State of Ohio Environmental Protection Agency

RE: FINAL PERMIT TO INSTALL MODIFICATION **CERTIFIED MAIL**
LUCAS COUNTY

Street Address:
122 S. Front Street

Lazarus Gov. Center **TELE:** (614) 644-3020 **FAX:** (614) 644-2329

Mailing Address:
Lazarus Gov. Center
P.O. Box 1049

Application No: 04-01345
Fac ID: 0448000012
DATE: 1/26/2006

Johns Manville Plant 1
Ron Hudson
6050 River Rd
Waterville, OH 43566

Enclosed Please find a modification to the Ohio EPA Permit To Install referenced above which will modify the terms and conditions.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
309 South Fourth Street, Room 222
Columbus, Ohio 43215

Sincerely,

Michael W. Ahern

Michael W. Ahern, Manager
Permit Issuance and Data Management Section
Division of Air Pollution Control

CC: **USEPA** **TDES**

STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

Permit To Install **Issue Date: 1/26/2006**
Terms and Conditions **Effective Date: 1/26/2006**

FINAL ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 04-01345

Application Number:	04-01345
Facility ID:	0448000012
Permit Fee:	**$8500**
Name of Facility:	Johns Manville Plant 1
Person to Contact:	Ron Hudson
Address:	6050 River Rd Waterville, OH 43566

Location of proposed air contaminant source(s) [emissions unit(s)]:
6050 River Rd
Waterville, **Ohio**

Description of proposed emissions unit(s):
Modification to increase the production rate on the gypsum oven (P045), lower the emission rate for the BMC (P032), and modify P037-P044 for bag leak detectors.

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Joseph P. Koncelik

Director

Part I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Permit-To-Install General Terms and Conditions

1. Monitoring and Related Recordkeeping and Reporting Requirements

a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

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.

b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:

i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to

the appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See B.9 below if no deviations occurred during the quarter.

iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the appropriate Ohio EPA District Office or local air agency every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.

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

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

2. Scheduled Maintenance/Malfunction Reporting

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

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

3. Risk Management Plans

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

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.

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.

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 re-issuance, or modification

b. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.

c. This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.

d. This permit does not convey any property rights of any sort, or any exclusive privilege.

e. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to

the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

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. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

9. Compliance Requirements

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

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

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 ORC section 3704.08.

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.

10. Permit-To-Operate Application

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

b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this permit is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the source(s) covered by this permit.

11. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

12. 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.

13. Permit-To-Install

A permit-to-install must be obtained pursuant to OAC Chapter 3745-31 prior to "installation" of "any air contaminant source" as defined in OAC rule 3745-31-01, or "modification", as defined in OAC rule 3745-31-01, of any emissions unit included in this permit.

B. State Only Enforceable Permit-To-Install General Terms and Conditions

1. Compliance Requirements

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

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

a. Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the 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 (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. 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.)

3. 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.

4. Authorization To Install or Modify

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

5. Construction of New Sources(s)

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

6. Public Disclosure

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

7. Applicability

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

8. Construction Compliance Certification

If applicable, the applicant shall provide Ohio EPA with a written certification (see enclosed form if applicable) that the facility has been constructed in accordance with the permit-to-install application and the terms and conditions of the permit-to-install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

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

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

C. Permit-To-Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

Pollutant	Tons Per Year (Increase)
PM10	*155.87* (*40.56*)
SO2	143.92 (36.30)
NOx	145.5 (38.80)
CO	20.69 (7.31)
VOC	*31.47* (*20.47*)
Fluorides	29.81 (7.52)

Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions

1. The permittee shall provide an annual report of all HAPs used at the facility. The report shall include an table that shows usage by emissions unit. The report shall list each HAP and the amount used in tons. This report may be submitted electronically with prior approval of the Toledo Division of Environmental Services. This report shall be submitted by January 31 and shall include the usages for the previous calendar year.

B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions

1. The permittee shall provide an annual report of all Air Toxics used at the facility. The report shall include an table that shows usage by emissions unit. The report shall list each Air Toxic and the amount used in tons. This report may be submitted electronically with prior approval of the Toledo Division of Environmental Services. This report shall be submitted by January 31 and shall include the usages for the previous calendar year. For the purpose of this report, an Air Toxic is defined as any substance that has been assigned a Threshold Limit Value (TLV) as established by the American Conference of Governmental Industrial Hygienists(ACGIH).

Emissions Unit ID: P001

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 specified in narrative form following the table.

Operations, Property, and/or Equipment		
P001 - 9211 Glass melting furnace(with electric boost), forehearth, and forming room - modification 5/20/2004		
	Fiberglass forehearth area with natural gas over firing and no controls	

Emissions Unit ID: P001

	Applicable Rules/Requirements	OAC rule 3745-21-07(B)
	OAC rule 3745-31-05(A)(3)	OAC rule 3745-21-08(B)
		OAC rule 3745-23-06(B)
		40 CFR Part 60, Subpart CC
Fiberglass forming area with rolled-on binder application and no controls		OAC rule 3745-31-05(A)(3)
	OAC rule 3745-31-10 through 20	
	OAC rule 3745-31-05(C)	
	OAC rule 3745-31-02(A)(2)	
	OAC rule 3745-17-07(A)(1)	
	OAC rule 3745-17-11(B)(1)	
		OAC rule 3745-31-10 through 20
		OAC rule 3745-31-05(C)
	OAC rule 3745-18-06(E)(2)	

OAC rule 3745-31-02(A)(2) OAC rule 3745-17-07(A)(1) OAC rule 3745-17-08(B) OAC rule 3745-18-06(A) OAC rule 3745-21-07(B) OAC rule 3745-21-08(B) OAC rule 3745-23-06(B) OAC rule 3745-31-05(A)(3) OAC rule 3745-31-10 through 20	OAC rule 3745-31-05(C) OAC rule 3745-31-02(A)(2) OAC rule 3745-17-07(A)(1) OAC rule 3745-17-08(B) OAC rule 3745-21-07(B)	Applicable Emissions <u>Limitations/Control Measures</u> 1.87 pounds of particulate emissions as PM_{10} per ton of glass pull; 66 tons PM_{10} per rolling, 12-month period; 17.34 tons of filterable particulate emissions (PE) per year; 0.01 pound of carbon monoxide (CO) per ton of glass pull; 0.35 ton CO per rolling, 12-month period; 1.71 pounds of nitrogen oxides (NOx) per ton of glass pull; 60 tons NOx per rolling, 12-month period; 2.02 pounds of sulfur dioxide (SO_2) per ton of glass pull; 71 tons SO_2 per rolling, 12-month period; 0.04 pound of volatile organic compounds (VOC) per ton of glass pull; 1.4 tons VOC per rolling, 12-month period; 0.36 pound of fluorides (F^-) per ton of glass pull; 13 tons F^- per rolling, 12-month period; and see sections A.I.2.a and A.I.2.r. See section A.I.2.b. See section A.I.2.c. See section A.I.2.d. See section A.I.2.e. Requirements for 40 CFR Part 60,

Subpart CC are more stringent than this rule.	12-month period;	12-month period;
	0.038 pound of fluorides (F^-) per ton of glass pull;	0.021 pound of fluorides (F^-) per ton of glass pull;
See section A.I.2.e.	1.32 tons F^- per rolling, 12-month period;	0.73 ton F^- per rolling, 12-month period;
See section A.I.2.f.	and see section A.I.2.i.	and see section A.I.2.i.
See section A.I.2.g.	See section A.I.2.k.	See section A.I.2.o.
See section A.I.2.h.	See section A.I.2.l.	See section A.I.2.p.
0.50 pound of filterable particulate emissions (PE) per ton of glass pull	See section A.I.2.m.	See section A.I.2.q.
	See section A.I.2.e.	See section A.I.2.e.
0.011 pound of particulate emissions as PM_{10} per ton of glass pull;	No visible emissions of fugitive dust from the exhaust stack; and see section A.I.2.j.	No visible emissions of fugitive dust from the exhaust stack and see section A.I.2.j.
0.39 ton PM_{10} per rolling, 12-month period;	See section A.I.2.n.	See section A.I.2.f.
0.20 pound of filterable particulate emissions (PE) per hour;	See section A.I.2.f.	
0.88 ton PE per year;	See section A.I.2.g.	
1.8 pounds of carbon monoxide (CO) per hour;	See section A.I.2.h.	
7.9 tons CO per rolling, 12-month period;	0.20 pound of particulate emissions as PM_{10} per ton of glass pull;	
2.1 pounds of nitrogen oxides (NOx) per hour;	7.0 tons PM_{10} per rolling, 12-month period;	
9.2 tons NOx, per rolling, 12-month period;	0.50 pound of filterable particulate emissions (PE) per hour;	
0.02 pound of sulfur dioxide (SO_2) per hour;	2.2 tons PE per year;	
0.09 ton SO_2 per rolling, 12-month period;	0.09 pound of volatile organic compounds (VOC) per ton of glass pull;	
0.12 pound of volatile organic compounds (VOC) per hour;	3.2 tons VOC per rolling,	
0.53 ton VOC per rolling,		

2. Additional Terms and Conditions

2.a The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1), 3745-31-10 through 20, and 40 CFR Part 60, Subpart CC.

2.b The combined emissions from P001 and P013, measured at the glass melting furnace baghouse exhaust, shall not exceed 133.10 tons of PM_{10} and 25.62 tons of fluorides per rolling, 12-month period.

2.c 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 SO_2, and 2.85 tons of VOC per rolling, 12-month period.

2.d 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.e 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.f 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.g 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.h 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.i The requirements of this rule also include compliance with the requirements of

OAC rules 3745-31-10 through 20, OAC rule 3745-31-05(C) and where applicable OAC rule 3745-31-02(A)(2).

2.j The permittee shall install best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust. 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.

2.k 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 PM_{10} and 2.70 tons of fluorides per rolling, 12-month period.

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 15.91 tons of NOx, 0.78 ton of PM_{10}, 0.10 ton of SO_2, and 0.87 ton of VOC 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 13.36 tons of CO per rolling, 12-month period.

2.n OAC rule 3745-18-06(A) does not establish sulfur dioxide emission limitations for the fuel burning equipment associated with this emissions unit because the emissions unit only employs natural gas as fuel. However, OAC rule 3745-18-06(A) requires that the natural gas being combusted meet certain fuel quality restrictions (a heat content greater than 950 Btu per standard cubic foot and a sulfur content less than 0.6 pound per million standard cubic feet). Because the natural gas being burned in this emissions unit is the standard, pipeline quality natural gas supplied to industrial, commercial, and residential users throughout the State, it is assumed that it meets the fuel quality restrictions; and no monitoring, record keeping or reporting requirements are necessary to ensure ongoing compliance with OAC rule3745-18-06(A).

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 14.24 tons of PM_{10} and 1.49 tons of fluorides per rolling, 12-month period.

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 5.18 tons of methanol per rolling, 12-month period.

2.r Visible particulate emissions from the stack servicing this emissions unit shall not exceed 20% 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 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 hourly pull rates.

   To ensure enforceability during the first 12 calendar months of operation following start-up of this emissions unit/permit issuance, the permittee shall not exceed the emission levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Production Rate of Glass Pulled (Tons)
1	5,700
1-2	11,400
1-3	17,100
1-4	22,800
1-5	28,500
1-6	34,200
1-7	39,900
1-8	45,600
1-9	51,300
1-10	57,000
1-11	62,700
1-12	69,350

   After the first 12 calendar months of operation following issuance of this permit, compliance with the annual emission limitation(s) shall be based upon a rolling, 12-month summation of the glass pull rates.

3. 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.

4. 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 shut down of the unit. The SOP shall include, but shall not be limited to the following:

   a. startup and shut down 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; and

   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 SOP shall specify 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. 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 average 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 any 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 Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

2. The permittee shall 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 install 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.

4. The permittee shall install, 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:

   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.

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 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 PM_{10}, tons of SO_2, tons of VOC, and tons of fluorides;

   b. the total rolling, 12-month summation of the combined emissions from P001 and P013, measured at the glass melting furnace baghouse exhaust, for all vents serving both forehearth areas and for all exhaust stacks serving both forming areas, in tons of CO, tons of NOx, tons of PM_{10}, tons of SO_2, tons of VOC, and tons of fluorides per rolling, 12-month period; and

   c. a record of the glass pull rate as a rolling, 12-month summation of the daily glass pull rates, including a record of any month in which the pull rate exceeded the allowable rolling, 12-month rate of glass pull.

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.

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 cumulative rolling 12-month glass pull rate limitation of 69,350 tons per rolling 12-months;

   b. all periods of time during which the glass pull rate exceeded the daily 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 that 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 average 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 limitation in tons of CO, tons of NOx, tons of PM_{10}, tons of SO_2, tons of VOC, and/or tons of fluorides per rolling, 12-month period.

6. Except as otherwise specified above, all reports required in this permit shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.

V. Testing Requirements

<u>Glass Melting Furnace</u>

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

1. The permittee shall conduct, or have conducted, emission testing for the glass melting furnace in accordance with the following requirements:

   a. The emissions testing shall be conducted within 60 days after reaching full production, but not later than 180 days after the initial furnace startup following the installation of the electric boost system.

   b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for CO, NOx, PE, PM_{10}, SO_2, F- and opacity.

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

      i. for CO, Method 10 of 40 CFR Part 60, Appendix A;

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

      iii. for PE, Method 5 of 40 CFR Part 60, Appendix A, as specified in 40 CFR 60.293(e);

iv. for PM_{10}, Methods 201 and 202 of 40 CFR Part 51, Appendix M;

v. for SO_2, Method 6 of 40 CFR Part 60, Appendix A using the procedures specified in OAC rule 3745-18-04;

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

vii. 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.

d. The tests 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 or the Ohio EPA Central Office.

e. If both melting furnaces P001 and P013 are to be tested simultaneously, they shall be operating at or near their maximum capacity and compliance shall be demonstrated with the combined total of the applicable emission limitations for each emissions unit. Each of the two units shall be tested, either together or separately as required in this section.

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

g. Unless a different frequency is specified in this section or proposed and agreed upon by the Ohio EPA, the permittee shall monitor and record process and/or add-on control device parameters, that will be used to demonstrate continuous compliance following testing, at least every 15 minutes during the performance tests. This shall include the NaOH addition rate to the spray tower and a check-off noting that the baghouse alarm has not been activated. The arithmetic average for each parameter (excluding the baghouse) shall be calculated using all of the recorded measurements collected during the compliance demonstration.

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.

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.

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 tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to testing may result in the Toledo Division of Environmental Services or the Ohio EPA Central Office's refusal to accept the results of the emission tests.

Personnel from the Toledo Division of Environmental Services or the Ohio EPA Central Office shall be permitted to witness the tests, 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 tests 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 tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Toledo Division of Environmental Services or the Ohio EPA Central Office.

2.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); or other U.S. EPA approved test method, with prior approval from the Ohio EPA.

2.b Emission Limitation:

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

Applicable Compliance Method:

The permittee shall demonstrate compliance through the testing requirements

contained in Section V.1, 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. The permittee may be required to retest if compliance with the CO emissions limitation is in question or as required in an operating/Title V permit.

2.c Emission Limitation:

0.35 ton CO per rolling, 12-month period

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 hourly limitation, compliance shall also be shown with the annual emission limitation.

2.d Emission Limitation:

1.71 pounds of NOx per ton of glass pull

Applicable Compliance Method:

The permittee shall demonstrate compliance through the testing requirements contained in Section V.1, 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. The permittee may be required to retest if compliance with the NOx emissions limitation is in question or as required in an operating/Title V permit.

2.e Emission Limitation:

60 tons NOx per rolling, 12-month period

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 hourly limitation, compliance shall also be shown with the annual emission limitation.

2.f Emission Limitation:

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

Applicable Compliance Method:

The permittee shall demonstrate compliance through the testing requirements contained in Section V.1, in accordance with the methods and procedures specified in Methods 1 through 4 and 5 of 40 CFR Part 60, Appendix A and as required in 40 CFR 60.293(e). The permittee may be required to retest if compliance with the PE emissions limitation is in question or as required in an operating/Title V permit.

2.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 lbs per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

2.h Emission Limitation:

1.87 pounds of PM_{10} per ton of glass pull

Applicable Compliance Method:

The permittee shall demonstrate compliance through the testing requirements contained in Section V.1, 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. The permittee may be required to retest if compliance with the PM_{10} emissions limitation is in question or as required in an operating/Title V permit.

2.i Emission Limitation:

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

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable PM_{10} emission limitation (1.87 pounds of PM_{10} 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 hourly limitation, compliance shall also be shown with the annual emission limitation.

2.j Emission Limitation:

2.02 pounds of SO_2 per ton of glass pull

Applicable Compliance Method:

The permittee shall demonstrate compliance through the testing requirements contained in Section V.1, 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. The permittee may be required to retest if compliance with the SO_2 emissions limitation is in question or as required in an operating/Title V permit.

2.k Emission Limitation:

71 tons SO_2 per rolling, 12-month period

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable SO_2 emission limitation (2.02 pounds of SO_2 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 hourly limitation, compliance shall also be shown with the annual emission limitation.

2.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 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:

1.4 tons VOC per rolling, 12-month period

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 hourly limitation, compliance shall also be shown with the annual emission limitation.

2.n Emission Limitation:

0.36 pound of F^- per ton of glass pull

Applicable Compliance Method:

The permittee shall demonstrate compliance through the testing requirements contained in Section V.1, in accordance with Methods 1 through 4 and 13B of 40 CFR Part 60 Appendix A; or other U.S. EPA approved test method, with prior approval from the Ohio EPA.. The permittee may be required to retest if compliance with the F^- emissions limitation is in question or as required in an operating/Title V permit.

2.o Emission Limitation:

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

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 hourly limitation, compliance shall also be shown with the annual emission limitation.

