dated 7/98 (84 pounds of CO emissions per mmscf) by the actual volume of natural gas combusted in emissions units P037 through P040 (in mmscft, as recorded in section A.III.2 above), and then dividing by 2000 pounds per ton.

2.b Emission Limitation:

The combined emissions from P037 through P044 shall not exceed 3.56 ton NOx per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1 dated 7/98 (100 pounds of NOx per mmscf) by the actual volume of natural gas combusted in emissions units P037 through P040 (in mmscft, as recorded in section A.III.2 above), and then dividing by 2000 pounds per ton.

V. Testing Requirements (continued)

2.c Emission Limitation:

The combined emissions from P037 through P044 shall not exceed 2.08 tons of PM10 per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor determined during the most recent stack test(s) which demonstrated compliance with this emission limitation for PM10 (in tons PM10 per ton of glass throughput) by the combined throughput of glass fibers, in tons, for emissions units P037 through P040 (in tons, as recorded in section A.III.3 above).

2.d Emission Limitation:

The combined emissions from P037 through P044 shall not exceed 0.02 ton SO2, per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2 dated 7/98 (0.6 pound of SO2 per mmscf) by the actual volume of natural gas combusted in emissions units P037 through P040 (in mmscft, as recorded in section A.III.2 above), and then dividing by 2000 pounds per ton.

2.e Emission Limitation:

The combined emissions from P037 through P044 shall not exceed 10.33 tons VOC per rolling, 12-month period

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor determined during the most recent stack test which demonstrated compliance with this emission limitation for VOC (in tons VOC per ton of glass throughput) by the combined throughput of glass fibers, in tons, for emissions units P037 through P040 (in tons, as recorded in section A.III.3 above).

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: Direct Dry Chop Classifier #1 Leg #5 (P041)

Activity Description: For Furnace 9212

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
chopped fiberglass classifier controlled by a fabric filter (modification)	OAC rule 3745-31-05(A)(3) (PTI 04-01345)	0.15 pound per hour of filterable particulate emissions (PE)
		0.66 ton per year PE
		0.113 pound per hour of PM10
		0.50 ton per year of PM10
		See sections A.I.2.a and A.I.2.b.
	OAC rule 3745-17-07(A)(1)	See section A.I.2.c.
	OAC rule 3745-17-11(B)(1)	See section A.I.2.c.
	OAC rules 3745-31-10 thru 20	See section A.I.2.d.

2. Additional Terms and Conditions

2.a The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the requirements of OAC rules 3745-31-10 thru 20.

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

2.c 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.d Combined annual emissions from P037 through P044 shall not exceed 2.08 tons of PM10 per rolling, 12-month period.

II. Operational Restrictions

1. The combined throughput of glass fibers in emissions units P041 through P044 shall not exceed 30,165.2 tons per rolling, 12-month period.

II. Operational Restrictions (continued)

2. The permittee shall initiate corrective action within 1 hour of an alarm from a bag leak detection system and complete corrective actions in a timely manner. Example corrective actions may include:

i. inspecting the baghouse for air leaks, torn or broken bags or filter media, or 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; and

vi. shutting down the process producing the particulate emissions.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain records, on a monthly basis, of the combined throughput of glass fibers, in tons, for emissions units P041 through P044 as a rolling, 12-month summation.

2. The permittee shall install, calibrate, maintain, and continuously operate a bag leak detection system.

i. A triboelectric bag leak detection system shall be installed, operated, adjusted, and maintained in a manner consistent with the U.S. Environmental Protection Agency guidance, "Fabric Filter Bag Leak Detection Guidance" (EPA-454/R-98-015, September 1997). Other bag leak detection systems including, but not limited to, devices using light scattering and other effects, shall be installed, operated, adjusted, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.

ii. The bag leak detection system shall be certified by the manufacturer to be capable of detecting PE emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grain per actual cubic foot) or less.

iii. The bag leak detection system sensor shall produce an output of relative particulate emissions.

