State of Ohio Environmental Protection Agency

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

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

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

01/08/03

CERTIFIED MAIL

RE: Final Title V Chapter 3745-77 permit

13-18-17-0235
FERRO CORPORATION - CLEVELAND FRIT PLANT
Michael E Gray
4150 East 56th Street, P.O. Box 6550
Cleveland, OH 44101

Dear Michael E Gray:

Enclosed is the Title V permit that allows you to operate the facility in the manner indicated in the permit. Because this permit may contain several conditions and restrictions, we urge you to read it carefully.

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469.

You are hereby notified that this action of the Director is final and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed with the Environmental Review Appeals Commission within thirty (30) days after notice of the Director's 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. It is also requested by the Director that a copy of the appeal be served upon the Environmental Enforcement Section of the Office of the Attorney General. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
236 East Town Street
Room 300
Columbus, Ohio 43215

If you have any questions, please contact Cleveland Division of Air Pollution Control.

Very truly yours,

Michael W. Ahern

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

cc: Cleveland Division of Air Pollution Control
File, DAPC PMU

State of Ohio Environmental Protection Agency

FINAL TITLE V PERMIT

Issue Date: **01/08/03**	Effective Date: **01/29/03**	Expiration Date: **01/29/08**

This document constitutes issuance of a Title V permit for Facility ID: 13-18-17-0235 to:
FERRO CORPORATION - CLEVELAND FRIT PLANT
4150 East 56th Street, P.O. Box 6550
Cleveland, OH 44101-1550

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

P032 (Smelter #4)
Continuous smelting of raw materials to produce molten frit.

P033 (Nos.6, 7, 8,10 Batch Ball Mills, No. 9 Cont. Ball Mill)
Frit Batch Ball Mills and one Continuous Ball Mill

P034 (Dry Batch Ball Mill #12)
Perc Cover Coating Mill

P053 (Mill 13)
Batch ball mill No. 13

P057 (PERC Mikron classification system)
PERC powder Mikron classification system

P061 (FEM (E&SG) P111-1)
Continuous electric melter

P063 (FEM (E&SG) P111-3)
Continuous electric melter

P064 (FEM (E&SG) Melter 1)
Batch electric melter

P065 (FEM (E&SG) Melter 2)
Batch electric melter

P066 (FEM (E&SG) Melter 3)
Batch electric melter

P067 (FEM (E&SG) Melter 5)
Batch electric melter

P068 (FEM (E&SG) Melter 9)
Batch electric melter

P069 (FEM (E&SG) Melter 10)
Batch electric melter

P071 (FEM (E&SG) Alcohol milling expansion)
Friction dryers 1, 2 & 3 with packed bed scrubber for alcohol emissions.

P072 (Dry batch ball mill #14 w/Mikron classifier)
Perc Cover Coating Mill w/ PERC powder Mikron classification system

P901 (Raw material receiving and transport to storage)
Unloading of raw material from trucks, and rail road cars and transport to storage bins.

P902 (Raw material weighing and mixing)
Raw material weighing, mixing and transporting into portable bins.

P903 (Nos. 1, 2 Continuous Mills, Nos. 4, 5 Batch Mills)
Conveying and feeding of frit material into the mill, classifying and screening the grined frit material and bagging of the screened product.

P906 (Smelter #3)
Continuous smelting of raw materials to produce molten frit.

P908 (Smelter #6)
Continuous smelting of raw materials to produce molten frit.

P909 (Smelter #7)
Continuous smelting of raw materials to produce molten frit.

P910 (Smelter #8)
Continuous smelting of raw materials to produce molten frit.

P911 (Smelter #9)
Continuous smelting of raw materials to produce molten frit.

P912 (Smelter #10)
Continuous smelting of raw materials to produce molten frit.

P913 (Smelter #22)
Continuous smelting of raw materials to produce molten frit.

P914 (Smelter #24)
Continuous smelting of raw materials to produce molten fritt.

P915 (ESG-Speciality lead glass melter)
EMS lead gas/O2 continuous melter, 1 small electric batch melter

P917 (SM#3FF)
FlexKleen dust collector.

P918 (SM#4FF)
Flexkleen dust collector

P920 (SM#6FF)
Flexkleen dust collector

P921 (SM#7FF)
Flexkleen dust collector

P922 (SM#8FF)
Flexkleen dust collector

P923 (SM#9FF)
Flexkleen dust collector

P924 (SM#10FF)
Flexkleen dust collector

P925 (Smelter # 12)
Continuous smelting of raw materials to produce molten frit.