Forehearth Area

Compliance with the forehearth area 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:

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.b Emission Limitation:

0.88 tons 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.c 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.d 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.e 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.

3.f 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.g 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.h Emission Limitation:

0.011 pound of particulate emissions as PM_{10} per ton of glass pull

Applicable Compliance Method:

The permittee shall demonstrate compliance through the testing requirements contained in Section V.3, 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. The permittee may be required to retest if compliance with the PM_{10} emissions limitation is in question or as required in an operating/Title V permit.

3.i Emission Limitation:

0.39 ton PM_{10} per rolling, 12-month period

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable PM_{10} emission limitation (0.011 pound of PM_{10} 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 hourly limitation, compliance shall also be shown with the annual emission limitation.

3.j Emission Limitation:

0.02 pound of SO_2 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 SO_2 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 SO_2 per rolling, 12-month period

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable SO_2 emission limitation (0.02 pound of SO_2 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.

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:

0.038 pound of F^- per ton of glass pull

Applicable Compliance Method:

The permittee shall demonstrate compliance through the testing requirements contained in Section V.3, in accordance with Methods 1 through 4 and 13B of 40 CFR Part 60 Appendix A; or other U.S. EPA approved test method, with prior approval from the Ohio EPA. The permittee may be required to retest if compliance with the F^- emissions limitation is in question or as required in an operating/Title V permit.

3.o 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 hourly limitation, compliance shall also be shown with the annual emission limitation.

Fiberglass Forming Area

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:

0.50 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.

4.b 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.c 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.

4.d Emission Limitation:

0.20 pound of particulate emissions as PM_{10} per ton of glass pull

Applicable Compliance Method:

The permittee shall demonstrate compliance through the testing requirements contained in Section V.5, 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. The permittee may be required to retest if compliance with the PM_{10} emissions limitation is in question or as required in an operating/Title V permit.

4.e Emission Limitation:

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

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable PM_{10} emission limitation (0.20 pound of PM_{10} 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 hourly 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 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.

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 hourly 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:

The permittee shall demonstrate compliance through the testing requirements contained in Section V.5, in accordance with Methods 1 through 4 and 13B of 40 CFR Part 60 Appendix A; or other U.S. EPA approved test method, with prior approval from the Ohio EPA. The permittee may be required to retest if compliance with the F^- emissions limitation is in question or as required in an operating/Title V permit.

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 hourly 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 5.18 tons of methanol per rolling, 12-month period.

Applicable Compliance Method:

This limit was established to reflect a maximum potential to emit for methanol. Actual methanol emissions at full production are expected to be less than 0.5 ton per year based on mass balance. If required, the company is to submit an updated mass balance demonstrating the actual methanol losses.

VI. Miscellaneous Requirements

1. The terms and conditions contained in this PTI supercede those contained in PTI 04-975 for emissions unit P001.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 specified in narrative form following the table.

Operations, Property, and/or Equipment		
P013 - 9212 glass melting furnace with natural gas oxyfuel firing and electric boost, controlled by wet caustic scrubber and fabric filter - 8.4 ton/hr modification 5/20/2004		
	Fiberglass forehearth area with natural gas over firing and no controls	

	Applicable Rules/Requirements	
	OAC rule 3745-31-05(A)(3)	OAC rule 3745-21-08(B)
		OAC rule 3745-23-06(B)
		40 CFR Part 60, Subpart CC
Fiberglass forming area with rolled-on binder application and no controls		OAC rule 3745-31-05(A)(3)
	OAC rule 3745-31-10 through 20	
	OAC rule 3745-31-05(C)	
	OAC rule 3745-31-02(A)(2)	
	OAC rule 3745-17-07(A)(1)	
	OAC rule 3745-17-11(B)(1)	
	OAC rule 3745-18-06(E)(2)	OAC rule 3745-31-10 through 20
	OAC rule 3745-21-07(B)	OAC rule 3745-31-05(C)

		Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-02(A)(2) OAC rule 3745-17-07(A)(1) OAC rule 3745-17-08(B) OAC rule 3745-18-06(A) OAC rule 3745-21-07(B) OAC rule 3745-21-08(B) OAC rule 3745-23-06(B) OAC rule 3745-31-05(A)(3)	OAC rule 3745-17-07(A)(1) OAC rule 3745-17-08(B) OAC rule 3745-21-07(B)	1.87 pounds of particulate emissions as PM_{10} per ton of glass pull; 69 tons PM_{10} per rolling, 12-month period; 18.25 tons of filterable particulate emissions (PE) per year; 0.01 pound of carbon monoxide (CO) per ton of glass pull; 0.37 ton CO per rolling, 12-month period; 1.71 pounds of nitrogen oxides (NOx) per ton of glass pull; 63 tons NOx per rolling, 12-month period; 2.02 pounds of sulfur dioxide (SO_2) per ton of glass pull; 75 tons SO_2 per rolling, 12-month period; 0.04 pound of volatile organic compounds (VOC) per ton of glass pull; 1.5 tons VOC per rolling, 12-month period; 0.36 pound of fluorides (F^-) per ton of glass pull, 14 tons F^- per rolling, 12-month period; and see sections A.I.2.a and A.I.2.r.
OAC rule 3745-31-10 through 20		See section A.I.2.b.
OAC rule 3745-31-05(C)		See section A.I.2.c.
OAC rule 3745-31-02(A)(2)		See section A.I.2.d.
		See section A.I.2.e.

Requirements for 40 CFR Part 60, Subpart CC are more stringent than this rule	(F^-) per ton of glass pull; 1.39 tons F^- per rolling, 12-month period; and see section A.I.2.i.	See section A.I.2.o.
See section A.I.2.e.	See section A.I.2.k.	See section A.I.2.p.
See section A.I.2.f.	See section A.I.2.l.	See section A.I.2.q.
See section A.I.2.g.	See section A.I.2.m.	See section A.I.2.e.
See section A.I.2.h.	See section A.I.2.e.	No visible emissions of fugitive dust from the exhaust stack and see section A.I.2.j.
0.50 pound of filterable particulate emissions (PE) per ton of glass pull	No visible emissions of fugitive dust from the exhaust stack and see section A.I.2.j.	See section A.I.2.f.
0.011 pound of particulate emissions as PM_{10} per ton of glass pull; 0.41 ton PM_{10} per rolling, 12-month period; 0.20 pound of filterable particulate emissions (PE) per hour; 0.88 ton PE per year; 1.9 pounds of carbon monoxide (CO) per hour, 8.3 tons CO per rolling, 12-month period; 2.2 pounds of nitrogen oxides (NOx) per hour, 9.6 tons NOx per rolling, 12-month period; 0.02 pound of sulfur dioxide (SO_2) per hour; 0.09 ton SO_2 per rolling, 12-month period; 0.13 pound of volatile organic compounds (VOC) per hour; 0.57 ton VOC per rolling, 12-month period; 0.038 pound of fluorides	See section A.I.2.n. See section A.I.2.f. See section A.I.2.g. See section A.I.2.h. 0.20 pound of particulate emissions as PM_{10} per ton of glass pull; 7.3 tons PM_{10} per rolling, 12-month period; 0.50 pound of filterable particulate emissions (PE) per hour; 2.2 tons PE per year; 0.09 pound of volatile organic compounds (VOC) per ton of glass pull; 3.3 tons VOC per rolling, 12-month period; 0.021 pound of fluorides (F^-) per ton of glass pull; 0.77 ton F^- per rolling, 12-month period; and see section A.I.2.i.	

2. Additional Terms and Conditions

2.a The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1), 3745-31-10 through 20, and 40 CFR Part 60, Subpart CC.

2.b The combined emissions from P001 and P013, measured at the glass melting furnace baghouse exhaust, shall not exceed 133.10 tons of PM_{10} and 25.62 tons of fluorides per rolling, 12-month period.

2.c 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 SO_2, and 2.85 tons of VOC per rolling, 12-month period.

2.d 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.e 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.f 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.g 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.h 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.i The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-10 through 20, OAC rule 3745-31-05(C) and where applicable OAC rule 3745-31-02(A)(2).

2.j The permittee shall install best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust. 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.

2.k 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 PM_{10} and 2.70 tons of fluorides per rolling, 12-month period.

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 15.91 tons of NOx, 0.78 ton of PM_{10}, 0.10 ton of SO_2, and 0.87 ton of VOC 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 13.36 tons of CO per rolling, 12-month period.

2.n OAC rule 3745-18-06(A) does not establish sulfur dioxide emission limitations for the fuel burning equipment associated with this emissions unit because the emissions unit only employs natural gas as fuel. However, OAC rule 3745-18-06(A) requires that the natural gas being combusted meet certain fuel quality restrictions (a heat content greater than 950 Btu per standard cubic foot and a sulfur content less than 0.6 pound per million standard cubic feet). Because the natural gas being burned in this emissions unit is the standard, pipeline quality natural gas supplied to industrial, commercial, and residential users throughout the State, it is assumed that it meets the fuel quality restrictions; and no monitoring, record keeping or reporting requirements are necessary to ensure ongoing compliance with OAC rule3745-18-06(A).

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 14.24 tons of PM_{10} and 1.49 tons of fluorides per rolling, 12-month period.

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 5.18 tons of methanol per rolling, 12-month period.

2.r Visible particulate emissions from the stack servicing this emissions unit shall not exceed 20% 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 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 hourly pull rates.

   To ensure enforceability during the first 12 calendar months of operation following start-up of this emissions unit/permit issuance, the permittee shall not exceed the emission levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Production Rate of Glass Pulled (Tons)
1	5,700
1-2	11,400
1-3	17,100
1-4	22,800
1-5	28,500
1-6	34,200
1-7	39,900
1-8	45,600
1-9	51,300
1-10	57,000
1-11	62,700
1-12	73,000

   After the first 12 calendar months of operation following issuance of this permit, compliance with the annual emission limitation(s) shall be based upon a rolling, 12-month summation of the glass pull rates.

3. 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.

4. 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 shut down of the unit. The SOP shall include, but shall not be limited to the following:

   a. startup and shut down 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; and

   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 SOP shall specify 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. 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 average 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 Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

2. The permittee shall 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 install 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.

4. The permittee shall install, 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:

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 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.

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 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 PM_{10}, tons of SO_2, tons of VOC, and tons of fluorides;

   b. the total rolling, 12-month summation of the combined emissions from P001 and P013, measured at the glass melting furnace baghouse exhaust, for all vents serving both forehearth areas and for all exhaust stacks serving both forming areas, in tons of CO, tons of NOx, tons of PM_{10}, tons of SO_2, tons of VOC, and tons of fluorides per rolling, 12-month period; and

   c. a record of the glass pull rate as a rolling, 12-month summation of the daily glass pull rates, including a record of any month in which the pull rate exceeded the allowable rolling, 12-month rate of glass pull.

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.

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 cumulative rolling 12-month glass pull rate limitation of 69,350 tons per rolling 12-months;

   b. all periods of time during which the glass pull rate exceeded the daily 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 that 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 average 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 limitation in tons of CO, tons of NOx, tons of PM_{10}, tons of SO_2, tons of VOC, and/or tons of fluorides per rolling, 12-month period.

6. Except as otherwise specified above, all 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

<u>Glass Melting Furnace</u>

Compliance with the glass melting furnace limitation(s) in section A.I.1 of these terms and

conditions shall be determined in accordance with the following method(s):

1. The permittee shall conduct, or have conducted, emission testing for the glass melting furnace in accordance with the following requirements:

   a. The emissions testing shall be conducted within 60 days after reaching full production, but not later than 180 days after the initial furnace startup following the installation of the electric boost system.

   b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for CO, NOx, PE, PM_{10}, SO_2, F- and opacity.

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

      i. for CO, Method 10 of 40 CFR Part 60, Appendix A;

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

      iii. for PE, Method 5 of 40 CFR Part 60, Appendix A, as specified in 40 CFR 60.293(e)

      iv. for PM_{10}, Methods 201 and 202 of 40 CFR Part 51, Appendix M;

      v. for SO_2, Method 6 of 40 CFR Part 60, Appendix A using the procedures specified in OAC rule 3745-18-04;

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

      vii. 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.

   d. The tests 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 or the Ohio EPA Central Office.

   e. If both melting furnaces P001 and P013 are to be tested simultaneously, they shall be operating at or near their maximum capacity and compliance shall be

demonstrated with the combined total of the applicable emission limitations for each emissions unit. Each of the two units shall be tested, either together or separately as required in this section.

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

g. Unless a different frequency is specified in this section or proposed and agreed upon by the Ohio EPA, the permittee shall monitor and record process and/or add-on control device parameters, that will be used to demonstrate continuous compliance following testing, at least every 15 minutes during the performance tests. This shall include the NaOH addition rate to the spray tower and a check-off noting that the baghouse alarm has not been activated. The arithmetic average for each parameter (excluding the baghouse) shall be calculated using all of the recorded measurements collected during the compliance demonstration.

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.

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.

i. for CO, Method 10 of 40 CFR Part 60, Appendix A;

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

iii. for PE, Method 5 of 40 CFR Part 60, Appendix A, as specified in 40 CFR 60.293(e)

iv. for PM_{10}, Methods 201 and 202 of 40 CFR Part 51, Appendix M;

v. for SO_2, Method 6 of 40 CFR Part 60, Appendix A using the procedures specified in OAC rule 3745-18-04;

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

vii. 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.

d. The tests 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 or the Ohio EPA Central Office.

e. If both melting furnaces P001 and P013 are to be tested simultaneously, they shall be operating at or near their maximum capacity and compliance shall be demonstrated with the combined total of the applicable emission limitations for each emissions unit. Each of the two units shall be tested, either together or separately as required in this section.

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

g. Unless a different frequency is specified in this section or proposed and agreed upon by the Ohio EPA, the permittee shall monitor and record process and/or add-on control device parameters, that will be used to demonstrate continuous compliance following testing, at least every 15 minutes during the performance tests. This shall include the NaOH addition rate to the spray tower and a check-off noting that the baghouse alarm has not been activated. The arithmetic average for each parameter (excluding the baghouse) shall be calculated using all of the recorded measurements collected during the compliance demonstration.

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.

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.

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 tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to testing may result in the Toledo Division of Environmental Services or the Ohio EPA Central Office's refusal to accept the results of the emission tests.

Personnel from the Toledo Division of Environmental Services or the Ohio EPA Central Office shall be permitted to witness the tests, 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 tests 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 tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Toledo Division of Environmental Services or the Ohio EPA Central Office.

2.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); or other U.S. EPA approved test method, with prior approval from the Ohio EPA.

2.b Emission Limitation:

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

Applicable Compliance Method:

The permittee shall demonstrate compliance through the testing requirements contained in Section V.1, 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. The permittee may be required to retest if compliance with the CO emissions limitation is in question or as required in an operating/Title V permit.

2.c Emission Limitation:

0.37 ton CO per rolling, 12-month period

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 hourly limitation, compliance shall also be shown with the annual emission limitation.

2.d Emission Limitation:

1.71 pounds of NOx per ton of glass pull

Applicable Compliance Method:

The permittee shall demonstrate compliance through the testing requirements contained in Section V.1, 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. The permittee may be required to retest if compliance with the NOx emissions limitation is in question or as required in an operating/Title V permit.

2.e Emission Limitation:

63 tons NOx per rolling, 12-month period

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 hourly limitation, compliance shall also be shown with the annual emission limitation.

2.f Emission Limitation:

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

Applicable Compliance Method:

The permittee shall demonstrate compliance through the testing requirements contained in Section V.1, in accordance with the methods and procedures specified in

Methods 1 through 5 of 40 CFR Part 60, Appendix A and as required in 40 CFR 60.293(e) The permittee may be required to retest if compliance with the PE emissions limitation is in question or as required in an operating/Title V permit.

2.g Emission Limitation:

18.25 tons filterable 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 lbs per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

2.h Emission Limitation:

1.87 pounds of PM_{10} per ton of glass pull

Applicable Compliance Method:

The permittee shall demonstrate compliance through the testing requirements contained in Section V.1, 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. The permittee may be required to retest if compliance with the PM_{10} emissions limitation is in question or as required in an operating/Title V permit.

2.i Emission Limitation:

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

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable PM_{10} emission limitation (1.87 pounds of PM_{10} 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 hourly limitation, compliance shall also be shown with the annual emission limitation.

2.j Emission Limitation:

2.02 pounds of SO_2 per ton of glass pull

Applicable Compliance Method:

The permittee shall demonstrate compliance through the testing requirements contained in Section V.1, 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. The permittee may be required to retest if compliance with the SO_2 emissions limitation is in question or as required in an operating/Title V permit.

2.k Emission Limitation:

75 tons SO_2 per rolling, 12-month period

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable SO_2 emission limitation (2.02 pounds of SO_2 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 hourly limitation, compliance shall also be shown with the annual emission limitation.

2.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 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:

1.5 tons VOC per rolling, 12-month period

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 hourly limitation, compliance shall also be shown with the annual emission limitation.

2.n Emission Limitation:

0.36 pound of F^- per ton of glass pull

Applicable Compliance Method:

The permittee shall demonstrate compliance through the testing requirements contained in Section V.1, in accordance with Methods 1 through 4 and 13B of 40 CFR Part 60 Appendix A; or other U.S. EPA approved test method, with prior approval from the Ohio EPA. The permittee may be required to retest if compliance with the F^- emissions limitation is in question or as required in an operating/Title V permit.

2.o Emission Limitation:

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

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 hourly limitation, compliance shall also be shown with the annual emission limitation.

Forehearth Area

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:

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.b 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.c 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)(1); or other U.S. EPA

approved test method, with prior approval from the Ohio EPA.

3.d 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.e 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.