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

v. The bag leak detection system shall be installed downstream of the baghouse. Where multiple bag leak detection systems are required, the system instrumentation and alarm may be shared among the monitors.

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

vii. Following the initial adjustment, the permittee shall not adjust the range, averaging period, alarm setpoints, or alarm delay time. In no event shall the range be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless a responsible official certifies, by written report, that the baghouse has been inspected and found to be in good operating condition.

The permittee shall maintain records of any bag leak detection system alarms, including the date and time of the alarm, when corrective actions were initiated, the cause of the alarm, an explanation of the corrective actions taken, and when the cause of the alarm was corrected.

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 baghouse 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 any exceedence of the rolling, 12-month limitation for the combined throughput of glass fibers in emissions units P041 through P044.

2. The permittee shall submit semiannual deviation (excursion) reports that identify all periods of time during which any bag leak detection system alarms were sounded. The reports shall include a summary of the date and time of the alarm(s), when corrective actions were initiated, the cause of the alarm(s), an explanation of the corrective actions taken, and when the cause of the alarm(s) was corrected.

3. The permittee shall submit quarterly written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year.

V. Testing Requirements

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

1.a Emission Limitation:

10% opacity, as a 6-minute average

Applicable Compliance Method;

If required, compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A.

1.b Emission Limitation:

0.113 pound of PM10 per hour

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 of 40 CFR Part 60, Appendix A and Methods 201 and 202 of 40 CFR Part 51, Appendix M, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

1.c Emission Limitation:

0.5 ton of PM10 per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emission unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.113 pound of PM10 per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

V. Testing Requirements (continued)

1.d Emission Limitation:

The combined emissions from P037 through P044 shall not exceed 2.08 tons of PM10 per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the emission factor determined during the most recent stack test(s) which demonstrated compliance with this emission limitation for PM10 (in tons PM10 per ton of glass throughput) by the combined throughput of glass fibers, in tons, for emissions units P041 through P044 (in tons, as recorded in section A.III.1 above).

NOTE: the summation of tons of glass dried in emissions units P037 through P040 should be equal to the summation of tons of glass processed in emissions units P041 through P044, recorded as required in sections A.III for each emissions unit.

1.e Emission Limitation:

0.15 pound of filterable PE per hour

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60 Appendix A, using the methods and procedures specified in OAC rule 3745-17-03(B)(10), or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

1.f Emission Limitation:

0.66 ton of PE per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated by multiplying the short term emission rate of 0.15 pound of PE per hour by 8,760 hours per year and dividing by 2,000 pounds per ton.

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: Direct Dry Chop Classifier #2 Leg #6 (P042)

Activity Description: For Furnace 9212

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
chopped fiberglass classifier controlled by a fabric filter (modification)	OAC rule 3745-31-05(A)(3) PTI 04-01345	0.15 pound per hour of filterable particulate emissions (PE)
		0.66 ton per year PE
		0.113 pound per hour of particulate matter as PM10
		0.50 ton per year of PM10
		See sections A.I.2.a and A.I.2.b.
	OAC rule 3745-17-07(A)(1)	See section A.I.2.c.
	OAC rule 3745-17-11(B)(1)	See section A.I.2.c.
	OAC rules 3745-31-10 thru 20	See section A.I.2.d.

2. Additional Terms and Conditions

2.a The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the requirements of OAC rules 3745-31-10 thru 20.

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

2.c 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.d Combined annual emissions from P037 through P044 shall not exceed 2.08 tons of PM10 per rolling, 12-month period.

II. Operational Restrictions

1. The combined throughput of glass fibers in emissions units P041 through P044 shall not exceed 30,165.2 tons per rolling, 12-month period.

II. Operational Restrictions (continued)

2. The permittee shall initiate corrective action within 1 hour of an alarm from a bag leak detection system and complete corrective actions in a timely manner. Example corrective actions may include:

i. inspecting the baghouse for air leaks, torn or broken bags or filter media, or 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; and

vi. shutting down the process producing the particulate emissions.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain records, on a monthly basis, of the combined throughput of glass fibers, in tons, for emissions units P041 through P044 as a rolling, 12-month summation.