P926 (SM#12FF)
Flexkleen dust collector

P927 (SM#22FF)
Flexkleen dust collector

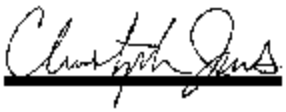
P929 (SM#24FF)
Flexkleen dust collector

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

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

Cleveland Division of Air Pollution Control
1925 St. Clair
Cleveland, OH 44114
(216) 664-2324

OHIO ENVIRONMENTAL PROTECTION AGENCY



Christopher Jones
Director

PART I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Section

1. Monitoring and Related Record Keeping and Reporting Requirements

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

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

b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
(Authority for term: OAC rule 3745-77-07(A)(3)(b)(ii))

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

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

ii. **All reporting required in accordance with the OAC rule 3745-77-07(A)(3)(c) with respect to emission limitations, operational restrictions, and control device operating parameter limitations shall be submitted in the following manner:**

(a) Written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations ; (ii) the probable cause of such deviations; and (iii) any corrective actions or preventive measures taken, shall be promptly made to the appropriate Ohio EPA District Office or local air agency. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, i.e., in Part III of this Title V permit, the written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year, and shall cover the previous calendar quarters. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. These written reports shall satisfy the requirements (in part) of OAC rule 3745-77-07(A)(3)(c)(i) and (ii) pertaining to the submission of monitoring reports every six

months and the requirements (in part) of OAC rule 3745-77-07(A)(3)(c)(iii) pertaining to the prompt reporting of all deviations. See B.6 below if no deviations occurred during the quarter.

(Authority for term: OAC rules 3745-77-07(A)(3)(c)(i) ,(ii) and (iii))

(b) Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be promptly reported to the Ohio EPA in accordance with OAC rule 3745-15-06. In addition, to fulfill the deviation reporting requirements for this Title V permit, written reports that identify each malfunction that occurred during each calendar quarter shall be submitted, at a minimum, quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year, and shall cover the previous calendar quarters.

In identifying each deviation caused by a malfunction, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. For a specific malfunction, if this information has been provided in a written report that was submitted in accordance with OAC rule 3745-15-06, the permittee may simply reference that written report to identify the deviation. Also, if a deviation caused by a malfunction is identified in a written report submitted pursuant to paragraph (a) above, a separate report is not required for that malfunction pursuant to this paragraph. Nevertheless, all malfunctions, including those reported only verbally in accordance with OAC rule 3745-15-06, must be reported in writing, at a minimum, on a quarterly basis.

Any scheduled maintenance, as defined in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation, operational restriction, and control device operating parameter limitation shall be reported in the same manner as described above for malfunctions. These written reports for malfunctions (and scheduled maintenance projects, if appropriate) shall satisfy the requirements (in part) of OAC rule 3745-77-07(A)(3)(c)(iii) pertaining to the prompt reporting of all deviations.

(Authority for term: OAC rules 3745-77-07(A)(3)(c)(iii))

iii. **For monitoring, record keeping, and reporting requirements:**

Written reports that identify any deviations from the federally enforceable monitoring, record keeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year, for the previous six calendar months. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. These semi-annual written reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c)(i) and (ii) pertaining to the reporting of any deviations related to the monitoring, record keeping, and reporting requirements. 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.

(Authority for term: OAC rules 3745-77-07(A)(3)(c)(i) and (ii))

iv. Each written report shall be signed by a responsible official certifying that, "based on information and belief formed after reasonable inquiry, the statements and information in the

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

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 of any emissions unit(s) or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in OAC rule 3745-15-06, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).
(Authority for term: OAC rule 3745-77-07(A)(3)(c)(iii))

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

4. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.
(Authority for term: OAC rule 3745-77-07(A)(5))

5. Severability Clause

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

6. General Requirements

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

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

c. This permit may be modified, reopened, revoked, or revoked and reissued, for cause, in accordance with A.10 below. The filing of a request by the permittee for a permit modification, revocation and

reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.

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

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

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

7. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78.

(Authority for term: OAC rule 3745-77-07(A)(8))

8. Marketable Permit Programs

No revision of this permit is required under any approved economic incentive, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in this permit.