3.f 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.g 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.h Emission Limitation:

0.011 pound of particulate emissions as PM_{10} per ton of glass pull

Applicable Compliance Method:

The permittee shall demonstrate compliance through the testing requirements contained in Section V.3, 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. The permittee may be required to retest if compliance with the PM_{10} emissions limitation is in question or as required in an operating/Title V permit.

3.i Emission Limitation:

0.41 ton PM_{10} per rolling, 12-month period

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable PM_{10} emission limitation (0.011 pound of PM_{10} 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 hourly limitation, compliance shall also be shown with the annual emission limitation.

3.j Emission Limitation:

0.02 pound of SO_2 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 SO_2 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 SO_2 per rolling, 12-month period

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable SO_2 emission limitation (0.02 pound of SO_2 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.

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 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:

0.038 pound of F^- per ton of glass pull

Applicable Compliance Method:

The permittee shall demonstrate compliance through the testing requirements contained in Section V.3, in accordance with Methods 1 through 4 and 13B of 40 CFR Part 60 Appendix A; or other U.S. EPA approved test method and, with prior approval from the Ohio EPA. The permittee may be required to retest if compliance with the F^- emissions limitation is in question or as required in an operating/Title V permit.

3.o 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 lbs per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

<u>Fiberglass Forming Area</u>

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:

0.50 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.

4.b 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.c 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.

4.d Emission Limitation:

0.20 pound of particulate emissions as PM_{10} per ton of glass pull

Applicable Compliance Method:

The permittee shall demonstrate compliance through the testing requirements contained in Section V.5, 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. The permittee may be required to retest if compliance with the PM_{10} emissions limitation is in question or as required in an operating/Title V permit..

4.e Emission Limitation:

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

Applicable Compliance Method:

This emission limitation was developed by multiplying the allowable PM_{10} emission limitation (0.20 pound of PM_{10} 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 hourly 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 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.

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 lbs per ton. Therefore, if compliance is shown with the hourly 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:

The permittee shall demonstrate compliance through the testing requirements contained in Section V.5, in accordance with Methods 1 through 4 and 13B of 40 CFR Part 60 Appendix A; or other U.S. EPA approved test method, with prior approval from the Ohio EPA. The permittee may be required to retest if compliance with the F^- emissions limitation is in question or as required in an operating/Title V permit.

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 lbs per ton. Therefore, if compliance is shown with the hourly 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 5.18 tons of methanol per rolling, 12-month period.

Applicable Compliance Method:

This limit was established to reflect a maximum potential to emit for methanol. Actual methanol emissions at full production are expected to be less than 0.5 ton per year based on mass balance. If required, the company is to submit an updated mass balance demonstrating the actual methanol losses.

VI. Miscellaneous Requirements

1. The terms and conditions contained in this PTI supercede those contained in PTI 04-975 for emissions unit P013.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
		OAC rule 3745-21-08(B)
P017 - Enclosed precrusher, hammer mill and fluid bed dryer for scrap fiberglass recycling for direct melt furnace 9212, with exhaust gas from dryer vented and controlled by a baghouse. (modification 5/20/2004)	OAC rule 3745-31-05(A)(3)	OAC rule 3745-23-06(B)
	OAC rule 3745-31-02(A)(2)	
	OAC rule 3745-31-05(C)	
	OAC rule 3745-31-10 through 20	
	OAC rule 3745-17-07(A)(1)	
	OAC rule 3745-17-11(B)(1)	
	OAC rule 3745-18-06(E)	
	OAC rule 3745-21-07(B)	

Applicable Emissions Limitations/Control Measures

1.5 lb/hr of filterable particulate emissions (PE);
3.8 tpy PE;
0.002 lb/hr of SO_2;
0.27 lb/hr of NOx;
0.23 lb/hr of CO;
0.01 lb/hr VOC; and
See sections A.I.2.a, f, & c.

0.66 tpy CO

0.04 tpy VOC;
0.79 tpy NOx; and
0.006 tpy SO_2

1.11 lbs/hr of PM_{10}; and
4.85 tpy of PM_{10}

See section A.I.2.b.

See section A.I.2.b.

See section A.I.2.b.

See section A.I.2.d.

See section A.I.2.e.

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 rule 3745-17-07(A)(1), OAC rule 3745-31-02(A)(2), OAC rule 3745-31-05(C) and OAC rule 3745-31-10 through 20.

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

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 servicing this emissions unit 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 column while the emissions unit is in operation.

3. This emissions unit shall operate for no more than 5800 hours per rolling 12-month period.

III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

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

3. The permittee shall record the rolling 12-month summation of hours of operation for this emissions unit on a monthly basis.

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 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.

3. The permittee shall submit quarterly deviation (excursion) reports that identify any exceedance of the rolling 12-month summation of operating hours specified above.

V. Testing Requirements

Compliance with the allowable 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, 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:

1.11 pounds of PM_{10} per hour

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon emission testing performed 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.c Emission Limitation:

4.85 tons of PM_{10} per year

Applicable Compliance Method:

Compliance is demonstrated by multiplying the short term emission rate of 1.11 pounds of PM_{10} per hour by the annual hours of operation per year and dividing by 2,000 pounds per ton.

1.d 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.

1.e Emission Limitation:

0.66 ton of CO per year

Applicable Compliance Method:

Compliance is demonstrated by multiplying the short term emission rate of 0.23 pound of CO per hour by the annual hours of operation per year and dividing by 2,000 pounds per ton.

1.f 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.g Emission Limitation:

0.79 ton of NOx per year

Applicable Compliance Method:

Compliance is demonstrated by multiplying the short term emission rate of 0.27 pound of NOx per hour by the annual hours of operation and dividing by 2,000 pounds per ton.

1.h Emission Limitation:

0.002 pound of SO_2 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 SO_2 emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 2.7 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.i Emission Limitation:

0.006 ton of SO_2 per year

Applicable Compliance Method:

Compliance is demonstrated by multiplying the short term emission rate of 0.002 pound of SO_2 per hour by the annual hours of operation and dividing by 2,000 pounds per ton.

1.j 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.k Emission Limitation:

0.04 ton of VOC per year

Applicable Compliance Method:

Compliance is demonstrated by multiplying the short term emission rate of 0.01 pound of VOC per hour by the annual hours of operation and dividing by 2,000 pounds per ton.

1.l Emission Limitation:

1.5 pounds 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.m Emission Limitation:

3.8 tons per of PE per year

Applicable Compliance Method:

Compliance is demonstrated by multiplying the short term emission rate of 1.5 pounds of PE per hour by the annual hours of operation, and dividing by 2,000 pounds per ton.

VI. Miscellaneous Requirements

1. The terms and conditions contained in this PTI supercede those contained in PTI 04-360 for emissions unit P017.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
		OAC rule 3745-18-06(E)
P019 - Batch Oven No. 1 (Forming Pre-bake curing oven) - modification 5/20/2004	OAC rule 3745-31-05(A)(3)	OAC rule 3745-21-07(B)
		OAC rule 3745-21-08(B)
		OAC rule 3745-23-06(B)
	OAC rules 3745-31-10 through 20	
	OAC rule 3745-31-05(C)	
	OAC rule 3745-31-02(A)(2)	
	OAC rule 3745-17-07(A)(1)	
	OAC rule 3745-17-11(B)(1)	

Applicable Emissions Limitations/Control Measures
0.024 lb/hr of filterable particulate emissions (PE); 0.11 tpy PE; 0.0006 lb/hr of SO_2; 0.003 tpy SO_2; 0.099 lb/hr of NOx; 0.44 tpy NOx; 0.083 lb/hr of CO; 0.37 tpy CO; 0.006 lb/hr VOC; 0.03 tpy VOC; and See sections A.I.2.a, i, and c.
0.007 lb/hr of PM_{10}; 0.031 tpy of PM_{10}; and See section A.I.2.d.
See section A.I.2.e.
See section A.I.2.f.
See section A.I.2.b.
See section A.I.2.b.
See section A.I.2.b.
See section A.I.2.h.
See section A.I.2.g.
See section A.I.2.h.

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 rule 3745-31-10 through 20.

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

2.d Combined annual emissions from P019 through P024 and P053 shall not exceed 0.091 tons of PM_{10} per rolling 12-month period.

2.e Combined annual emissions from P019 through P024 and P053 shall not exceed: 0.01 ton SO_2, 1.19 tons NOx, and 0.23 ton VOC per rolling 12-month period.

2.f Combined annual emissions from P019 through P024 and P053 shall not exceed: 1.00 ton CO per rolling 12-month period.

2.g 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.h 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).

Emissions Unit ID: P019

2.i Visible particulate emissions from the stack servicing this emissions unit shall not exceed 10% opacity, as a 6-minute average.

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 P019 through P024 and P053 shall not exceed 23.845 MMscf per rolling 12-month period.

3. The combined amount of glass dried in P019 through P024 and P053 shall not exceed 963,965 pounds per rolling 12-month period.

III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

2. The permittee shall maintain monthly records of the combined volume of natural gas combusted in emissions units P019 through P024 and P053 as a rolling, 12-month summation.

3. The permittee shall maintain monthly records of the combined glass dried, in pounds, in emissions units P019 through P024 and P053 as a rolling, 12-month summation.

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 exceedance of the rolling 12-month summation limits specified above.

V. Testing Requirements

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, 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:

0.083 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 1 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:

0.37 ton of CO 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 0.083 pound of CO per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.d Emission Limitation:

0.099 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 1 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:

0.44 ton of NOx 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 0.099 pound of NOx per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.f Emission Limitation:

0.007 pound of PM_{10} 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 7.6 pounds of PM_{10} 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 MMBtu per hour.

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

1.g Emission Limitation:

0.031 ton of PM_{10} 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 0.007 pound of PM_{10} per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.h Emission Limitation:

0.0006 pound of SO_2 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 SO_2 emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 1 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.i Emission Limitation:

0.003 ton of SO_2 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 0.0006 pound of SO_2 per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.j Emission Limitation:

0.006 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.k Emission Limitation:

0.03 ton of VOC per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emission unit. Compliance is demonstrated by multiplying the short term emission rate of 0.006 pound of VOC per hour by 8,760 hours per year and dividing by 2,000 pounds per ton.

1.l Emission Limitation:

0.024 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.m Emission Limitation:

0.11 ton of PE per year

Applicable Compliance Method:

Compliance is demonstrated by multiplying the short term emission rate of 0.024 pounds of PE per hour by 8,760 annual hours of operation, and dividing by 2,000 pounds per ton.

1.n Emission Limitation:

Combined annual emissions from P019 through P024 and P053 shall not exceed 0.091 tons of PM_{10}, 0.01 ton SO_2, 1.19 ton NOx, 0.23 ton VOC, and 1.00 ton CO per rolling 12-month period.

Applicable Compliance Method:
Compliance is demonstrated by multiplying the appropriate emission factor (as listed above), in pounds per million standard cubic feet, by the actual MMscf of gas combusted (see section A.II. above) and dividing by 2000. Also for the VOC limit, multiply the combined pounds of glass dried times the emissions factor of 0.000336 lbs VOC per pound of glass dried, divide by 2000 lbs per ton, and add this to the tons of VOC from the combustion of natural gas.

VI. Miscellaneous Requirements

1. The terms and conditions contained in this PTI supercede those contained in PTI 04-333 for emissions unit P019.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
P020 - Batch Oven No. 2 (Forming Pre-bake curing oven) - modification 5/20/2004	OAC rule 3745-31-05(A)(3)	OAC rule 3745-18-06(E)
		OAC rule 3745-21-07(B)
		OAC rule 3745-21-08(B)
		OAC rule 3745-23-06(B)
	OAC rules 3745-31-10 through 20	
	OAC rule 3745-31-05(C)	
	OAC rule 3745-31-02(A)(2)	
	OAC rule 3745-17-07(A)(1)	
	OAC rule 3745-17-11(B)(1)	

Emissions Unit ID: P020

Applicable Emissions Limitations/Control Measures
0.024 lb/hr of filterable particulate emissions (PE); 0.11 tpy PE; 0.0006 lb/hr of SO_2; 0.003 tpy SO_2; 0.099 lb/hr of NOx; 0.44 tpy NOx; 0.083 lb/hr of CO; 0.37 tpy CO; 0.006 lb/hr VOC; 0.03 tpy VOC; and See sections A.I.2.a, i, and c.
0.007 lb/hr of PM_{10}; 0.031 tpy of PM_{10}; and See section A.I.2.d
See section A.I.2.e
See section A.I.2.f
See section A.I.2.b.
See section A.I.2.b.
See section A.I.2.b.
See section A.I.2.h.
See section A.I.2.g.
See section A.I.2.h.

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 rule 3745-31-10 through 20.

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

2.d Combined annual emissions from P019 through P024 and P053 shall not exceed 0.091 tons of PM_{10} per rolling 12-month period.

2.e Combined annual emissions from P019 through P024 and P053 shall not exceed: 0.01 ton SO_2, 1.19 ton NOx, and 0.23 ton VOC per rolling 12-month period.

2.f Combined annual emissions from P019 through P024 and P053 shall not exceed: 1.00 ton CO per rolling 12-month period.

2.g 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.h 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.i Visible particulate emissions from the stack servicing this emissions unit shall not exceed 10% opacity, as a 6-minute average.

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 P019 through P024 and P053 shall not exceed 23.845 MMscf per rolling 12-month period.

3. The combined amount of glass dried in P019 through P024 and P053 shall not exceed 963,965 pounds per rolling 12-month period.

III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

2. The permittee shall maintain monthly records of the combined volume of natural gas combusted in emissions units P019 through P024 and P053 as a rolling, 12-month summation.

3. The permittee shall maintain monthly records of the combined glass dried, in pounds, in emissions units P019 through P024 and P053 as a rolling, 12-month summation.

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 exceedance of the rolling 12-month summation limits specified above.

V. Testing Requirements

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, 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:

0.083 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 1 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:

0.37 ton of CO 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 0.083 pound of CO per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.d Emission Limitation:

0.099 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 1 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:

0.44 ton of NOx 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 0.099 pound of NOx per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.f Emission Limitation:

0.007 pound of PM_{10} 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 7.6 pounds of PM_{10} 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 MMBtu per hour.

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

1.g Emission Limitation:

0.031 ton of PM_{10} 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 0.007 pound of PM_{10} per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.h Emission Limitation:

0.0006 pound of SO_2 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 SO_2 emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 1 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.i Emission Limitation:

0.003 ton of SO_2 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 0.0006 pound of SO_2 per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.j Emission Limitation:

0.006 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.k Emission Limitation:

0.03 ton of VOC per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emission unit. Compliance is demonstrated by multiplying the short term emission rate of 0.006 pound of VOC per hour by 8,760 hours per year and dividing by 2,000 pounds per ton.

1.l Emission Limitation:

0.024 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.m Emission Limitation:

0.11 ton of PE per year

Applicable Compliance Method:

Compliance is demonstrated by multiplying the short term emission rate of 0.024 pounds of PE per hour by 8,760 annual hours of operation, and dividing by 2,000 pounds per ton.

1.n Emission Limitation:

Combined annual emissions from P019 through P024 and P053 shall not exceed 0.091 tons of PM_{10}, 0.01 ton SO_2, 1.19 ton NOx, 0.23 ton VOC, and 1.00 ton CO per rolling 12-month period.

Applicable Compliance Method:
Compliance is demonstrated by multiplying the appropriate emission factor (as listed above), in pounds per million standard cubic feet, by the actual MMscf of gas combusted (see section A.II. above) and dividing by 2000. Also for the VOC limit, multiply the combined pounds of glass dried times the emissions factor of 0.000336 lbs VOC per pound of glass dried, divide by 2000 lbs per ton, and add this to the tons of VOC from the combustion of natural gas.

VI. Miscellaneous Requirements

1. The terms and conditions contained in this PTI supercede those contained in PTI 04-333 for emissions unit P020.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit ID: P021

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	OAC rule 3745-21-08(B)
P021 - Batch Oven No. 3 (Forming Pre-bake curing oven) - modification 5/20/2004	OAC rule 3745-31-05(A)(3)	OAC rule 3745-23-06(B)
	OAC rules 3745-31-10 through 20	
	OAC rule 3745-31-05(C)	
	OAC rule 3745-31-02(A)(2)	
	OAC rule 3745-17-07(A)(1)	
	OAC rule 3745-17-11(B)(1)	
	OAC rule 3745-18-06(E)	
	OAC rule 3745-21-07(B)	

Applicable Emissions Limitations/Control Measures
0.024 lb/hr of filterable particulate emissions (PE); 0.11 tpy PE; 0.0006 lb/hr of SO_2; 0.003 tpy SO_2; 0.099 lb/hr of NOx; 0.44 tpy NOx; 0.083 lb/hr of CO; 0.37 tpy CO; 0.006 lb/hr VOC; 0.03 tpy VOC; and See sections A.I.2.a, i, and c.
0.007 lb/hr of PM_{10}; 0.031 tpy of PM_{10}; and See section A.I.2.d
See section A.I.2.e
See section A.I.2.f
See section A.I.2.b.
See section A.I.2.b.
See section A.I.2.b.
See section A.I.2.h.
See section A.I.2.g.
See section A.I.2.h.

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 rule 3745-31-10 through 20.

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

2.d Combined annual emissions from P019 through P024 and P053 shall not exceed 0.091 tons of PM_{10} per rolling 12-month period.

2.e Combined annual emissions from P019 through P024 and P053 shall not exceed: 0.01 ton SO_2, 1.19 ton NOx, and 0.23 ton VOC per rolling 12-month period.

2.f Combined annual emissions from P019 through P024 and P053 shall not exceed: 1.00 ton CO per rolling 12-month period.

2.g 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.h 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.i Visible particulate emissions from the stack servicing this emissions unit shall not exceed 10% opacity, as a 6-minute average.

Emissions Unit ID: P021

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 P019 through P024 and P053 shall not exceed 23.845 MMscf per rolling 12-month period.