2. The permittee shall install, calibrate, maintain, and continuously operate a bag leak detection system.

i. A triboelectric bag leak detection system shall be installed, operated, adjusted, and maintained in a manner consistent with the U.S. Environmental Protection Agency guidance, "Fabric Filter Bag Leak Detection Guidance" (EPA-454/R-98-015, September 1997). Other bag leak detection systems including, but not limited to, devices using light scattering and other effects, shall be installed, operated, adjusted, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.

ii. The bag leak detection system shall be certified by the manufacturer to be capable of detecting PE emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grain per actual cubic foot) or less.

iii. The bag leak detection system sensor shall produce an output of relative particulate emissions.

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

v. The bag leak detection system shall be installed downstream of the baghouse. Where multiple bag leak detection systems are required, the system instrumentation and alarm may be shared among the monitors.

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

vii. Following the initial adjustment, the permittee shall not adjust the range, averaging period, alarm setpoints, or alarm delay time. In no event shall the range be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless a responsible official certifies, by written report, that the baghouse has been inspected and found to be in good operating condition.

The permittee shall maintain records of any bag leak detection system alarms, including the date and time of the alarm, when corrective actions were initiated, the cause of the alarm, an explanation of the corrective actions taken, and when the cause of the alarm was corrected.

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 baghouse 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 any exceedence of the rolling, 12-month limitation for the combined throughput of glass fibers in emissions units P041 through P044.

2. The permittee shall submit semiannual deviation (excursion) reports that identify all periods of time during which any bag leak detection system alarms were sounded. The reports shall include a summary of the date and time of the alarm(s), when corrective actions were initiated, the cause of the alarm(s), an explanation of the corrective actions taken, and when the cause of the alarm(s) was corrected.

3. The permittee shall submit quarterly written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year.

V. Testing Requirements

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

1.a Emission Limitation:

10% opacity, as a 6-minute average.

Applicable Compliance Method;

If required, compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A.

1.b Emission Limitation:

0.113 pound of PM10 per hour.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 of 40 CFR Part 60, Appendix A and Methods 201 and 202 of 40 CFR Part 51, Appendix M, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

1.c Emission Limitation:

0.5 ton of PM10 per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emission unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.113 pound of PM10 per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

V. Testing Requirements (continued)

1.d Emission Limitation:

The combined emissions from P037 through P044 shall not exceed 2.08 tons of PM10 per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the emission factor determined during the most recent stack test(s) which demonstrated compliance with this emission limitation for PM10 (in tons PM10 per ton of glass throughput) by the combined throughput of glass fibers, in tons, for emissions units P041 through P044 (in tons, as recorded in section A.III.1 above).

NOTE: the summation of tons of glass dried in emissions units P037 through P040 should be equal to the summation of tons of glass processed in emissions units P041 through P044, recorded as required in sections A.III for each emissions unit.

1.e Emission Limitation:

0.15 pound of filterable PE per hour

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60 Appendix A, using the methods and procedures specified in OAC rule 3745-17-03(B)(10), or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

1.f Emission Limitation:

0.66 ton of PE per year.

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated by multiplying the short term emission rate of 0.15 pound of PE per hour by 8,760 hours per year and dividing by 2,000 pounds per ton.

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: Direct Dry Chop Classifier #3 Leg #7 (P043)

Activity Description: For Furnace 9212

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
chopped fiberglass classifier controlled by a fabric filter (modification)	OAC rule 3745-31-05(A)(3) PTI 04-01345	0.15 pound per hour of filterable particulate emissions (PE)
		0.66 ton per year PE
		0.113 pound per hour of particulate matter as PM10
		0.50 ton per year of PM10
		See sections A.I.2.a and A.I.2.b.
	OAC rule 3745-17-07(A)(1)	See section A.I.2.c.
	OAC rule 3745-17-11(B)(1)	See section A.I.2.c.
	OAC rules 3745-31-10 thru 20	See section A.I.2.d.