(Authority for term: OAC rule 3745-77-07(A)(9))

9. Reasonably Anticipated Operating Scenarios

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

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

10. Reopening for Cause

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

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

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

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

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

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

11. Federal and State Enforceability

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

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

12. Compliance Requirements

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

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

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

ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with paragraph (E) of OAC rule 3745-77-03.

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

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

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

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

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

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

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

13. Permit Shield

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

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

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

14. Operational Flexibility

The permittee is authorized to make the changes identified in OAC rule 3745-77-07(H)(1)(a) to (H)(1)(c) within the permitted stationary source without obtaining a permit revision, if such change is not a modification

under any provision of Title I of the Act [as defined in OAC rule 3745-77-01(JJ)], and does not result in an exceedance of the emissions allowed under this permit (whether expressed therein as a rate of emissions or in terms of total emissions), and the permittee provides the Administrator of the U.S. EPA and the appropriate Ohio EPA District Office or local air agency with written notification within a minimum of seven days in advance of the proposed changes, unless the change is associated with, or in response to, emergency conditions. If less than seven days notice is provided because of a need to respond more quickly to such emergency conditions, the permittee shall provide notice to the Administrator of the U.S. EPA and the appropriate District Office of the Ohio EPA or local air agency as soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).
(Authority for term: OAC rules 3745-77-07(H)(1) and (2))

15. Emergencies

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

16. Off-Permit Changes

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

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

b. The permittee provides contemporaneous written notice of the change to the Director and the Administrator of the U.S. EPA, except that no such notice shall be required for changes that qualify as insignificant emission levels or activities as defined in OAC rule 3745-77-01(U). Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change.

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

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

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

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

(I) of rule 3745-77-07 of the Administrative Code shall affect any applicable obligation under Chapter 3745-31 of the Administrative Code.

(For purposes of clarification, the permittee can refer to Engineering Guide #63 that is available in the STARSHIP software package.)
(Authority for term: OAC rule 3745-77-07(I))

17. Compliance Method Requirements

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee, including but not limited to, any challenge to the Credible Evidence Rule (see 62 Fed. Reg. 8314, Feb. 24, 1997), in the context of any future proceeding.
(This term is provided for informational purposes only.)

18. Insignificant Activities

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

19. Permit to Install Requirement

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

20. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.
(Authority for term: OAC rule 3745-77-07(A)(1))

B. *State Only Enforceable Section*

1. Reporting Requirements Related to Monitoring and Record Keeping Requirements

The permittee shall submit required reports in the following manner:

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

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

shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

2. Records Retention Requirements

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

3. Inspections and Information Requests

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

4. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

5. Permit Transfers

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

6. Additional Reporting Requirements When There Are No Deviations of <u>Federally Enforceable</u> 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., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

Part II - Specific Facility Terms and Conditions

A. State and Federally Enforcable Section

None

B. State Only Enforceable Section

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

P002 - IP-745 patterson mill for passivation glass;
P021 - 3 gas-fired melters in control lab and 3 glass heat treating ovens (R&D);
P022 - 10 gas-fired pot melters in development lab, 3 tray dryers (R&D);
P023 - 4 gas fired pot melters in development lab, small cone blender (R&D);
P054 - pilot kiln (R&D);
P055 - pilot shuttle kiln (R&D);
P072 - No.14 mill system
Z001 - line scale bin from minor system;

Z002 - line scale bin from minor system #2;
Z003 - line scale bin from minor system #3;
Z004 - line scale bin from minor system #4;
Z005 - line scale bin from minor system #5;
Z006 - 7 line scales in batch mixing area;
Z007 - spout burner with smelter #6;
Z008 - spout burner with smelter #7;
Z009 - spout burner with smelter #8;
Z010 - spout burner with smelter #9;
Z011 - spout burner with smelter #10;
Z012 - spout burner with smelter #22;
Z013 - spout burner with smelter #24;
Z014 - vacuum dust collector in mixing area, used 1 hr/day;
Z015 - vacuum dust collector in smelter area, used 1 hr/day;
Z016 - four stations for bag dumping with repackaging system;
Z017 - vacuum dust collector in milling area, used 1 hr/day;
Z018 - vacuum dust collector in PERC area;
Z019 - rail road raw material unloading dump station, quartz dust collection;
Z020 - bulk bag unloading hopper and 72' elevator dust collection;
Z021 - vacuum dust collector in glaze blending area, used 1 hr/day;
Z022 - gas-fired space heaters;
Z023 - 3 cooling towers using water as a cooling media;
Z024 - cure oven, electric-heated (R&D);
Z025 - 3 spray booths (R&D);