3. The combined amount of glass dried in P019 through P024 and P053 shall not exceed 963,965 pounds per rolling 12-month period.

III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

2. The permittee shall maintain monthly records of the combined volume of natural gas combusted in emissions units P019 through P024 and P053 as a rolling, 12-month summation.

3. The permittee shall maintain monthly records of the combined glass dried, in pounds, in emissions units P019 through P024 and P053 as a rolling, 12-month summation.

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 exceedance of the rolling 12-month summation limits specified above.

V. Testing Requirements

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, 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:

0.083 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 1 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:

0.37 ton of CO 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 0.083 pound of CO per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.d Emission Limitation:

0.099 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 1 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:

0.44 ton of NOx 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 0.099 pound of NOx per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.f Emission Limitation:

0.007 pound of PM_{10} 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 7.6 pounds of PM_{10} 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 MMBtu per hour.

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

1.g Emission Limitation:

0.031 ton of PM_{10} 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 0.007 pound of PM_{10} per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.h Emission Limitation:

0.0006 pound of SO_2 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 SO_2 emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 1 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.i Emission Limitation:

0.003 ton of SO_2 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 0.0006 pound of SO_2 per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.j Emission Limitation:

0.006 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.k Emission Limitation:

0.03 ton of VOC per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emission unit. Compliance is demonstrated by multiplying the short term emission rate of 0.006 pound of VOC per hour by 8,760 hours per year and dividing by 2,000 pounds per ton.

1.l Emission Limitation:

0.024 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.m Emission Limitation:

0.11 ton per of PE per year

Applicable Compliance Method:

Compliance is demonstrated by multiplying the short term emission rate of 0.024 pounds of PE per hour by 8,760 annual hours of operation, and dividing by 2,000 pounds per ton.

1.n Emission Limitation:

Combined annual emissions from P019 through P024 and P053 shall not exceed 0.091 tons of PM_{10}, 0.01 ton SO_2, 1.19 ton NOx, 0.23 ton VOC, and 1.00 ton CO per rolling 12-month period.

Applicable Compliance Method:
Compliance is demonstrated by multiplying the appropriate emission factor (as listed above), in pounds per million standard cubic feet, by the actual MMscf of gas combusted (see section A.II. above) and dividing by 2000. Also for the VOC limit,

multiply the combined pounds of glass dried times the emissions factor of 0.000336 lbs VOC per pound of glass dried, divide by 2000 lbs per ton, and add this to the tons of VOC from the combustion of natural gas.

VI. Miscellaneous Requirements

1. The terms and conditions contained in this PTI supercede those contained in PTI 04-333 for emissions unit P021.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
P022 - Batch Oven No. 4 (Forming Pre-bake curing oven) - modification 5/20/2004	OAC rule 3745-31-05(A)(3)	OAC rule 3745-18-06(E)
		OAC rule 3745-21-07(B)
		OAC rule 3745-21-08(B)
		OAC rule 3745-23-06(B)
	OAC rules 3745-31-10 through 20	
	OAC rule 3745-31-05(C)	
	OAC rule 3745-31-02(A)(2)	
	OAC rule 3745-17-07(A)(1)	
	OAC rule 3745-17-11(B)(1)	

Applicable Emissions Limitations/Control Measures
0.024 lb/hr of filterable particulate emissions (PE); 0.11 tpy PE; 0.0006 lb/hr of SO_2; 0.003 tpy SO_2; 0.099 lb/hr of NOx; 0.44 tpy NOx; 0.083 lb/hr of CO; 0.37 tpy CO; 0.006 lb/hr VOC; 0.03 tpy VOC; and See sections A.I.2.a, i, and c.
0.007 lb/hr of PM_{10}; 0.031 tpy of PM_{10}; and See section A.I.2.d
See section A.I.2.e
See section A.I.2.f
See section A.I.2.b.
See section A.I.2.b.
See section A.I.2.b.
See section A.I.2.h.
See section A.I.2.g.
See section A.I.2.h.

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 rule 3745-31-10 through 20.

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

2.d Combined annual emissions from P019 through P024 and P053 shall not exceed 0.091 tons of PM_{10} per rolling 12-month period.

2.e Combined annual emissions from P019 through P024 and P053 shall not exceed: 0.01 ton SO_2, 1.19 ton NOx, and 0.23 ton VOC per rolling 12-month period.

2.f Combined annual emissions from P019 through P024 and P053 shall not exceed: 1.00 ton CO per rolling 12-month period.

2.g 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.h 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).

Emissions Unit ID: P022

2.i Visible particulate emissions from the stack servicing this emissions unit shall not exceed 10% opacity, as a 6-minute average.

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 P019 through P024 and P053 shall not exceed 23.845 MMscf per rolling 12-month period.

3. The combined amount of glass dried in P019 through P024 and P053 shall not exceed 963,965 pounds per rolling 12-month period.

III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

2. The permittee shall maintain monthly records of the combined volume of natural gas combusted in emissions units P019 through P024 and P053 as a rolling, 12-month summation.

3. The permittee shall maintain monthly records of the combined glass dried, in pounds, in emissions units P019 through P024 and P053 as a rolling, 12-month summation.

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 exceedance of the rolling 12-month summation limits specified above.

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, 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:

0.083 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 1 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:

0.37 ton of CO 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 0.083 pound of CO per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.d Emission Limitation:

0.099 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 1 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:

0.44 ton of NOx 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 0.099 pound of NOx per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.f Emission Limitation:

0.007 pound of PM_{10} 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 7.6 pounds of PM_{10} 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 MMBtu per hour.

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

1.g Emission Limitation:

0.031 ton of PM_{10} 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 0.007 pound of PM_{10} per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.h Emission Limitation:

0.0006 pound of SO_2 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 SO_2 emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 1 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.i Emission Limitation:

0.003 ton of SO_2 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 0.0006 pound of SO_2 per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.j Emission Limitation:

0.006 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.k Emission Limitation:

0.03 ton of VOC per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emission unit. Compliance is demonstrated by multiplying the short term emission rate of 0.006 pound of VOC per hour by 8,760 hours per year and dividing by 2,000 pounds per ton.

1.l Emission Limitation:

0.024 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.m Emission Limitation:

0.11 ton of PE per year

Applicable Compliance Method:

Compliance is demonstrated by multiplying the short term emission rate of 0.024 pounds of PE per hour by 8,760 annual hours of operation, and dividing by 2,000 pounds per ton.

1.n Emission Limitation:

Combined annual emissions from P019 through P024 and P053 shall not exceed 0.091 tons of PM_{10}, 0.01 ton SO_2, 1.19 ton NOx, 0.23 ton VOC, and 1.00 ton CO per rolling 12-month period.

Applicable Compliance Method:
Compliance is demonstrated by multiplying the appropriate emission factor (as listed above), in pounds per million standard cubic feet, by the actual MMscf of gas combusted (see section A.II. above) and dividing by 2000. Also for the VOC limit,

multiply the combined pounds of glass dried times the emissions factor of 0.000336 lbs VOC per pound of glass dried, divide by 2000 lbs per ton, and add this to the tons of VOC from the combustion of natural gas.

VI. Miscellaneous Requirements

1. The terms and conditions contained in this PTI supercede those contained in PTI 04-387 for emissions unit P022.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
P023 - Batch Oven No. 5 (Forming Pre-bake curing oven) - modification 5/20/2004	OAC rule 3745-31-05(A)(3)	OAC rule 3745-18-06(E)
		OAC rule 3745-21-07(B)
		OAC rule 3745-21-08(B)
		OAC rule 3745-23-06(B)
	OAC rules 3745-31-10 through 20	
	OAC rule 3745-31-05(C)	
	OAC rule 3745-31-02(A)(2)	
	OAC rule 3745-17-07(A)(1)	
	OAC rule 3745-17-11(B)(1)	

Applicable Emissions Limitations/Control Measures
0.024 lb/hr of filterable particulate emissions (PE); 0.11 tpy PE; 0.0006 lb/hr of SO_2; 0.003 tpy SO_2; 0.099 lb/hr of NOx; 0.44 tpy NOx; 0.083 lb/hr of CO; 0.37 tpy CO; 0.006 lb/hr VOC; 0.03 tpy VOC; and See sections A.I.2.a, i, and c.
0.007 lb/hr of PM_{10}; 0.031 tpy of PM_{10}; and See section A.I.2.d
See section A.I.2.e
See section A.I.2.f
See section A.I.2.b.
See section A.I.2.b.
See section A.I.2.b.
See section A.I.2.h.
See section A.I.2.g.
See section A.I.2.h.

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 rule 3745-31-10 through 20.

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

2.d Combined annual emissions from P019 through P024 and P053 shall not exceed 0.091 tons of PM_{10} per rolling 12-month period.

2.e Combined annual emissions from P019 through P024 and P053 shall not exceed: 0.01 ton SO_2, 1.19 ton NOx, and 0.23 ton VOC per rolling 12-month period.

2.f Combined annual emissions from P019 through P024 and P053 shall not exceed: 1.00 ton CO per rolling 12-month period.

2.g 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.h 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.i Visible particulate emissions from the stack servicing this emissions unit shall not exceed 10% opacity, as a 6-minute average.

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 P019 through P024 and P053 shall not exceed 23.845 MMscf per rolling 12-month period.

3. The combined amount of glass dried in P019 through P024 and P053 shall not exceed 963,965 pounds per rolling 12-month period.

III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

2. The permittee shall maintain monthly records of the combined volume of natural gas combusted in emissions units P019 through P024 and P053 as a rolling, 12-month summation.

3. The permittee shall maintain monthly records of the combined glass dried, in pounds, in emissions units P019 through P024 and P053 as a rolling, 12-month summation.

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 exceedance of the rolling 12-month summation limits specified above.

V. Testing Requirements

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, 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:

0.083 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 1 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:

0.37 ton of CO 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 0.083 pound of CO per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.d Emission Limitation:

0.099 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 1 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:

0.44 ton of NOx 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 0.099 pound of NOx per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.f Emission Limitation:

0.007 pound of PM_{10} 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 7.6 pounds of PM_{10} 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 MMBtu per hour.

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

1.g Emission Limitation:

0.031 ton of PM_{10} 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 0.007 pound of PM_{10} per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.h Emission Limitation:

0.0006 pound of SO_2 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 SO_2 emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 1 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.i Emission Limitation:

0.003 ton of SO_2 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 0.0006 pound of SO_2 per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.j Emission Limitation:

0.006 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.k Emission Limitation:

0.03 ton of VOC per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emission unit. Compliance is demonstrated by multiplying the short term emission rate of 0.006 pound of VOC per hour by 8,760 hours per year and dividing by 2,000 pounds per ton.

1.l Emission Limitation:

0.024 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.m Emission Limitation:

0.11 ton of PE per year

Applicable Compliance Method:

Compliance is demonstrated by multiplying the short term emission rate of 0.024 pounds of PE per hour by 8,760 annual hours of operation, and dividing by 2,000 pounds per ton.

1.n Emission Limitation:

Combined annual emissions from P019 through P024 and P053 shall not exceed 0.091 tons of PM_{10}, 0.01 ton SO_2, 1.19 ton NOx, 0.23 ton VOC, and 1.00 ton CO per rolling 12-month period.

Applicable Compliance Method:
Compliance is demonstrated by multiplying the appropriate emission factor (as listed above), in pounds per million standard cubic feet, by the actual MMscf of gas combusted (see section A.II. above) and dividing by 2000. Also for the VOC limit, multiply the combined pounds of glass dried times the emissions factor of 0.000336 lbs VOC per pound of glass dried, divide by 2000 lbs per ton, and add this to the tons of VOC from the combustion of natural gas.

VI. Miscellaneous Requirements

1. The terms and conditions contained in this PTI supercede those contained in PTI 04-387 for emissions unit P023.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
		OAC rule 3745-18-06(E)
P024 - Batch Oven No. 6 (Forming Pre-bake curing oven) - modification 5/20/2004	OAC rule 3745-31-05(A)(3)	OAC rule 3745-21-07(B)
		OAC rule 3745-21-08(B)
		OAC rule 3745-23-06(B)
	OAC rules 3745-31-10 through 20	
	OAC rule 3745-31-05(C)	
	OAC rule 3745-31-02(A)(2)	
	OAC rule 3745-17-07(A)(1)	
	OAC rule 3745-17-11(B)(1)	

Applicable Emissions Limitations/Control Measures
0.024 lb/hr of filterable particulate emissions (PE); 0.11 tpy PE; 0.0006 lb/hr of SO_2; 0.003 tpy SO_2; 0.099 lb/hr of NOx; 0.44 tpy NOx; 0.083 lb/hr of CO; 0.37 tpy CO; 0.006 lb/hr VOC; 0.03 tpy VOC; and See sections A.I.2.a, i, and c.
0.007 lb/hr of PM_{10}; 0.031 tpy of PM_{10}; and See section A.I.2.d
See section A.I.2.e
See section A.I.2.f
See section A.I.2.b.
See section A.I.2.b.
See section A.I.2.b.
See section A.I.2.h.
See section A.I.2.g.
See section A.I.2.h.

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 rule 3745-31-10 through 20.

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

2.d Combined annual emissions from P019 through P024 and P053 shall not exceed 0.091 tons of PM_{10} per rolling 12-month period.

2.e Combined annual emissions from P019 through P024 and P053 shall not exceed: 0.01 ton SO_2, 1.19 ton NOx, and 0.23 ton VOC per rolling 12-month period.

2.f Combined annual emissions from P019 through P024 and P053 shall not exceed: 1.00 ton CO per rolling 12-month period.

2.g 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.h 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.i Visible particulate emissions from the stack servicing this emissions unit shall not exceed 10% opacity, as a 6-minute average.

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 P019 through P024 and P053 shall not exceed 23.845 MMscf per rolling 12-month period.

3. The combined amount of glass dried in P019 through P024 and P053 shall not exceed 963,965 pounds per rolling 12-month period.

III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

2. The permittee shall maintain monthly records of the combined volume of natural gas combusted in emissions units P019 through P024 and P053 as a rolling, 12-month summation.

3. The permittee shall maintain monthly records of the combined glass dried, in pounds, in emissions units P019 through P024 and P053 as a rolling, 12-month summation.

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 exceedance of the rolling 12-month summation limits specified above.

V. Testing Requirements

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, 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:

0.083 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 1 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:

0.37 ton of CO 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 0.083 pound of CO per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.d Emission Limitation:

0.099 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 1 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:

0.44 ton of NOx 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 0.099 pound of NOx per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.f Emission Limitation:

0.007 pound of PM_{10} 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 7.6 pounds of PM_{10} 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 MMBtu per hour.

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

1.g Emission Limitation:

0.031 ton of PM_{10} 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 0.007 pound of PM_{10} per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.h Emission Limitation:

0.0006 pound of SO_2 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 SO_2 emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 1 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.i Emission Limitation:

0.003 ton of SO_2 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 0.0006 pound of SO_2 per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.j Emission Limitation:

0.006 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.k Emission Limitation:

0.03 ton of VOC per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emission unit. Compliance is demonstrated by multiplying the short term emission rate of 0.006 pound of VOC per hour by 8,760 hours per year and dividing by 2,000 pounds per ton.

1.l Emission Limitation:

0.024 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.m Emission Limitation:

0.11 ton of PE per year

Applicable Compliance Method:

Compliance is demonstrated by multiplying the short term emission rate of 0.024 pounds of PE per hour by 8,760 annual hours of operation, and dividing by 2,000 pounds per ton.

1.n Emission Limitation:

Combined annual emissions from P019 through P024 and P053 shall not exceed 0.091 tons of PM_{10}, 0.01 ton SO_2, 1.19 ton NOx, 0.23 ton VOC, and 1.00 ton CO per rolling 12-month period.

Applicable Compliance Method:
Compliance is demonstrated by multiplying the appropriate emission factor (as listed above), in pounds per million standard cubic feet, by the actual MMscf of gas combusted (see section A.II. above) and dividing by 2000. Also for the VOC limit,

multiply the combined pounds of glass dried times the emissions factor of 0.000336 lbs VOC per pound of glass dried, divide by 2000 lbs per ton, and add this to the tons of VOC from the combustion of natural gas.

VI. Miscellaneous Requirements

1. The terms and conditions contained in this PTI supercede those contained in PTI 04-387 for emissions unit P024.

Emissions Unit ID: P024

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 specified in narrative form following the table.

Operations, Property, and/or Equipment		Applicable Rules/Requirements
P026 - TP dryer and chop process - modification 5/20/2004 Products of combustion (Stacks 68 & 70)		OAC rule 3745-31-05(A)(3)
	Baghouse emissions (stack 90)	
		OAC rules 3745-31-10 through 20
		OAC rule 3745-31-05(C)
		OAC rule 3745-31-02(A)(2)
		OAC rule 3745-17-07(A)(1)
		OAC rule 3745-17-11(B)(1)

	Applicable Emissions Limitations/Control Measures	
OAC rule 3745-18-06(E)		3.9 tpy PE; 0.24 lb/hr VOC; 1.1 tpy VOC;
OAC rule 3745-21-07(B)	0.011 lb/hr PM_{10}; 0.049 tpy PM_{10};	See sections A.I.2.a and A.I.2.i; and See section A.I.2.c for VOC
OAC rule 3745-21-08(B)	0.003 lb/hr filterable particulate emissions (PE); 0.014 tpy PE;	See section A.I.2.b.
OAC rule 3745-23-06(B)	0.0009 lb/hr of SO_2; 0.004 tpy SO_2;	See section A.I.2.b.
OAC rule 3745-31-05(A)(3)	0.149 lb/hr of NOx; 0.66 tpy NOx; 0.124 lb/hr of CO; 0.55 tpy CO; 0.009 lb/hr VOC; 0.04 tpy VOC; and See sections A.I.2.a, i, and c.	
	See section A.I.2.d.	
	See section A.I.2.e.	
OAC rule 3745-17-11(B)(1)	See section A.I.2.f.	
OAC rule 3745-17-07(A)(1)	See section A.I.2.b.	
	See section A.I.2.b.	
	See section A.I.2.b.	
	See section A.I.2.h.	
	See section A.I.2.g.	
	See section A.I.2.h.	
	0.038 lb/hr PM_{10}; 0.17 tpy PM_{10}; 0.88 lb/hr filterable particulate emissions (PE);	

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 through 20.