2. Additional Terms and Conditions

2.a The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the requirements of OAC rules 3745-31-10 thru 20.

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

2.c 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.d Combined annual emissions from P037 through P044 shall not exceed 2.08 tons of PM10 per rolling, 12-month period.

II. Operational Restrictions

1. The combined throughput of glass fibers in emissions units P041 through P044 shall not exceed 30,165.2 tons per rolling, 12-month period.

II. Operational Restrictions (continued)

2. The permittee shall initiate corrective action within 1 hour of an alarm from a bag leak detection system and complete corrective actions in a timely manner. Example corrective actions may include:

i. inspecting the baghouse for air leaks, torn or broken bags or filter media, or 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; and

vi. shutting down the process producing the particulate emissions.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain records, on a monthly basis, of the combined throughput of glass fibers, in tons, for emissions units P041 through P044 as a rolling, 12-month summation.

2. The permittee shall install, calibrate, maintain, and continuously operate a bag leak detection system.

i. A triboelectric bag leak detection system shall be installed, operated, adjusted, and maintained in a manner consistent with the U.S. Environmental Protection Agency guidance, "Fabric Filter Bag Leak Detection Guidance" (EPA-454/R-98-015, September 1997). Other bag leak detection systems including, but not limited to, devices using light scattering and other effects, shall be installed, operated, adjusted, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.

ii. The bag leak detection system shall be certified by the manufacturer to be capable of detecting PE emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grain per actual cubic foot) or less.

iii. The bag leak detection system sensor shall produce an output of relative particulate emissions.

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

v. The bag leak detection system shall be installed downstream of the baghouse. Where multiple bag leak detection systems are required, the system instrumentation and alarm may be shared among the monitors.

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

vii. Following the initial adjustment, the permittee shall not adjust the range, averaging period, alarm setpoints, or alarm delay time. In no event shall the range be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless a responsible official certifies, by written report, that the baghouse has been inspected and found to be in good operating condition.

The permittee shall maintain records of any bag leak detection system alarms, including the date and time of the alarm, when corrective actions were initiated, the cause of the alarm, an explanation of the corrective actions taken, and when the cause of the alarm was corrected.

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 baghouse 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 any exceedence of the rolling, 12-month limitation for the combined throughput of glass fibers in emissions units P041 through P044.

2. The permittee shall submit semiannual deviation (excursion) reports that identify all periods of time during which any bag leak detection system alarms were sounded. The reports shall include a summary of the date and time of the alarm(s), when corrective actions were initiated, the cause of the alarm(s), an explanation of the corrective actions taken, and when the cause of the alarm(s) was corrected.

3. The permittee shall submit quarterly written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year.

V. Testing Requirements

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

1.a Emission Limitation:

10% opacity, as a 6-minute average

Applicable Compliance Method;

If required, compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A.

1.b Emission Limitation:

0.113 pound of PM10 per hour

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 of 40 CFR Part 60, Appendix A and Methods 201 and 202 of 40 CFR Part 51, Appendix M, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

1.c Emission Limitation:

0.5 ton of PM10 per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emission unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.113 pound of PM10 per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

V. Testing Requirements (continued)

1.d Emission Limitation:

The combined emissions from P037 through P044 shall not exceed 2.08 tons of PM10 per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the emission factor determined during the most recent stack test(s) which demonstrated compliance with this emission limitation for PM10 (in tons PM10 per ton of glass throughput) by the combined throughput of glass fibers, in tons, for emissions units P041 through P044 (in tons, as recorded in section A.III.1 above).

NOTE: the summation of tons of glass dried in emissions units P037 through P040 should be equal to the summation of tons of glass processed in emissions units P041 through P044, recorded as required in sections A.III for each emissions unit.