Z026 - electrostatic spray booth (R&D);
Z027 - electrostatic spray booth (R&D);
Z028 - batch ball mill, spray booth and sand blaster (R&D);
Z029 - CERC kiln, gas-fired for floor tile studies (R&D);
Z030 - spray booth (R&D);
Z031 - small milling system and spray booth (R&D);
Z032 - powder electronic spray gun (R&D);
Z033 - frit spray booth;
Z034 - test pannel sand blaster;
Z035 - frit spray gun for wet milled product;
Z036 - frit curing oven;
Z037 - drying oven;
Z038 - dry process spray booth;
Z055 -pulverizer and screener (R&D);
Z056 - boxing of thermosetting powder (R&D);
Z057 - powder coating in quality and development lab (R&D);
Z058 - VEDOC lab sand blaster (R&D);
Z059 - powder coatings applications (R&D);
Z060 - cold cleaning bath with top cover (R&D);
Z069 - Hoffman vacuum cleaning (VC2) used 1 hr/day;
Z070 - Hoffman vacuum cleaning (VC1) used 1 hr/day;
Z071 - lab ball mills;
Z072 - shipping dock #4 minor repackaging;

B. State Only Enforceable Section (continued)

Z074 - pilot rotary furnace (R&D);
Z075 - pilot rotary kiln gas combustion only (R&D);
Z076 - pilot ball mills (2 wet) (R&D);
Z077 - pilot 8" jet mills (R&D);
Z078 - pilot Sweco grinders (R&D);
Z079 - pilot Littleford mixer (R&D);
Z080 - pilot Prodex mixers (2) (R&D);
Z081 - pilot large Enrich mixer (R&D);
Z082 - pilot small Enrich mixer (R&D);
Z083 - pilot research 4" lab jet mill (R&D);
Z084 - pilot spray chamber/dryer (R&D);
Z085 - Safety Clean degreaser;
Z086 - Stanley grinder;
Z087 - welding bench;
Z088 - blow off booth by loading dock;
Z089 - blow off booth near mill room;
Z090 - vehicle traffic dust generation;
Z091 - conveying and feeding of frit material into the mill, milling, classifying and screening the grinded frit;
Z092 - hand unloading of potassium carbonate;
Z093 - unloading of sodium nitrate bags;
Z094 - unloading of boric oxide bags;
Z095 - unloading of bags of K2SiF6;
Z096 - recycle of captured raw material dust to main conveyor belt;
Z097 - shuttle kiln, less than 10 mmBtu/hr;
Z098 - 2 solvent mills, blue M oven, jar mills, photo spin hood;
Z100 - frictional dryer - SMB for solvent milling;
Z101 - pan dryer (infrared heated);
Z102 - FEM (E&SG) coarse grinding process;
Z103 - FEM (E&SG) consolidated raw material batching, product packaging;
Z104 - FEM (E&SG) consolidation 5 lb/cycle melters (DB melters 1, 2, and 3); and
Z105 - PERC cover coating mill with PERC powder Mikron classification system.

Each insignificant emissions unit at this facility must comply with all applicable State and federal regulations, as well as any emission limitations and/or control requirements contained within a permit to install for the emissions unit.

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Smelter #4 (P032)

Activity Description: Continuous smelting of raw materials to produce molten frit.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
continuous frit smelter #4 (production capacity: 3000 lbs/hr max.) equipped with 4 venturi scrubbers which operate independently and in parallel	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-31-05(A)(3) (PTI#13-2079)	0.88 lb of particulate emissions in the exhaust gases per ton of frit fired The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).

2. Additional Terms and Conditions

None

II. Operational Restrictions

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

2. The pH of the scrubber liquor in each scrubber shall be maintained within the range of 6 and 10.

3. The pressure drop across each scrubber shall be continuously maintained at a value of not less than 30 inches of water at all times while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to continuously monitor and record the pH of the scrubber liquor and the pressure drop across each scrubber while the emissions unit is in operation. The monitoring devices and any recorders shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day for each scrubber:

a. The pH of the scrubber liquor.

b. The pressure drop across the scrubber, in inches of water.