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

2.d Combined annual emissions from P026 and P028 shall not exceed 0.0484 ton of PM_{10} per rolling 12-month period.

2.e Combined annual emissions from P026 and P028 shall not exceed: 0.0009 ton SO_2, 0.1437 ton NOx, and 0.4275 ton VOC per rolling 12-month period.

2.f Combined annual emissions from P026 and P028 shall not exceed: 0.1207 ton CO per rolling 12-month period.

2.g 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.h 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.i Visible particulate emissions from the stack servicing this emissions unit shall not exceed 10% opacity, as a 6-minute average.

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 P026 and P028 shall not exceed 2.874 MMscf per rolling 12-month period.

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

III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

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

3. 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.

4. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving 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.

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 exceedance of the rolling 12-month summation limits specified above.

3. The permittee shall submit written quarterly reports which (a) identify all days during which any visible particulate emissions were observed from the stack serving the fabric filter (stack 90) and (b) describe any corrective actions taken to eliminate the visible particulate emissions.

V. Testing Requirements

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

1. **TP Chop Dryer and Products of combustion**

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, 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:

0.124 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 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 U.S. EPA approved test method, with prior approval from the Ohio EPA.

1.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.

1.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 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 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.

1.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.

1.f Emission Limitation:

0.011 pound of PM_{10} 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 7.6 pounds of PM_{10} 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 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.g Emission Limitation:

0.049 ton of PM_{10} per year.

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable emission limitation (0.011 pound of PM_{10} 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.h Emission Limitation:

0.003 pound of filterable particulate emissions (PE) 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 1.9 pound of filterable particulate matter 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)(10); or other U.S. EPA approved test method, with prior approval from the Ohio EPA.

1.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 filterable particulate emissions (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.j Emission Limitation:

0.0009 pound of SO_2 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 SO_2 emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 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.

1.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 SO_2 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.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 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 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.

1.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.

2. **Baghouse Emissions**

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, 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.

2.b 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.

2.c Emission Limitation:

1.1 tons of VOC per year.

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable emission limitation (0.24 lb/hr VOC) 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.d Emission Limitation:

0.038 pound PM_{10} per hour.

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

2.e Emission Limitation:

0.17 ton of PM_{10} per year.

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable emission limitation (0.038 pound PM_{10} 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:

0.88 lb filterable PE/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.

2.g Emission Limitation:

3.9 tons of filterable PE per year.

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable emission limitation (0.88 lb filterable PE/hr) 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. **Combined Limitations**

3.a Emission Limitation:

Combined annual emissions from P026 and P028 shall not exceed 0.0484 tons of PM_{10}, 0.0009 ton SO_2, 0.1437 ton NOx, 0.4275 ton VOC, and 0.1207 ton CO per rolling 12-month period.

Applicable Compliance Method:
Compliance is demonstrated by multiplying the appropriate emission factor (as listed above), in pounds per million standard cubic feet, by the actual MMscf of gas combusted (see section A.II. above) and dividing by 2000. Also for the VOC limit, multiply the combined pounds of glass dried times the emissions factor of 0.672 lbs VOC per ton of glass dried, divide by 2000 lbs per ton, and add this to the tons of VOC from the combustion of natural gas; for PM_{10} multiply the actual tons throughput of glass per rolling 12-month period by 0.06 lb PM_{10} per ton, divide by 2000 lbs per ton, and add this to the natural gas combustion emissions.

VI. Miscellaneous Requirements

1. The terms and conditions contained in this PTI supercede those contained in PTI

04-545 for emissions unit P026.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 specified in narrative form following the table.

Operations, Property, and/or Equipment		Applicable Rules/Requirements
P028 - TP Chop Dryer #2 - (chopper 3 & 4) - modification 5/20/2004 Products of combustion (Stacks 69 & 71)		OAC rule 3745-31-05(A)(3)
	Baghouse emissions (stack 90)	
		OAC rules 3745-31-10 through 20
		OAC rule 3745-31-05(C)
		OAC rule 3745-31-02(A)(2)
		OAC rule 3745-17-07(A)(1)
		OAC rule 3745-17-10(B)(1)

Emissions Unit ID: P028

	Applicable Emissions Limitations/Control Measures	See sections A.I.2.a and A.I.2.i; and See section A.I.2.c for VOC
OAC rule 3745-18-06(E)	0.019 lb/hr PM_{10}; 0.09 tpy PM_{10};	See section A.I.2.b.
OAC rule 3745-21-07(B)	0.005 lb/hr of filterable particulate emissions (PE);	See section A.I.2.b.
OAC rule 3745-21-08(B)	0.03 tpy PE; 0.0015 lb/hr of SO_2;	
OAC rule 3745-23-06(B)	0.01 tpy SO_2;	
OAC rule 3745-31-05(A)(3)	0.245 lb/hr of NOx, 1.1 tpy NOx; 0.206 lb/hr of CO; 0.91 tpy CO; 0.0135 lb/hr VOC; 0.06 tpy VOC; and See sections A.I.2.a, i, and c.	
OAC rule 3745-17-11(B)(1)	See section A.I.2.d.	
OAC rule 3745-17-07(A)(1)	See section A.I.2.e.	
	See section A.I.2.f.	
	See section A.I.2.b.	
	See section A.I.2.b.	
	See section A.I.2.b.	
	See section A.I.2.h.	
	See section A.I.2.g.	
	See section A.I.2.h.	
	0.011 lb/hr PM_{10}; 0.05 tpy PM_{10}; 0.88 lb/hr filterable particulate emissions (PE); 3.9 tpy PE; 0.061 lb/hr VOC; 0.27 tpy VOC;	

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 through 20.

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

2.d Combined annual emissions from P026 and P028 shall not exceed 0.0484 ton of PM_{10} per rolling 12-month period.

2.e Combined annual emissions from P026 and P028 shall not exceed: 0.0009 ton SO_2, 0.1437 ton NOx, and 0.4275 ton VOC per rolling 12-month period.

2.f Combined annual emissions from P026 and P028 shall not exceed: 0.1207 ton CO per rolling 12-month period.

2.g 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.h 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.i Visible particulate emissions from the stack servicing this emissions unit shall not exceed 10% opacity, as a 6-minute average.

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 P026 and P028 shall not exceed 2.874 MMscf per rolling 12-month period.

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

III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

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

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

4. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving 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.

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 exceedance of the rolling 12-month summation limits specified above.

3. The permittee shall submit written quarterly reports which (a) identify all days during which any visible particulate emissions were observed from the stack serving the fabric filter (stack 90) and (b) describe any corrective actions taken to eliminate the visible particulate emissions.

V. Testing Requirements

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

1. **<u>TP Chop Dryer and Products of combustion</u>**

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, 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:

0.206 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 2.5 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 U.S. EPA approved test method, with prior approval from the Ohio EPA.

1.c Emission Limitation:

0.245 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 2.5 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.

1.d Emission Limitation:

0.019 pound of PM_{10} 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 7.6 pounds of PM_{10} 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 2.5 MMBtu per hour.

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

1.e Emission Limitation:

0.005 pound of filterable particulate emissions (PE) 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 1.9 pounds of filterable particulate matter 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 2.5 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)(10); or other U.S. EPA approved test method, with prior approval from the Ohio EPA.

1.f Emission Limitation:

0.0015 pound of SO_2 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 SO_2 emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 2.5 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.

1.g Emission Limitation:

0.0135 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 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. **Baghouse Emissions**

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, 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.

2.b Emission Limitation:

0.061 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.

2.c Emission Limitation:

0.011 pound PM_{10} per hour

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

2.d Emission Limitation:

0.88 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.

3. **Combined Limitations**

3.a Emission Limitation:

Combined annual emissions from P026 and P028 shall not exceed 0.0484 ton of PM_{10}, 0.0009 ton SO_2, 0.1437 ton NOx, 0.4275 ton VOC, and 0.1207 ton CO per rolling 12-month period.

Applicable Compliance Method:
Compliance is demonstrated by multiplying the appropriate emission factor (as listed above), in pounds per million standard cubic feet, by the actual MMscf of gas combusted (see section A.II. above) and dividing by 2000. Also for the VOC limit, multiply the combined pounds of glass dried times the emissions factor of 0.672 lbs VOC per ton of glass dried, divide by 2000 lbs per ton, and add this to the tons of VOC from the combustion of natural gas; for PM_{10} multiply the actual tons throughput of glass per rolling 12-month period by 0.06 lb PM_{10} per ton, divide by 2000 lbs per ton, and add this to the natural gas combustion emissions.

VI. Miscellaneous Requirements

1. The terms and conditions contained in this PTI supercede those contained in PTI

04-583 for emissions unit P028.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
P029 - Prebake Tunnel Oven A - modification 5/20/2004	OAC rule 3745-31-05(A)(3)	OAC rule 3745-18-06(E)
		OAC rule 3745-21-07(B)
		OAC rule 3745-21-08(B)
		OAC rule 3745-23-06(B)
	OAC rules 3745-31-10 through 20	
	OAC rule 3745-31-05(C)	
	OAC rule 3745-31-02(A)(2)	
	OAC rule 3745-17-07(A)(1)	
	OAC rule 3745-17-10(B)(1)	

Applicable Emissions Limitations/Control Measures
0.01 lb/hr filterable particulate emissions (PE); 0.03 tpy PE; 0.002 lb/hr of SO_2; 0.009 tpy SO_2; 0.29 lb/hr of NOx; 1.27 tpy NOx; 0.25 lb/hr of CO; 1.1 tpy CO; 0.85 lb/hr VOC; 3.7 tpy VOC; and See sections A.I.2.a and c.
0.023 lb/hr of PM_{10}; 0.1 tpy of PM_{10}; and See section A.I.2.d.
See section A.I.2.e.
See section A.I.2.f.
See section A.I.2.i.
See section A.I.2.b.
See section A.I.2.b.
See section A.I.2.h.
See section A.I.2.g.
See section A.I.2.h.

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 through 20.

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

2.d Combined annual emissions from P029 and P030 shall not exceed 0.1 tons of PM_{10} per rolling 12-month period.

2.e Combined annual emissions from P029 and P030 shall not exceed: 0.01 ton SO_2, 1.27 ton NOx, and 4.68 tons VOC per rolling 12-month period.

2.f Combined annual emissions from P029 and P030 shall not exceed: 1.1 ton CO per rolling 12-month period.

2.g 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.h 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.i Visible particulate emissions from the stacks servicing this emissions unit shall not exceed 10% opacity, as a 6-minute average.

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 P029 and P030 shall not exceed 26 MMscf per rolling 12-month period.

3. The combined amount of glass dried in P029 and P030 shall not exceed 13,656 tons per rolling 12-month period.

III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

2. The permittee shall maintain monthly records of the combined volume of natural gas combusted in emissions units P029 and P030 as a rolling, 12-month summation.

3. The permittee shall maintain monthly records of the combined glass dried, in tons, in emissions units P029 and P030 as a rolling, 12-month summation.

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 exceedance of the rolling 12-month summation limits specified above.

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;

Emissions Unit ID: P029

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); or other U.S. EPA approved test method, with prior approval from the Ohio EPA.

1.b Emission Limitation:

0.25 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 3 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:

1.1 ton of CO 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 0.25 pound of CO per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.d Emission Limitation:

0.29 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 3

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:

1.27 tons of NOx 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 0.29 pound of NOx per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.f Emission Limitation:

0.023 pound of PM_{10} 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 7.6 pounds of PM_{10} 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 3 MMBtu per hour.

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

1.g Emission Limitation:

0.1 ton of PM_{10} 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 0.023 pound of PM_{10} per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.h Emission Limitation:

0.002 pound of SO_2 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 SO_2 emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 3 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.i Emission Limitation:

0.009 ton of SO_2 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 0.002 pound of SO_2 per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.j Emission Limitation:

0.85 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.k Emission Limitation:

3.7 tons of VOC per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emission unit. Compliance is demonstrated by multiplying the short term emission rate of 0.85 pound of VOC per hour by 8,760 hours per year and dividing by 2,000 pounds per ton.

1.l Emission Limitation:

Combined annual emissions from P029 and P030 shall not exceed 0.1 tons of PM_{10}, 0.01 ton SO_2, 1.27 tons NOx, 4.68 tons VOC, and 1.00 ton CO per rolling 12-month period.

Applicable Compliance Method:
Compliance is demonstrated by multiplying the appropriate emission factor (as listed above), in pounds per million standard cubic feet, by the actual MMscf of gas combusted (see section A.II above) and dividing by 2000. Also for the VOC limit, multiply the combined pounds of glass dried times the emissions factor of 0.672 pounds of VOC per ton of glass dried, divide by 2000 lbs per ton, and add this to the tons of VOC from the combustion of natural gas.

1.m Emission Limitation:

0.01 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.n Emission Limitation:

0.05 ton of PE per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emission unit. Compliance is demonstrated by multiplying the short term emission rate of 0.01 pound of PE per hour by 8,760 hours per year and dividing by 2,000 pounds per ton.

VI. Miscellaneous Requirements

1. The terms and conditions contained in this PTI supercede those contained in PTI 04-587 for emissions unit P029.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Emissions Unit ID: P030

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	OAC rule 3745-21-08(B)
P030 - Prebake Tunnel Oven B - modification 5/20/2004	OAC rule 3745-31-05(A)(3)	OAC rule 3745-23-06(B)
	OAC rules 3745-31-10 through 20	
	OAC rule 3745-31-05(C)	
	OAC rule 3745-31-02(A)(2)	
	OAC rule 3745-17-07(A)(1)	
	OAC rule 3745-17-10(B)(1)	
	OAC rule 3745-18-06(E)	
	OAC rule 3745-21-07(B)	

Applicable Emissions Limitations/Control Measures
0.01 lb/hr filterable particulate emissions (PE); 0.03 tpy PE; 0.002 lb/hr of SO_2; 0.009 tpy SO_2; 0.29 lb/hr of NOx; 1.27 tpy NOx; 0.25 lb/hr of CO; 1.1 tpy CO; 0.85 lb/hr VOC; 3.7 tpy VOC; and See sections A.I.2.a and c.
0.023 lb/hr of PM_{10}; 0.1 tpy of PM_{10}; and See section A.I.2.d.
See section A.I.2.e.
See section A.I.2.f.
See section A.I.2.i.
See section A.I.2.b.
See section A.I.2.b.
See section A.I.2.h.
See section A.I.2.g.
See section A.I.2.h.

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 through 20.

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

2.d Combined annual emissions from P029 and P030 shall not exceed 0.1 tons of PM_{10} per rolling 12-month period.

2.e Combined annual emissions from P029 and P030 shall not exceed: 0.01 ton SO_2, 1.27 ton NOx, and 4.68 tons VOC per rolling 12-month period.

2.f Combined annual emissions from P029 and P030 shall not exceed: 1.1 ton CO per rolling 12-month period.

2.g 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.h 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.i Visible particulate emissions from the stacks servicing this emissions unit shall

not exceed 10% opacity, as a 6-minute average.

Emissions Unit ID: P030

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 P029 and P030 shall not exceed 26 MMscf per rolling 12-month period.

3. The combined amount of glass dried in P029 and P030 shall not exceed 13,656 tons per rolling 12-month period.

III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

2. The permittee shall maintain monthly records of the combined volume of natural gas combusted in emissions units P029 and P030 as a rolling, 12-month summation.

3. The permittee shall maintain monthly records of the combined glass dried, in tons, in emissions units P029 and P030 as a rolling, 12-month summation.

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 exceedance of the rolling 12-month summation limits specified above.

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, 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:

0.25 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 3 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:

1.1 ton of CO 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 0.25 pound of CO per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.d Emission Limitation:

0.29 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 3

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:

1.27 tons of NOx 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 0.29 pound of NOx per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.f Emission Limitation:

0.023 pound of PM_{10} 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 7.6 pounds of PM_{10} 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 3 MMBtu per hour.

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

1.g Emission Limitation:

0.1 ton of PM_{10} 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 0.023 pound of PM_{10} per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.h Emission Limitation:

0.002 pound of SO_2 per hour 3 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.

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 SO_2 emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 3 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.i Emission Limitation:

0.009 ton of SO_2 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 0.002 pound of SO_2 per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.j Emission Limitation:

0.85 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.k Emission Limitation:

3.7 tons of VOC per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emission unit.
Compliance is demonstrated by multiplying the short term emission rate of 0.85 pound of VOC per hour by 8,760 hours per year and dividing by 2,000 pounds per ton.

1.l Emission Limitation:

Combined annual emissions from P029 and P030 shall not exceed 0.1 tons of PM_{10}, 0.01 ton SO_2, 1.27 tons NOx, 4.68 tons VOC, and 1.00 ton CO per rolling 12-month period.

Applicable Compliance Method:
Compliance is demonstrated by multiplying the appropriate emission factor (as listed above), in pounds per million standard cubic feet, by the actual MMscf of gas combusted (see section A.II. above) and dividing by 2000. Also for the VOC limit, multiply the combined pounds of glass dried times the emissions factor of 0.672 pounds of VOC per ton of glass dried, divide by 2000 lbs per ton, and add this to the tons of VOC from the combustion of natural gas.

1.m Emission Limitation:

0.01 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.n Emission Limitation:

0.05 ton of PE per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emission unit. Compliance is demonstrated by multiplying the short term emission rate of 0.01 pound of PE per hour by 8,760 hours per year and dividing by 2,000 pounds per ton.