1.e Emission Limitation:

0.15 pound of filterable PE per hour

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60 Appendix A, using the methods and procedures specified in OAC rule 3745-17-03(B)(10), or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

1.f Emission Limitation:

0.66 ton of PE per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated by multiplying the short term emission rate of 0.15 pound of PE per hour by 8,760 hours per year and dividing by 2,000 pounds per ton.

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: Direct Dry Chop Classifier #4 Leg #8 (P044)

Activity Description: For Furnace 9212

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
chopped fiberglass classifier controlled by a fabric filter (modification)	OAC rule 3745-31-05(A)(3) PTI 04-01345	0.15 pound per hour of filterable particulate emissions (PE)
		0.66 ton per year PE
		0.113 pound per hour of particulate matter as PM10
		0.50 ton per year of PM10
		See sections A.I.2.a and A.I.2.b.
	OAC rule 3745-17-07(A)(1)	See section A.I.2.c.
	OAC rule 3745-17-11(B)(1)	See section A.I.2.c.
	OAC rules 3745-31-10 thru 20	See section A.I.2.d.

2. Additional Terms and Conditions

2.a The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the requirements of OAC rules 3745-31-10 thru 20.

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

2.c 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.d Combined annual emissions from P037 through P044 shall not exceed 2.08 tons of PM10 per rolling, 12-month period.

II. Operational Restrictions

1. The combined throughput of glass fibers in emissions units P041 through P044 shall not exceed 30,165.2 tons per rolling, 12-month period.

II. Operational Restrictions (continued)

2. The permittee shall initiate corrective action within 1 hour of an alarm from a bag leak detection system and complete corrective actions in a timely manner. Example corrective actions may include:

i. inspecting the baghouse for air leaks, torn or broken bags or filter media, or 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; and

vi. shutting down the process producing the particulate emissions.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain records, on a monthly basis, of the combined throughput of glass fibers, in tons, for emissions units P041 through P044 as a rolling, 12-month summation.

2. The permittee shall install, calibrate, maintain, and continuously operate a bag leak detection system.

i. A triboelectric bag leak detection system shall be installed, operated, adjusted, and maintained in a manner consistent with the U.S. Environmental Protection Agency guidance, "Fabric Filter Bag Leak Detection Guidance" (EPA-454/R-98-015, September 1997). Other bag leak detection systems including, but not limited to, devices using light scattering and other effects, shall be installed, operated, adjusted, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.

ii. The bag leak detection system shall be certified by the manufacturer to be capable of detecting PE emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grain per actual cubic foot) or less.

iii. The bag leak detection system sensor shall produce an output of relative particulate emissions.

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

v. The bag leak detection system shall be installed downstream of the baghouse. Where multiple bag leak detection systems are required, the system instrumentation and alarm may be shared among the monitors.

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

vii. Following the initial adjustment, the permittee shall not adjust the range, averaging period, alarm setpoints, or alarm delay time. In no event shall the range be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless a responsible official certifies, by written report, that the baghouse has been inspected and found to be in good operating condition.

The permittee shall maintain records of any bag leak detection system alarms, including the date and time of the alarm, when corrective actions were initiated, the cause of the alarm, an explanation of the corrective actions taken, and when the cause of the alarm was corrected.

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 baghouse 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 any exceedence of the rolling, 12-month limitation for the combined throughput of glass fibers in emissions units P041 through P044.

2. The permittee shall submit semiannual deviation (excursion) reports that identify all periods of time during which any bag leak detection system alarms were sounded. The reports shall include a summary of the date and time of the alarm(s), when corrective actions were initiated, the cause of the alarm(s), an explanation of the corrective actions taken, and when the cause of the alarm(s) was corrected.

3. The permittee shall submit quarterly written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year.

V. Testing Requirements

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

1.a Emission Limitation:

10% opacity, as a 6-minute average

Applicable Compliance Method;

If required, compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A.

1.b Emission Limitation:

0.113 pound of PM10 per hour

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 of 40 CFR Part 60, Appendix A and Methods 201 and 202 of 40 CFR Part 51, Appendix M, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

1.c Emission Limitation:

0.5 ton of PM10 per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emission unit. Compliance may be demonstrated through calculations performed as follows: multiply the short term emission rate of 0.113 pound of PM10 per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

V. Testing Requirements (continued)

1.d Emission Limitation:

The combined emissions from P037 through P044 shall not exceed 2.08 tons of PM10 per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the emission factor determined during the most recent stack test(s) which demonstrated compliance with this emission limitation for PM10 (in tons PM10 per ton of glass throughput) by the combined throughput of glass fibers, in tons, for emissions units P041 through P044 (in tons, as recorded in section A.III.1 above).

NOTE: the summation of tons of glass dried in emissions units P037 through P040 should be equal to the summation of tons of glass processed in emissions units P041 through P044, recorded as required in sections A.III for each emissions unit.

1.e Emission Limitation:

0.15 pound of filterable PE per hour

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60 Appendix A, using the methods and procedures specified in OAC rule 3745-17-03(B)(10), or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

1.f Emission Limitation:

0.66 ton of PE per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated by multiplying the short term emission rate of 0.15 pound of PE per hour by 8,760 hours per year and dividing by 2,000 pounds per ton.

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: Gypsum Line Oven (P045)

Activity Description: For Furnace 9212 Line #4

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
2.0 mmBtu per hour, direct fired, natural gas fired fiberglass drying oven controlled by a wet scrubber (modification)	OAC rule 3745-31-05(A)(3) (PTI 04-01345)	0.17 pound per hour of carbon monoxide (CO) 0.20 pound per hour of nitrogen oxides (NOx) 0.19 pound per hour of filterable particulate emissions (PE) 0.84 ton per year PE 0.14 pound per hour of PM10 0.001 pound per hour of sulfur dioxide (SO2) 1.25 pound per hour of volatile organic compounds (VOC) See sections A.I.2.a, A.I.2.b, and A.I.2.c.
	OAC rule 3745-17-07(A)(1)	See section A.I.2.d.
	OAC rule 3745-17-11(B)(1)	See section A.I.2.d.
	OAC rule 3745-18-06(E)	See section A.I.2.d.
	OAC rule 3745-21-07(B)	See section A.I.2.e.
	OAC rule 3745-21-08(B)	See section A.I.2.f.
	OAC rule 3745-23-06(B)	See section A.I.2.e.
	OAC rule 3745-31-02(A)(2)	0.39 ton per year of CO

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
	OAC rule 3745-31-05(C)	0.47 ton per year of NOx
		0.004 ton per year of SO2
		5.47 ton per year of VOC
	OAC rules 3745-31-10 thru 20	0.49 ton per year of PM10

2. Additional Terms and Conditions

2.a The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(B), OAC rule 3745-21-08(B), OAC rule 3745-23-06(B), OAC rule 3745-31-02(A)(2), OAC rule 3745-31-05(C) and OAC rules 3745-31-10 thru 20.

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

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

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

2.e The permittee has satisfied the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-07(B) and OAC rule 3745-23-06 by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 04-01345.

2.f The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by complying with all applicable rules.

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 burn only natural gas as fuel in this emissions unit.

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

3. The pressure drop across the scrubber shall be continuously maintained between 3 and 6 inches of water at all times while the emissions unit is in operation.

4. The scrubber water flow rate shall be continuously maintained at a value of not less than 60 gallons per minute at all times while the emissions unit is in operation.

5. The volume of natural gas combusted in this emissions unit shall not exceed 9.37 mmscf per rolling, 12-month period.

6. The throughput of glass fibers in this emissions unit shall not exceed 16,200 tons (32,401,100 lbs) per rolling, 12-month period.

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

3. The permittee shall collect and record the following information during each 8-hour shift:

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

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

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

4. The permittee shall maintain records, on a monthly basis, of the volume of natural gas (in mmscf) combusted in this emissions unit as a rolling, 12-month summation.