VI. Miscellaneous Requirements

1. The terms and conditions contained in this PTI supercede those contained in PTI 04-587 for emissions unit P030.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P032 - Finishing Department (BMC) with baghouse control - modification to lower the PM_{10} emission limitation	OAC 3745-31-05(A)(3)	0.52 lb/hr filterable particulate emissions (PE); 2.3 tpy PE; 0.01 lb/hr PM_{10}; and See sections A.I.2.c and d.
	OAC rules 3745-31-10 through 20	0.05 tpy PM_{10}; and See section A.I.2.c.
	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.b.

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 through 20.

2.b 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.c The annual emission limitation was established for Permitting purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop monitoring, record keeping and/or reporting requirements to ensure

compliance with this limitation.

2.d Visible particulate emissions from the stacks servicing this emissions unit shall not exceed 10% opacity, as a 6-minute average.

II. Operational Restrictions

1. To ensure the baghouse is operated according to the manufacturer's specifications and to maintain compliance with the allowable particulate emission rate, the pressure drop across the baghouse shall be maintained within the range of 1.0 to 3.0 inches of water column while the emissions unit is in operation.

III. Monitoring and/or Recordkeeping Requirements

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

IV. Reporting Requirements

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

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, 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:

Emissions Unit ID: P032

0.01 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 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:

0.05 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 0.01 pound of PM10 per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.d Emission Limitation:

0.52 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.e Emission Limitation:

2.3 ton of PE per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emission unit. Compliance is demonstrated by multiplying the short term emission rate of 0.52 pound of PE per hour by 8,760 hours per year and dividing by 2,000 pounds per ton.

VI. Miscellaneous Requirements

1. The terms and conditions contained in this PTI supercede those contained in PTI 04-692 for emissions unit P032.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P033 - Dielectric drying oven - modification 5/20/2004	OAC 3745-31-05(A)(3)	0.24 lb VOC/hr; and See section A.I.2.b.
	OAC rule 3745-31-05(C)	0.65 tpy VOC
	OAC 3745-21-07(B)	See Section A.I.2.a.

2. Additional Terms and Conditions

2.a 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.b The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the requirements of OAC rule 3745-31-05(C).

II. Operational Restrictions

1. The amount of glass dried in P033 shall not exceed 1,928 tons per rolling 12-month period.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the amount of glass dried, in tons, in

this emission unit as a rolling, 12-month summation.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify any exceedance of the rolling 12-month summation limits specified above.

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:

0.24 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.b Emission Limitation:

0.65 ton of VOC per year

Applicable Compliance Method:

Compliance may be demonstrated by multiply the rolling 12-month summation of glass dried, in tons, times the emissions factor of 0.000336 ton of VOC per ton of glass dried.

VI. Miscellaneous Requirements

1. The terms and conditions contained in this PTI supercede those contained in PTI 04-780 for emissions unit P033.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
P037 - Direct Chop Oven No. 1 w/baghouse control-modification to add bag leak detection terms instead of static pressure drop and VE terms	OAC rule 3745-31-05(A)(3)	OAC rule 3745-18-06(E)
		OAC rule 3745-21-07(B)
		OAC rule 3745-21-08(B)
		OAC rule 3745-23-06(B)
	OAC rules 3745-31-10 through 20	
	OAC rule 3745-31-05(C)	
	OAC rule 3745-31-02(A)(2)	
	OAC rule 3745-17-07(A)(1)	
	OAC rule 3745-17-11(B)(1)	

Emissions Unit ID: P037

Applicable Emissions Limitations/Control Measures
0.12 lb/hr of filterable particulate emissions (PE); 0.53 tpy PE; 0.088 lb/hr of PM_{10}; 0.39 tpy of PM_{10}; 0.0013 lb/hr of SO_2; 0.006 tpy SO_2; 0.196 lb/hr of NOx; 0.86 tpy NOx; 0.165 lb/hr of CO; 0.73 tpy CO; 0.99 lb/hr VOC; 4.34 tpy VOC; and See sections A.I.2.a, i, and c.
See section A.I.2.d.
See section A.I.2.e.
See section A.I.2.f.
See section A.I.2.b.
See section A.I.2.b.
See section A.I.2.b.
See section A.I.2.h.
See section A.I.2.g.
See section A.I.2.h.

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 through 20.

2.b 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.c The hourly and annual emission limitations for CO, NOx, PE, PM_{10}, VOC and SO_2 were established for Permitting purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limitations.

2.d The combined emissions of P037 through P044 shall not exceed 2.08 tons of PM_{10} as a rolling, 12-month summation.

2.e Combined annual emissions from P037 through P044 shall not exceed: 0.020 ton SO_2, 3.56 tons NOx, and 10.33 tons VOC per rolling 12-month period.

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

2.g 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.h 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.i Visible particulate emissions from the stacks servicing this emissions unit shall not exceed 10% opacity, as a 6-minute average.

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 amount of glass dried in 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 emission,

   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 Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

2. The permittee shall maintain monthly records of the combined volume of natural gas combusted in emissions units P037 through P040 as a rolling, 12-month summation.

3. The permittee shall maintain monthly records of the combined glass dried, in tons, in 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 grains 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 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 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.

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 exceedance of the rolling 12-month summation limits specified above.

3. The permittee shall submit semi-annual 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.

V. Testing Requirements

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

1. 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 3 months after issuance of the permit and thereafter when required by the Toledo Division of Environmental Services or Ohio EPA Central Office.

   b. The emission testing shall be conducted to demonstrate compliance with the PM_{10} & VOC emission limitation. The initial testing shall be used to establish a pressure drop range for normal operating conditions across the baghouse, assuming compliance is demonstrated. Also, for VOC, the initial testing shall be used to verify the mass balance emission factor.

   c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): For PM_{10}, Methods 201 and 202 of 40 CFR Part 51, Appendix M. For VOC, Method 25 of 40 CFR Part 60 Appendix A. Alternative U.S. EPA approved test methods may be used with prior 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.

e. The emissions testing for the PM_{10} emitted from this emissions unit will demonstrate compliance with the allowable emissions level for this emissions unit if the combined total PM_{10} emissions from the baghouse tested do not exceed the sum of the allowable emissions from both sources sharing the baghouse, i.e.,

PM_{10} allowable = 0.88 lb/hr (chop oven) + 0.113 (classifier) = 1.00 lb/hr

f. The emissions testing for the VOC emitted from this emissions unit will demonstrate compliance with the allowable emissions level for this emissions unit if the combined total VOC emissions from the baghouse tested do not exceed the sum of the allowable emissions from both sources sharing the baghouse, i.e.,

VOC allowable = 0.99 lb/hr (chop oven) + 0.00 (classifier) = 0.99 lb/hr

g. The process weight rate of glass dried in each source sharing the baghouse being tested, shall be maintained at the same hourly rate during the compliance demonstration.

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

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

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

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, 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.

2.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.

2.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 emission 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.

2.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.

2.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 emission 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.

2.f Emission Limitation:

0.088 pound of PM_{10} per hour

Applicable Compliance Method:

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

2.g Emission Limitation:

0.39 ton of PM_{10} 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 0.088 pound of PM_{10} per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

2.h Emission Limitation:

0.0013 pound of SO_2 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 SO_2 emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 2 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.i Emission Limitation:

0.006 ton of SO_2 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 0.0013 pound of SO_2 per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

2.j 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.

2.k 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 emission unit. Compliance is demonstrated by multiplying the short term emission rate of 0.99 pound of VOC per hour by 8,760 hours per year and dividing by 2,000 pounds per ton.

2.I 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.

2.m 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 emission unit. Compliance is 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.

2.n Emission Limitation:

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

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 (MMscf) by the combined volume of natural gas combusted in emissions units P037 through P040 per rolling 12-month period (71.106 MMscf) and divide by 2,000 pounds per ton.

2.o Emission Limitation:

Combined annual emissions from P037 through P044 shall not exceed: 3.56 tons NOx per rolling 12-month period.

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 (MMscf) by the combined volume of natural gas combusted in emissions units P037 through P040 per rolling 12-month period (71.106 MMscf) and divide by 2,000 pounds per ton.

2.p Emission Limitation:

The combined emissions of P037 through P044 shall not exceed 2.08 tons of PM_{10} as a

rolling, 12-month summation.

Applicable Compliance Method:
Compliance shall be demonstrated by multiplying the average emissions rate (in pounds of PM_{10} per ton of glass dried) established during the most recent emissions testing which demonstrated compliance with the emissions limitation for PM_{10} for all emissions units, by the summation of glass dried in emissions units P037 through P040 (in tons per rolling, 12-month period) and dividing by 2,000 pounds per ton.

2.q Emission Limitation:

Combined annual emissions from P037 through P044 shall not exceed 0.02 ton SO_2 per rolling 12-month period.

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 0.6 pound of SO_2 emissions per million standard cubic feet (MMscf) by the combined volume of natural gas combusted in emissions units P037 through P040 per rolling 12-month period (71.106 MMscf) and divide by 2,000 pounds per ton.

2.r Emission Limitation:

Combined annual emissions from P037 through P044 shall not exceed 10.33 tons VOC per rolling 12-month period.

Applicable Compliance Method:
Compliance shall be demonstrated by multiplying the average emissions rate (in pounds of VOC per ton of glass dried) established during the most recent emissions testing which demonstrated compliance with the emissions limitation for VOC for all emissions units, by the summation of glass dried in emissions units P037 through P040 (in tons per rolling, 12-month period) and dividing by 2,000 pounds per ton.

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.

VI. Miscellaneous Requirements

Emissions Unit ID: P037

1. The terms and conditions contained in this PTI supercede those contained in PTI 04-01012 for emissions unit P037

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
P038 - Direct Chop Oven 2 w/baghouse control - modification to add bag leak detection terms instead of static pressure drop and VE terms.	OAC rule 3745-31-05(A)(3)	OAC rule 3745-18-06(E) OAC rule 3745-21-07(B) OAC rule 3745-21-08(B) OAC rule 3745-23-06(B)
	OAC rules 3745-31-10 through 20 OAC rule 3745-31-05(C) OAC rule 3745-31-02(A)(2) OAC rule 3745-17-07(A)(1) OAC rule 3745-17-11(B)(1)	

Applicable Emissions Limitations/Control Measures
0.12 lb/hr of filterable particulate emissions (PE); 0.53 tpy PE; 0.088 lb/hr of PM_{10}; 0.39 tpy PM_{10}; 0.0013 lb/hr of SO_2; 0.006 tpy SO_2; 0.196 lb/hr of NOx; 0.86 tpy NOx; 0.165 lb/hr of CO; 0.73 tpy CO; 0.99 lb/hr VOC; 4.34 tpy VOC; and See sections A.I.2.a, i, and c.
See section A.I.2.d.
See section A.I.2.e.
See section A.I.2.f.
See section A.I.2.b.
See section A.I.2.b.
See section A.I.2.b.
See section A.I.2.h.
See section A.I.2.g.
See section A.I.2.h.

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 through 20.

2.b 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.c The hourly and annual emission limitations for CO, NOx, PE, PM_{10}, VOC and SO_2 were established for Permitting purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limitations.

2.d The combined emissions of P037 through P044 shall not exceed 2.08 tons of PM_{10} as a rolling, 12-month summation.

2.e Combined annual emissions from P037 through P044 shall not exceed: 0.020 ton SO_2, 3.56 tons NOx, and 10.33 tons VOC per rolling 12-month period.

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

2.g 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.h 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.i Visible particulate emissions from the stacks servicing this emissions unit shall

not exceed 10% opacity, as a 6-minute average.

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 amount of glass dried in 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 emission,

   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 Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

2. The permittee shall maintain monthly records of the combined volume of natural gas combusted in emissions units P037 through P040 as a rolling, 12-month summation.

3. The permittee shall maintain monthly records of the combined glass dried, in tons, in 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 grains 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 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 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.

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 exceedance of the rolling 12-month summation limits specified above.

3. The permittee shall submit semi-annual 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.

V. Testing Requirements

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

1. 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 3 months after issuance of the permit and thereafter when required by the Toledo Division of Environmental Services or Ohio EPA Central Office.

   b. The emission testing shall be conducted to demonstrate compliance with the PM_{10} & VOC emission limitation. The initial testing shall be used to establish a pressure drop range for normal operating conditions across the baghouse, assuming compliance is demonstrated. Also, for VOC, the initial testing shall be used to verify the mass balance emission factor.

   c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): For PM_{10}, Methods 201 and 202 of 40 CFR Part 51, Appendix M. For VOC, Method 25 of 40 CFR Part 60 Appendix A. Alternative U.S. EPA approved test methods may be used with prior 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.

e. The emissions testing for the PM_{10} emitted from this emissions unit will demonstrate compliance with the allowable emissions level for this emissions unit if the combined total PM_{10} emissions from the baghouse tested do not exceed the sum of the allowable emissions from both sources sharing the baghouse, i.e.,

PM_{10} allowable = 0.88 lb/hr (chop oven) + 0.113 (classifier) = 1.00 lb/hr

f. The emissions testing for the VOC emitted from this emissions unit will demonstrate compliance with the allowable emissions level for this emissions unit if the combined total VOC emissions from the baghouse tested do not exceed the sum of the allowable emissions from both sources sharing the baghouse, i.e.,

VOC allowable = 0.99 lb/hr (chop oven) + 0.00 (classifier) = 0.99 lb/hr

g. The process weight rate of glass dried in each source sharing the baghouse being tested, shall be maintained at the same hourly rate during the compliance demonstration.

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

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

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

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, 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.

2.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.

2.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 emission 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.

2.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.

2.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 emission 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.

2.f Emission Limitation:

0.088 pound of PM_{10} per hour

Applicable Compliance Method:

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

2.g Emission Limitation:

0.39 ton of PM_{10} 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 0.088 pound of PM_{10} per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

2.h Emission Limitation:

0.0013 pound of SO_2 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 SO_2 emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 2 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.i Emission Limitation:

0.006 ton of SO_2 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 0.0013 pound of SO_2 per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

2.j 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.

2.k 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 emission unit. Compliance is demonstrated by multiplying the short term emission rate of 0.99 pound of VOC per hour by 8,760 hours per year and dividing by 2,000 pounds per ton

2.I 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.

2.m 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 emission unit. Compliance is 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.

2.n Emission Limitation:

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

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 (MMscf) by the combined volume of natural gas combusted in emissions units P037 through P040 per rolling 12-month period (71.106 MMscf) and divide by 2,000 pounds per ton.

2.o Emission Limitation:

Combined annual emissions from P037 through P044 shall not exceed: 3.56 tons NOx per rolling 12-month period.

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 (MMscf) by the combined volume of natural gas combusted in emissions units P037 through P040 per rolling 12-month period (71.106 MMscf) and divide by 2,000 pounds per ton.

2.p Emission Limitation:

The combined emissions of P037 through P044 shall not exceed 2.08 tons of PM_{10} as a

rolling, 12-month summation.

Applicable Compliance Method:
Compliance shall be demonstrated by multiplying the average emissions rate (in pounds of PM_{10} per ton of glass dried) established during the most recent emissions testing which demonstrated compliance with the emissions limitation for PM_{10} for all emissions units, by the summation of glass dried in emissions units P037 through P040 (in tons per rolling, 12-month period) and dividing by 2,000 pounds per ton.

2.q Emission Limitation:

Combined annual emissions from P037 through P044 shall not exceed 0.02 ton SO_2 per rolling 12-month period.

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 0.6 pound of SO_2 emissions per million standard cubic feet (MMscf) by the combined volume of natural gas combusted in emissions units P037 through P040 per rolling 12-month period (71.106 MMscf) and divide by 2,000 pounds per ton.

2.r Emission Limitation:

Combined annual emissions from P037 through P044 shall not exceed 10.33 tons VOC per rolling 12-month period.

Applicable Compliance Method:
Compliance shall be demonstrated by multiplying the average emissions rate (in pounds of VOC per ton of glass dried) established during the most recent emissions testing which demonstrated compliance with the emissions limitation for VOC for all emissions units, by the summation of glass dried in emissions units P037 through P040 (in tons per rolling, 12-month period) and dividing by 2,000 pounds per ton.

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.

VI. Miscellaneous Requirements

1. The terms and conditions contained in this PTI supercede those contained in PTI 04-01012 for emissions unit P038

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
P039 - Direct Chop Oven No. 3 w/baghouse control - modification to add bag leak detection terms instead of static pressure drop and VE terms.	OAC rule 3745-31-05(A)(3)	OAC rule 3745-18-06(E)
		OAC rule 3745-21-07(B)
		OAC rule 3745-21-08(B)
		OAC rule 3745-23-06(B)
	OAC rules 3745-31-10 through 20	
	OAC rule 3745-31-05(C)	
	OAC rule 3745-31-02(A)(2)	
	OAC rule 3745-17-07(A)(1)	
	OAC rule 3745-17-11(B)(1)	

Applicable Emissions Limitations/Control Measures
0.12 lb/hr of filterable particulate emissions (PE); 0.53 tpy PE; 0.088 lb/hr of PM_{10}; 0.39 tpy of PM_{10}; 0.0013 lb/hr of SO_2; 0.006 tpy SO_2; 0.196 lb/hr of NOx; 0.86 tpy NOx; 0.165 lb/hr of CO; 0.73 tpy CO; 0.99 lb/hr VOC; 4.34 tpy VOC; and See sections A.I.2.a, i, and c.
See section A.I.2.d.
See section A.I.2.e.
See section A.I.2.f.
See section A.I.2.b.
See section A.I.2.b.
See section A.I.2.b.
See section A.I.2.h.
See section A.I.2.g.
See section A.I.2.h.

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 through 20.

2.b 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.c The hourly and annual emission limitations for CO, NOx, PE, PM_{10}, VOC and SO_2 were established for Permitting purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limitations.

2.d The combined emissions of P037 through P044 shall not exceed 2.08 tons of PM_{10} as a rolling, 12-month summation.

2.e Combined annual emissions from P037 through P044 shall not exceed: 0.020 ton SO_2, 3.56 tons NOx, and 10.33 tons VOC per rolling 12-month period.

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

2.g 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.h 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.i Visible particulate emissions from the stacks servicing this emissions unit shall not exceed 10% opacity, as a 6-minute average.

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 amount of glass dried in 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 emission,

   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 Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

2. The permittee shall maintain monthly records of the combined volume of natural gas combusted in emissions units P037 through P040 as a rolling, 12-month summation.

3. The permittee shall maintain monthly records of the combined glass dried, in tons, in 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 grains 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 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 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.

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 exceedance of the rolling 12-month summation limits specified above.

3. The permittee shall submit semi-annual 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.

V. Testing Requirements

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

1. 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 3 months after issuance of the permit and thereafter when required by the Toledo Division of Environmental Services or Ohio EPA Central Office.

   b. The emission testing shall be conducted to demonstrate compliance with the PM_{10} & VOC emission limitation. The initial testing shall be used to establish a pressure drop range for normal operating conditions across the baghouse, assuming compliance is demonstrated. Also, for VOC, the initial testing shall be used to verify the mass balance emission factor.

   c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): For PM_{10}, Methods 201 and 202 of 40 CFR Part 51, Appendix M. For VOC, Method 25 of 40 CFR Part 60 Appendix A. Alternative U.S. EPA approved test methods may be used with prior 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.

e. The emissions testing for the PM_{10} emitted from this emissions unit will demonstrate compliance with the allowable emissions level for this emissions unit if the combined total PM_{10} emissions from the baghouse tested do not exceed the sum of the allowable emissions from both sources sharing the baghouse, i.e.,

   PM_{10} allowable = 0.88 lb/hr (chop oven) + 0.113 (classifier) = 1.00 lb/hr

f. The emissions testing for the VOC emitted from this emissions unit will demonstrate compliance with the allowable emissions level for this emissions unit if the combined total VOC emissions from the baghouse tested do not exceed the sum of the allowable emissions from both sources sharing the baghouse, i.e.,

   VOC allowable = 0.99 lb/hr (chop oven) + 0.00 (classifier) = 0.99 lb/hr

g. The process weight rate of glass dried in each source sharing the baghouse being tested, shall be maintained at the same hourly rate during the compliance demonstration.

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

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

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

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, 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.

2.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.

2.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 emission 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.

2.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.

2.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 emission 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.

2.f Emission Limitation:

0.088 pound of PM_{10} per hour

Applicable Compliance Method:

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

2.g Emission Limitation:

0.39 ton of PM_{10} 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 0.088 pound of PM_{10} per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

2.h Emission Limitation:

0.0013 pound of SO_2 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 SO_2 emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 2 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.i Emission Limitation:

0.006 ton of SO_2 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 0.0013 pound of SO_2 per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

2.j 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.

2.k 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 emission unit. Compliance is demonstrated by multiplying the short term emission rate of 0.99 pound of VOC per hour by 8,760 hours per year and dividing by 2,000 pounds per ton

2.I 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 Part60 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.

2.m 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 emission unit. Compliance is 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.

2.n Emission Limitation:

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

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 (MMscf) by the combined volume of natural gas combusted in emissions units P037 through P040 per rolling 12-month period (71.106 MMscf) and divide by 2,000 pounds per ton.

2.o Emission Limitation:

Combined annual emissions from P037 through P044 shall not exceed: 3.56 tons NOx per rolling 12-month period.

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 (MMscf) by the combined volume of natural gas combusted in emissions units P037 through P040 per rolling 12-month period (71.106 MMscf) and divide by 2,000 pounds per ton.

2.p Emission Limitation:

The combined emissions of P037 through P044 shall not exceed 2.08 tons of PM_{10} as a

rolling, 12-month summation.

Applicable Compliance Method:
Compliance shall be demonstrated by multiplying the average emissions rate (in pounds of PM_{10} per ton of glass dried) established during the most recent emissions testing which demonstrated compliance with the emissions limitation for PM_{10} for all emissions units, by the summation of glass dried in emissions units P037 through P040 (in tons per rolling, 12-month period) and dividing by 2,000 pounds per ton.

2.q Emission Limitation:

Combined annual emissions from P037 through P044 shall not exceed 0.02 ton SO_2 per rolling 12-month period.

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 0.6 pound of SO_2 emissions per million standard cubic feet (MMscf) by the combined volume of natural gas combusted in emissions units P037 through P040 per rolling 12-month period (71.106 MMscf) and divide by 2,000 pounds per ton.

2.r Emission Limitation:

Combined annual emissions from P037 through P044 shall not exceed 10.33 tons VOC per rolling 12-month period.

Applicable Compliance Method:
Compliance shall be demonstrated by multiplying the average emissions rate (in pounds of VOC per ton of glass dried) established during the most recent emissions testing which demonstrated compliance with the emissions limitation for VOC for all emissions units, by the summation of glass dried in emissions units P037 through P040 (in tons per rolling, 12-month period) and dividing by 2,000 pounds per ton.

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.

VI. Miscellaneous Requirements

Emissions Unit ID: P039

1. The terms and conditions contained in this PTI supercede those contained in PTI 04-01012 for emissions unit P039.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
P040 - Direct Chop Oven 4 w/baghouse control-modification to add bag leak detection terms instead of static pressure drop and VE terms.	OAC rule 3745-31-05(A)(3)	OAC rule 3745-18-06(E) OAC rule 3745-21-07(B) OAC rule 3745-21-08(B) OAC rule 3745-23-06(B)
	OAC rules 3745-31-10 through 20 OAC rule 3745-31-05(C) OAC rule 3745-31-02(A)(2) OAC rule 3745-17-07(A)(1) OAC rule 3745-17-11(B)(1)	

Applicable Emissions Limitations/Control Measures
0.12 lb/hr of filterable particulate emissions (PE); 0.53 tpy PE; 0.088 lb/hr of PM_{10}; 0.39 tpy of PM_{10}; 0.0013 lb/hr of SO_2; 0.006 tpy SO_2; 0.196 lb/hr of NOx; 0.86 tpy NOx; 0.165 lb/hr of CO; 0.73 tpy CO; 0.99 lb/hr VOC; 4.34 tpy VOC; and See sections A.I.2.a, i, and c.
See section A.I.2.d.
See section A.I.2.e.
See section A.I.2.f.
See section A.I.2.b.
See section A.I.2.b.
See section A.I.2.b.
See section A.I.2.h.
See section A.I.2.g.
See section A.I.2.h.

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 through 20.

2.b 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.c The hourly and annual emission limitations for CO, NOx, PE, PM_{10}, VOC and SO_2 were established for Permitting purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limitations.

2.d The combined emissions of P037 through P044 shall not exceed 2.08 tons of PM_{10} as a rolling, 12-month summation.

2.e Combined annual emissions from P037 through P044 shall not exceed: 0.020 ton SO_2, 3.56 tons NOx, and 10.33 tons VOC per rolling 12-month period.

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

2.g 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.h 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.i Visible particulate emissions from the stacks servicing this emissions unit shall

not exceed 10% opacity, as a 6-minute average.

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 amount of glass dried in 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 emission,

   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 Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

2. The permittee shall maintain monthly records of the combined volume of natural gas combusted in emissions units P037 through P040 as a rolling, 12-month summation.

3. The permittee shall maintain monthly records of the combined glass dried, in tons, in 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 grains 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 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 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.

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 exceedance of the rolling 12-month summation limits specified above.

3. The permittee shall submit semi-annual 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.

V. Testing Requirements

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

1. 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 3 months after issuance of the permit and thereafter when required by the Toledo Division of Environmental Services or Ohio EPA Central Office.

   b. The emission testing shall be conducted to demonstrate compliance with the PM_{10} & VOC emission limitation. The initial testing shall be used to establish a pressure drop range for normal operating conditions across the baghouse, assuming compliance is demonstrated. Also, for VOC, the initial testing shall be used to verify the mass balance emission factor.

   c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): For PM_{10}, Methods 201 and 202 of 40 CFR Part 51, Appendix M. For VOC, Method 25 of 40 CFR Part 60 Appendix A. Alternative U.S. EPA approved test methods may be used with prior 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.

e. The emissions testing for the PM_{10} emitted from this emissions unit will demonstrate compliance with the allowable emissions level for this emissions unit if the combined total PM_{10} emissions from the baghouse tested do not exceed the sum of the allowable emissions from both sources sharing the baghouse, i.e.,

PM_{10} allowable = 0.88 lb/hr (chop oven) + 0.113 (classifier) = 1.00 lb/hr

f. The emissions testing for the VOC emitted from this emissions unit will demonstrate compliance with the allowable emissions level for this emissions unit if the combined total VOC emissions from the baghouse tested do not exceed the sum of the allowable emissions from both sources sharing the baghouse, i.e.,

VOC allowable = 0.99 lb/hr (chop oven) + 0.00 (classifier) = 0.99 lb/hr

g. The process weight rate of glass dried in each source sharing the baghouse being tested, shall be maintained at the same hourly rate during the compliance demonstration.

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

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

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

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, 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.

2.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.

2.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 emission 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.

2.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.

2.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 emission 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.

2.f Emission Limitation:

0.088 pound of PM_{10} per hour

Applicable Compliance Method:

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

2.g Emission Limitation:

0.39 ton of PM_{10} 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 0.088 pound of PM_{10} per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

2.h Emission Limitation:

0.0013 pound of SO_2 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 SO_2 emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 2 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.i Emission Limitation:

0.006 ton of SO_2 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 0.0013 pound of SO_2 per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

2.j 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.

2.k 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 emission unit. Compliance is demonstrated by multiplying the short term emission rate of 0.99 pound of VOC per hour by 8,760 hours per year and dividing by 2,000 pounds per ton

2.I 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.

2.m 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 emission unit. Compliance is 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.

2.n Emission Limitation:

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

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 (MMscf) by the combined volume of natural gas combusted in emissions units P037 through P040 per rolling 12-month period (71.106 MMscf) and divide by 2,000 pounds per ton.

2.o Emission Limitation:

Combined annual emissions from P037 through P044 shall not exceed: 3.56 tons NOx per rolling 12-month period.

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 (MMscf) by the combined volume of natural gas combusted in emissions units P037 through P040 per rolling 12-month period (71.106 MMscf) and divide by 2,000 pounds per ton.

2.p Emission Limitation:

The combined emissions of P037 through P044 shall not exceed 2.08 tons of PM_{10} as a

rolling, 12-month summation.

Applicable Compliance Method:
Compliance shall be demonstrated by multiplying the average emissions rate (in pounds of PM_{10} per ton of glass dried) established during the most recent emissions testing which demonstrated compliance with the emissions limitation for PM_{10} for all emissions units, by the summation of glass dried in emissions units P037 through P040 (in tons per rolling, 12-month period) and dividing by 2,000 pounds per ton.

2.q Emission Limitation:

Combined annual emissions from P037 through P044 shall not exceed 0.02 ton SO_2 per rolling 12-month period.

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 0.6 pound of SO_2 emissions per million standard cubic feet (MMscf) by the combined volume of natural gas combusted in emissions units P037 through P040 per rolling 12-month period (71.106 MMscf) and divide by 2,000 pounds per ton.

2.r Emission Limitation:

Combined annual emissions from P037 through P044 shall not exceed 10.33 tons VOC per rolling 12-month period.

Applicable Compliance Method:
Compliance shall be demonstrated by multiplying the average emissions rate (in pounds of VOC per ton of glass dried) established during the most recent emissions testing which demonstrated compliance with the emissions limitation for VOC for all emissions units, by the summation of glass dried in emissions units P037 through P040 (in tons per rolling, 12-month period) and dividing by 2,000 pounds per ton.

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.

VI. Miscellaneous Requirements

1. The terms and conditions contained in this PTI supercede those contained in PTI 04-01012 for emissions unit P040.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P041 - Direct Chop Classifier Leg 5 w/baghouse control - modification to add bag leak detection terms instead of static pressure drop and VE terms.	OAC 3745-31-05(A)(3)	0.15 lb/hr filterable particulate emissions (PE); 0.66 tpy PE; 0.113 lb/hr PM_{10}; 0.50 tpy PM_{10}; and See sections A.I.2.c and e.
	OAC rules 3745-31-10 through 20	See section A.I.2.d.
	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.b.

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 through 20.

2.b 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.c The hourly and annual emission limitation were established for Permitting purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop monitoring, record keeping and/or reporting

requirements to ensure compliance with this limitation.

2.d The combined emissions of P037 through P044 shall not exceed 2.08 tons of PM_{10} as a rolling, 12-month summation.

2.e Visible particulate emissions from the stacks servicing this emissions unit shall not exceed 10% opacity, as a 6-minute average.

II. Operational Restrictions

1. 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 emission,

   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.

2. The combined amount of glass processed in P041 through P044 shall not exceed 30,165.2 tons per rolling 12-month period.

III. Monitoring and/or Recordkeeping Requirements

1. 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 grains 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 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 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.

2. The permittee shall maintain monthly records of the combined glass dried, in tons, in emissions units P041 through P044 as a rolling, 12-month summation.

IV. Reporting Requirements

1. The permittee shall submit semi-annual 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.

2. The permittee shall submit quarterly deviation (excursion) reports that identify any exceedance of the rolling 12-month summation limits specified above.

V. Testing Requirements

Compliance with the allowable emission limitations in this permit shall be determined

according to the following methods:

1. 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 3 months after issuance of the permit and thereafter when required by the Toledo Division of Environmental Services or Ohio EPA Central Office.

b. The emission testing shall be conducted to demonstrate compliance with the PM_{10} emission limitation. The testing shall be used to establish a pressure drop range for normal operating conditions across the baghouse, assuming compliance is demonstrated.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): For PM_{10}, Methods 201 and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
The test 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.

e. The emissions testing for the PM_{10} emitted from this emissions unit will demonstrate compliance with the allowable emissions level for this emissions unit if the combined total PM_{10} emissions from the baghouse tested do not exceed the sum of the allowable emissions from both sources sharing the baghouse, i.e.,

PM_{10} allowable = 0.88 lb/hr (chop oven) + 0.113 (classifier) = 1.00 lb/hr

f. The process weight rate of glass dried in each source sharing the baghouse being tested, shall be maintained at the same hourly rate during the compliance demonstration.

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

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

the emission test(s).

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

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, 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.

2.b Emission Limitation:

0.113 pound of PM_{10} per hour

Applicable Compliance Method:

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

2.c Emission Limitation:

0.5 ton of PM_{10} 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 PM_{10} per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

2.d Emission Limitation:

0.15 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.

2.e 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 emission unit. Compliance is 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.

2.f Emission Limitation:

The combined emissions of P037 through P044 shall not exceed 2.08 tons of PM_{10} as a rolling, 12-month summation.

Applicable Compliance Method:
Compliance shall be demonstrated by multiplying the average emissions rate (in pounds of PM_{10} per ton of glass dried) established during the most recent emissions testing which demonstrated compliance with the emissions limitation for PM_{10} for all emissions units, by the summation of glass dried in emissions units P037 through P040 (in tons per rolling, 12-month period) and dividing by 2,000 pounds per ton.

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.

VI. Miscellaneous Requirements

1. The terms and conditions contained in this PTI supercede those contained in PTI 04-01126 for emissions unit P041.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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

2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P042 - Direct Chop Classifier Leg 6 with baghouse control - modification to add bag leak detection terms instead of static pressure drop and VE terms	OAC 3745-31-05(A)(3)	0.15 lb/hr filterable particulate emissions (PE); 0.66 tpy PE; 0.113 lb/hr PM_{10}; 0.50 tpy PM_{10}; and See sections A.I.2.c and e.
	OAC rules 3745-31-10 through 20	See section A.I.2.d.
	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.b.

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 through 20.

2.b 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.c The hourly and annual emission limitation were established for Permitting purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop monitoring, record keeping and/or reporting

requirements to ensure compliance with this limitation.

2.d The combined emissions of P037 through P044 shall not exceed 2.08 tons of PM_{10} as a rolling, 12-month summation.

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

II. Operational Restrictions

1. 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 emission,

   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.

2. The combined amount of glass processed in P041 through P044 shall not exceed 30,165.2 tons per rolling 12-month period.

III. Monitoring and/or Recordkeeping Requirements

1. 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 grains 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 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 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.

2. The permittee shall maintain monthly records of the combined glass dried, in tons, in emissions units P041 through P044 as a rolling, 12-month summation.

IV. Reporting Requirements

1. The permittee shall submit semi-annual 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.

2. The permittee shall submit quarterly deviation (excursion) reports that identify any exceedance of the rolling 12-month summation limits specified above.

V. Testing Requirements

Compliance with the allowable emission limitations in this permit shall be determined

according to the following methods:

1. 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 3 months after issuance of the permit and thereafter when required by the Toledo Division of Environmental Services or Ohio EPA Central Office.

b. The emission testing shall be conducted to demonstrate compliance with the PM_{10} emission limitation. The testing shall be used to establish a pressure drop range for normal operating conditions across the baghouse, assuming compliance is demonstrated.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): For PM_{10}, Methods 201 and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

d. The test 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.

e. The emissions testing for the PM_{10} emitted from this emissions unit will demonstrate compliance with the allowable emissions level for this emissions unit if the combined total PM_{10} emissions from the baghouse tested do not exceed the sum of the allowable emissions from both sources sharing the baghouse, i.e.,

   PM_{10} allowable = 0.88 lb/hr (chop oven) + 0.113 (classifier) = 1.00 lb/hr

f. The process weight rate of glass dried in each source sharing the baghouse being tested, shall be maintained at the same hourly rate during the compliance demonstration.