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

6. 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 wet scrubber 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 each day when a fuel other than natural gas was burned in this emissions unit.

2. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were outside of the ranges specified in sections A.II.3 and A.II.4:

a. the static pressure drop across the scrubber; and

b. the scrubber water flow rate.

3. The permittee shall submit quarterly deviation (excursion) reports that identify each exceedence of the rolling, 12-month limitation for the volume of natural gas combusted in this emissions unit.

4. The permittee shall submit quarterly deviation (excursion) reports that identify each exceedance of the rolling, 12-month limitation for the throughput of glass fibers in this emissions unit.

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

6. The permittee shall submit quarterly written reports that (a) identify all days during which any visible particulate emissions were observed from the wet scrubber serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year.

V. Testing Requirements

1. Compliance with the emission limitations in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:

10% opacity as a 6-minute average

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A.

1.b Emission Limitation:

0.17 pound per hour of CO

Applicable Compliance Method:

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

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

1.c Emission Limitation:

0.39 ton per year of CO

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1, dated 7/98 (84 pounds of CO emissions per mmscf) by the actual volume of natural gas combusted in this emissions unit (in mmscf, as recorded in section A.III.4 above), and then dividing by 2000 pounds per ton.

1.d Emission Limitation:

0.20 pound per hour of NOx

Applicable Compliance Method:

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

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

V. Testing Requirements (continued)

1.e Emission Limitation:

0.47 ton per year of NOx

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1, dated 7/98 (100 pounds of NOx emissions per mmscf) by the actual volume of natural gas combusted in this emissions unit (in mmscf, as recorded in section A.III.4 above), and then dividing by 2000 pounds per ton.

1.f Emission Limitation:

0.19 pound per hour of particulate emissions

Applicable Compliance Method

If required, compliance shall be demonstrated based upon emission testing performed in accordance with Methods 1 through 5 of 40 CFR Part 60, Appendix A using the methods and procedures specified in OAC rule 3745-17-03(B)(10), or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

1.g Emission Limitation:

0.84 ton per year of particulate emissions

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable particulate emission limitation (0.19 pound per hour) by the maximum annual hours of operation (8760 hours per year), and then dividing by 2000 pounds per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

1.h Emission Limitation:

0.14 pound of PM10 per hour

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 of 40 CFR Part 60, Appendix A and Methods 201 and 202 of 40 CFR Part 51, Appendix M, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

1.i Emission Limitation:

0.49 ton of PM10 per year

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor determined during the most recent stack test which demonstrated compliance with this emission limitation for PM10 (in tons PM10 per ton of glass throughput) by the throughput of glass fibers for this emissions unit (in tons, as recorded in section A.III.5 above).

V. Testing Requirements (continued)

1.j Emission Limitation:

0.001 pound per hour of SO2

Applicable Compliance Method:

Compliance may be determined through calculations based on emission factors specified in U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-2, dated 7/98, as follows: divide the emission factor of 0.6 pound of SO2 emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 2 MMBtu per hour.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 6 of 40 CFR Part 60 Appendix A using the methods and procedures specified in OAC rule 3745-18-04, or other U.S. EPA-approved test method, with prior approval from the Ohio EPA.

1.k Emission Limitation:

0.004 ton per year of SO2

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1, dated 7/98 (0.6 pound of SO2 emissions per mmscf) by the actual volume of natural gas combusted in this emissions unit (in mmscf, as recorded in section A.III.4 above), and then dividing by 2000 pounds per ton.

1.l Emission Limitation:

1.25 pound per hour of VOC

Applicable Compliance Method:

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

1.m Emission Limitation:

5.47 tons per year of VOC

Applicable Compliance Method:

Compliance shall be determined by multiplying the emission factor determined during the most recent stack test which demonstrated compliance with this emission limitation for VOC (in tons VOC per ton of glass throughput) by the throughput of glass fibers for this emissions unit (in tons, as recorded in section A.III.5 above).

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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