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

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

of Environmental Services or Ohio EPA Central Office's refusal to accept the results of the emission test(s).

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

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, 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.

2.b Emission Limitation:

0.113 pound of PM_{10} per hour

Applicable Compliance Method:

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

2.c Emission Limitation:

0.5 ton of PM_{10} 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 PM_{10} per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

2.d Emission Limitation:

0.15 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.

2.e 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 emission unit. Compliance is 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.

2.f Emission Limitation:

The combined emissions of P037 through P044 shall not exceed 2.08 tons of PM_{10} as a rolling, 12-month summation.

Applicable Compliance Method:
Compliance shall be demonstrated by multiplying the average emissions rate (in pounds of PM_{10} per ton of glass dried) established during the most recent emissions testing which demonstrated compliance with the emissions limitation for PM_{10} for all emissions units, by the summation of glass dried in emissions units P037 through P040 (in tons per rolling, 12-month period) and dividing by 2,000 pounds per ton.

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.

VI. Miscellaneous Requirements

1. The terms and conditions contained in this PTI supercede those contained in PTI 04-01126 for emissions unit P042.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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

2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P043 - Direct Chop Classifier Leg 7 with baghouse control - modification to add bag leak detection terms instead of static pressure drop and VE terms.	OAC 3745-31-05(A)(3)	0.15 lb/hr filterable particulate emissions (PE); 0.66 tpy PE; 0.113 lb/hr PM_{10}; 0.50 tpy PM_{10}; and See sections A.I.2.c and e.
	OAC rules 3745-31-10 through 20	See section A.I.2.d.
	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.b.

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 through 20.

2.b 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.c The hourly and annual emission limitation were established for Permitting purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop monitoring, record keeping and/or reporting

requirements to ensure compliance with this limitation.

2.d The combined emissions of P037 through P044 shall not exceed 2.08 tons of PM_{10} as a rolling, 12-month summation.

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

II. Operational Restrictions

1. 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 emission,

   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.

2. The combined amount of glass processed in P041 through P044 shall not exceed 30,165.2 tons per rolling 12-month period.

III. Monitoring and/or Recordkeeping Requirements

1. 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 grains 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 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 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.

2. The permittee shall maintain monthly records of the combined glass dried, in tons, in emissions units P041 through P044 as a rolling, 12-month summation.

IV. Reporting Requirements

1. The permittee shall submit semi-annual 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.

2. The permittee shall submit quarterly deviation (excursion) reports that identify any exceedance of the rolling 12-month summation limits specified above.

V. Testing Requirements

Compliance with the allowable emission limitations in this permit shall be determined

according to the following methods:

1. 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 3 months after issuance of the permit and thereafter when required by the Toledo Division of Environmental Services or Ohio EPA Central Office.

b. The emission testing shall be conducted to demonstrate compliance with the PM_{10} emission limitation. The testing shall be used to establish a pressure drop range for normal operating conditions across the baghouse, assuming compliance is demonstrated.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): For PM_{10}, Methods 201 and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

d. The test 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.

e. The emissions testing for the PM_{10} emitted from this emissions unit will demonstrate compliance with the allowable emissions level for this emissions unit if the combined total PM_{10} emissions from the baghouse tested do not exceed the sum of the allowable emissions from both sources sharing the baghouse, i.e.,

PM_{10} allowable = 0.88 lb/hr (chop oven) + 0.113 (classifier) = 1.00 lb/hr

f. The process weight rate of glass dried in each source sharing the baghouse being tested, shall be maintained at the same hourly rate during the compliance demonstration.

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

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

of Environmental Services or Ohio EPA Central Office's refusal to accept the results of the emission test(s).

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

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, 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.

2.b Emission Limitation:

0.113 pound of PM_{10} per hour

Applicable Compliance Method:

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

2.c Emission Limitation:

0.5 ton of PM_{10} 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 PM_{10} per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

2.d Emission Limitation:

0.15 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.

2.e 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 emission unit. Compliance is 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.

2.f Emission Limitation:

The combined emissions of P037 through P044 shall not exceed 2.08 tons of PM_{10} as a rolling, 12-month summation.

Applicable Compliance Method:
Compliance shall be demonstrated by multiplying the average emissions rate (in pounds of PM_{10} per ton of glass dried) established during the most recent emissions testing which demonstrated compliance with the emissions limitation for PM_{10} for all emissions units, by the summation of glass dried in emissions units P037 through P040 (in tons per rolling, 12-month period) and dividing by 2,000 pounds per ton.

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.

VI. Miscellaneous Requirements

1. The terms and conditions contained in this PTI supercede those contained in PTI 04-01126 for emissions unit P043.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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

2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

Emissions Unit ID: P044

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P044 - Direct Chop Classifier Leg 8 with baghouse control - modification to add bag leak detection terms instead of static pressure drop and VE terms.	OAC 3745-31-05(A)(3)	0.15 lb/hr filterable particulate emissions (PE); 0.66 tpy PE; 0.113 lb/hr PM_{10}; 0.50 tpy PM_{10}; and See sections A.I.2.c and e.
	OAC rules 3745-31-10 through 20	See section A.I.2.d.
	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.b.

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 through 20.

2.b 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.c The hourly and annual emission limitation were established for Permitting purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop monitoring, record keeping and/or reporting requirements to ensure compliance with this limitation.

2.d The combined emissions of P037 through P044 shall not exceed 2.08 tons of PM_{10} as a rolling, 12-month summation.

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

II. Operational Restrictions

1. 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 emission,

   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.

2. The combined amount of glass processed in P041 through P044 shall not exceed 30,165.2 tons per rolling 12-month period.

III. Monitoring and/or Recordkeeping Requirements

1. 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 grains 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 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 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.

2. The permittee shall maintain monthly records of the combined glass dried, in tons, in emissions units P041 through P044 as a rolling, 12-month summation.

IV. Reporting Requirements

1. The permittee shall submit semi-annual 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.

2. The permittee shall submit quarterly deviation (excursion) reports that identify any exceedance of the rolling 12-month summation limits specified above.

V. Testing Requirements

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

1. 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 3 months after issuance of the permit and thereafter when required by the Toledo Division of Environmental Services or Ohio EPA Central Office.

b. The emission testing shall be conducted to demonstrate compliance with the PM_{10} emission limitation. The testing shall be used to establish a pressure drop range for normal operating conditions across the baghouse, assuming compliance is demonstrated.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): For PM_{10}, Methods 201 and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

d. The test 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.

e. The emissions testing for the PM_{10} emitted from this emissions unit will demonstrate compliance with the allowable emissions level for this emissions unit if the combined total PM_{10} emissions from the baghouse tested do not exceed the sum of the allowable emissions from both sources sharing the baghouse, i.e.,

PM_{10} allowable = 0.88 lb/hr (chop oven) + 0.113 (classifier) = 1.00 lb/hr

f. The process weight rate of glass dried in each source sharing the baghouse being tested, shall be maintained at the same hourly rate during the compliance demonstration.

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

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

of Environmental Services or Ohio EPA Central Office's refusal to accept the results of the emission test(s).

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

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, 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.

2.b Emission Limitation:

0.113 pound of PM_{10} per hour

Applicable Compliance Method:

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

2.c Emission Limitation:

0.5 ton of PM_{10} 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 PM_{10} per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

2.d Emission Limitation:

0.15 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.

2.e 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 emission unit. Compliance is 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.

2.f Emission Limitation:

The combined emissions of P037 through P044 shall not exceed 2.08 tons of PM_{10} as a rolling, 12-month summation.

Applicable Compliance Method:
Compliance shall be demonstrated by multiplying the average emissions rate (in pounds of PM_{10} per ton of glass dried) established during the most recent emissions testing which demonstrated compliance with the emissions limitation for PM_{10} for all emissions units, by the summation of glass dried in emissions units P037 through P040 (in tons per rolling, 12-month period) and dividing by 2,000 pounds per ton.

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.

VI. Miscellaneous Requirements

1. The terms and conditions contained in this PTI supercede those contained in PTI 04-01126 for emissions unit P044.

Emissions Unit ID: P044

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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

2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	
P045 - Gypsum Line Oven (9212 Leg 4) with baghouse control - modification to increase the throughput limitation	OAC rule 3745-31-05(A)(3)	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)	
	OAC rules 3745-31-10 through 20	
	OAC rule 3745-17-07(A)(1)	
	OAC rule 3745-17-11(B)(1)	
	OAC rule 3745-18-06(E)	

Applicable Emissions Limitations/Control Measures

0.19 lb/hr filterable particulate emissions (PE);
0.84 tpy PE;
0.14 lb/hr of PM_{10};
0.001 lb/hr of SO_2;
0.20 lb/hr of NOx;
0.17 lb/hr of CO;
1.25 lb/hr VOC; and
See sections A.I.2.a, f, and c.

0.39 tpy CO

0.47 tpy NOx;
0.004 tpy SO_2; and
5.47 tpy VOC

0.49 tpy of PM_{10}

See section A.I.2.b.

See section A.I.2.b.

See section A.I.2.b.

See section A.I.2.e.

See section A.I.2.d.

See section A.I.2.e.

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 rule 3745-31-10 through 20.

2.b 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.c The hourly emission limitations for CO, NOx, PE and SO_2 were established for Permitting purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limitations.

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

II. Operational Restrictions

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

2. The volume of natural gas combusted in this emissions unit shall not exceed 9.37 MMscf per rolling 12-month period.

3. The combined amount of glass dried in this emissions unit shall not exceed 16,200 tons (32,401,100 lbs) per rolling 12-month period.

4. To ensure the baghouse is operated according to the manufacturer's specifications and to maintain compliance with the allowable particulate emission rate, the pressure drop across the baghouse shall be maintained within 1 inch water column of the pressure drop established during the most recent stack test that demonstrated compliance while the emissions unit is in operation.

III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

2. The permittee shall maintain monthly records of the volume of natural gas combusted in this emissions unit as a rolling, 12-month summation.

3. The permittee shall maintain monthly records of the combined glass dried, in tons, in this emissions unit as a rolling, 12-month summation.

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

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 exceedance of the rolling 12-month summation limits specified above.

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

V. Testing Requirements

Compliance with the allowable emission limitations in this permit shall be determined

according to the following methods:

1. 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 3 months after issuance of the permit and thereafter when required by the Toledo Division of Environmental Services or Ohio EPA Central Office.

b. The emission testing shall be conducted to demonstrate compliance with the PM_{10} & VOC emission limitation. The testing shall be used to establish a pressure drop range for normal operating conditions across the baghouse, assuming compliance is demonstrated. Also, for VOC, the initial testing shall be used to verify the mass balance emission factor.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): For PM_{10}, Methods 201 and 202 of 40 CFR Part 51, Appendix M. For VOC, Method 25 of 40 CFR Part 60 Appendix A. Alternative U.S. EPA approved test methods may be used with prior 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.

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

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

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

the Ohio EPA Central Office.

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, 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.

2.b Emission Limitation:

0.17 pound of CO per hour

Applicable Compliance Method:

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

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

2.c Emission Limitation:

0.39 ton of CO per year

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, and the actual MMscf of gas combusted, as follows: multiply the emission factor of 84 pounds of CO emissions per million standard cubic feet(MMscf) times the actual MMscf combusted in the rolling 12-month period and divide by 2000 pounds per ton.

2.d Emission Limitation:

0.20 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.

2.e Emission Limitation:

0.47 ton of NOx per year

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, and the actual MMscf of gas combusted, as follows: multiply the emission factor of 100 pounds of NOx emissions per million standard cubic feet(MMscf) times the actual MMscf combusted in the rolling 12-month period and divide by 2000 pounds per ton.

2.f Emission Limitation:

0.14 pound of PM_{10} per hour

Applicable Compliance Method:

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

2.g Emission Limitation:

0.49 ton of PM_{10} per year

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the emission factor (in pounds of PM_{10} per ton of glass dried) established during the most recent emissions test which demonstrated compliance with the emissions limitation for PM_{10}, by the summation of glass dried in this emissions unit (in tons per rolling, 12-month period) and dividing by 2,000 pounds per ton.

2.h Emission Limitation:

0.001 pound of SO_2 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 SO_2 emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 2 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.i Emission Limitation:

0.004 ton of SO_2 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 0.001 pound of SO_2 per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

2.j Emission Limitation:

1.25 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.

2.k Emission Limitation:

5.47 tons of VOC per year

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the emission factor (in pounds of VOC per ton of glass dried) established during the most recent emissions test which demonstrated compliance with the emissions limitation for VOC, by the summation of glass dried in this emissions unit (in tons per rolling, 12-month period) and dividing by 2,000 pounds per ton.

2.l Emission Limitation:

0.19 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.

2.m Emission Limitation:

0.84 ton of PE per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emission unit. Compliance is demonstrated by multiplying the short term emission rate of 0.19 pound of PE per hour by 8,760 hours per year and dividing by 2,000 pounds per ton.

VI. Miscellaneous Requirements

1. The terms and conditions contained in this PTI supercede those contained in PTI 04-01132 for emissions unit P045

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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

2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

Emissions Unit ID: P053

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	OAC rule 3745-21-08(B)
P053 - Batch Oven No. 7 (Forming Pre-bake curing oven)	OAC rule 3745-31-05(A)(3)	OAC rule 3745-23-06(B)
	OAC rules 3745-31-10 through 20	
	OAC rule 3745-31-05(C)	
	OAC rule 3745-31-02(A)(2)	
	OAC rule 3745-17-07(A)(1)	
	OAC rule 3745-17-11(B)(1)	
	OAC rule 3745-18-06(E)	
	OAC rule 3745-21-07(B)	

Applicable Emissions Limitations/Control Measures
0.024 lb/hr of filterable particulate emissions (PE); 0.11 tpy PE; 0.0006 lb/hr of SO_2; 0.003 tpy SO_2; 0.099 lb/hr of NOx; 0.44 tpy NOx; 0.083 lb/hr of CO; 0.37 tpy CO; 0.006 lb/hr VOC; 0.03 tpy VOC; and See sections A.I.2.a, i, and c.
0.007 lb/hr of PM_{10}; 0.031 tpy of PM_{10}; and See section A.I.2.d
See section A.I.2.e
See section A.I.2.f
See section A.I.2.b.
See section A.I.2.b.
See section A.I.2.b.
See section A.I.2.h.
See section A.I.2.g.
See section A.I.2.h.

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 rule 3745-31-10 through 20.

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

2.d Combined annual emissions from P019 through P024 and P053 shall not exceed 0.091 tons of PM_{10} per rolling 12-month period.

2.e Combined annual emissions from P019 through P024 and P053 shall not exceed: 0.01 ton SO_2, 1.19 ton NOx, and 0.23 ton VOC per rolling 12-month period.

2.f Combined annual emissions from P019 through P024 and P053 shall not exceed: 1.00 ton CO per rolling 12-month period.

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

2.i Visible particulate emissions from the stack servicing this emissions unit shall not exceed 10% opacity, as a 6-minute average.

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 P019 through P024 and P053 shall not exceed 23.845 MMscf per rolling 12-month period.

3. The combined amount of glass dried in P019 through P024 and P053 shall not exceed 963,965 pounds per rolling 12-month period.

III. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

2. The permittee shall maintain monthly records of the combined volume of natural gas combusted in emissions units P019 through P024 and P053 as a rolling, 12-month summation.

3. The permittee shall maintain monthly records of the combined glass dried, in pounds, in emissions units P019 through P024 and P053 as a rolling, 12-month summation.

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 exceedance of the rolling 12-month summation limits specified above.

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, 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:

0.083 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 1 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:

0.37 ton of CO 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 0.083 pound of CO per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.d Emission Limitation:

0.099 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 1 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:

0.44 ton of NOx 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 0.099 pound of NOx per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.f Emission Limitation:

0.007 pound of PM_{10} 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 7.6 pounds of PM_{10} 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 MMBtu per hour.

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

1.g Emission Limitation:

0.031 ton of PM_{10} 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 0.007 pound of PM_{10} per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.h Emission Limitation:

0.0006 pound of SO_2 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 SO_2 emissions per million standard cubic feet by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum heat input capacity of 1 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.i Emission Limitation:

0.003 ton of SO_2 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 0.0006 pound of SO_2 per hour by 8,760 hours per year and divide by 2,000 pounds per ton.

1.j Emission Limitation:

0.006 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.k Emission Limitation:

0.03 ton of VOC per year

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emission unit. Compliance is demonstrated by multiplying the short term emission rate of 0.006 pound of VOC per hour by 8,760 hours per year and dividing by 2,000 pounds per ton.

1.l Emission Limitation:

0.024 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.m Emission Limitation:

0.11 ton of PE per year

Applicable Compliance Method:

Compliance is demonstrated by multiplying the short term emission rate of 0.024 pounds of PE per hour by 8,760 annual hours of operation, and dividing by 2,000 pounds per ton.

1.n Emission Limitation:

Combined annual emissions from P019 through P024 and P053 shall not exceed 0.091 tons of PM_{10}, 0.01 ton SO_2, 1.19 ton NOx, 0.23 ton VOC, and 1.00 ton CO per rolling 12-month period.

Applicable Compliance Method:
Compliance is demonstrated by multiplying the appropriate emission factor (as listed above), in pounds per million standard cubic feet, by the actual MMscf of gas combusted (see section A.II. above) and dividing by 2000. Also for the VOC limit,

multiply the combined pounds of glass dried times the emissions factor of 0.000336 lbs VOC per pound of glass dried, divide by 2000 lbs per ton, and add this to the tons of VOC from the combustion of natural gas.

VI. Miscellaneous Requirements

The terms and conditions contained in this PTI supercede those contained in PTI 04-01345 for emissions unit P053.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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

2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.