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

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

3. The permittee shall maintain records of production run times and the amount of frit processed in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:

a. The pressure drop across the scrubber.

b. The pH of the scrubber liquor.

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

3. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

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

1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

1.b Emission Limitation:
0.88 lb of particulate emissions in the exhaust gases per ton of frit fired

Applicable Compliance Method:
Compliance shall be based upon the results of the emission testing specified in section A.V.1.c.

V. Testing Requirements (continued)

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

The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit expiration.

The emission testing shall be conducted to demonstrate compliance with the particulate emission limitation.

The following test method shall be employed to demonstrate compliance with the particulate emission limitation: Methods 1-5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The test(s) shall be conducted while at least 5 of the following emissions units (P032, P906, P908, P909, P910, P911, P912, P913, P914, and P925) are vented to three of the venturi scrubbers. The emissions units shall be operated at or near their maximum capacities, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

The test(s) shall be conducted simultaneously at the exhaust stacks of the venturi scrubbers that are in operation during the compliance demonstration. The total particulate emission rate shall be the sum of the emission rates from each of the scrubbers in operation during the compliance demonstration. The total particulate emissions from all operating scrubbers will be divided equally to each operating smelter.

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

Personnel from the appropriate Ohio EPA District Office or local air agency 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Nos.6, 7, 8,10 Batch Ball Mills, No. 9 Cont. Ball Mill (P033)

Activity Description: Frit Batch Ball Mills and one Continuous Ball Mill

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
nos. 6,7,8 and 10 batch ball mills, and no.9 continuous ball mill (production capacity: 3000 lbs/hr max per mill) equipped with 8 dedicated baghouses	OAC rule 3745-17-07(A)	The emission limitations specified by this rule are less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-31-05(A)(3) (PTI # 13-2102)	Visible particulate emissions shall not exceed 5% opacity from any stack. 0.01 grain particulate emissions per dry standard cubic foot of exhaust gases

2. Additional Terms and Conditions

None

II. Operational Restrictions

1. The permittee shall operate the dedicated baghouses for control of particulate emissions whenever the connected mill is in operation.

2. The pressure drop across each baghouse shall be maintained within the range of 1.0 to 8.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across each of the baghouses while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across each baghouse once per day.

IV. Reporting Requirements

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

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

V. Testing Requirements

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

1.a Emission Limitation:
Visible particulate emissions shall not exceed 5% opacity from any stack.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

1.b Emission Limitation:
0.01 grain particulate emissions per dry standard cubic foot of exhaust gases

Applicable Compliance Method:
Compliance with the hourly emission limitation may be determined through the use of the U.S. EPA database, FIRE 6.22 emission factor for glass manufacturing (2.0 lbs/ton) which is multiplied by the combined maximum production rate for all mills (7.5 tons/hr) and (1-0.999) which is the 99.9% baghouse removal efficiency. This lb/hr emission rate is multiplied by (7000 grains/lb)*(1 hr/60min)*(min/2500 ft3) to arrive at the emission rate in grains of particulate emissions per dry standard cubic foot of exhaust gases.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Dry Batch Ball Mill #12 (P034)

Activity Description: Perc Cover Coating Mill

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
dry batch ball mill no. 12 (production capacity 2800 lbs/hr max) equipped with two baghouses	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-31-05(A)(3) (PTI # 13-2822)	0.39 lb/hr of particulate emissions The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).

2. Additional Terms and Conditions

None

II. Operational Restrictions

1. The pressure drop across the MillFF#12 baghouse shall be maintained within the range of 1.0 to 8.0 inches of water while the emissions unit is in operation.

Note: the MillTRANSPFF#12 baghouse is the receiver for a pneumatic transporter and does not generate a pressure drop. Therefore, pressure drop monitoring, record keeping and reporting is not required for this baghouse.

III. Monitoring and/or Record Keeping Requirements

1. 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 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.

IV. Reporting Requirements

1. 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.

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

V. Testing Requirements

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

1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

1.b Emission Limitation:
0.39 lb/hr of particulate emissions

Applicable Compliance Method:
Compliance with the hourly emission limitation may be determined through the use of the U.S. EPA database, FIRE 6.22 emission factor for glass manufacturing (2.0 lbs/ton) which is multiplied by the maximum production rate for the emissions unit (1.4 tons/hr) and (1-0.999) which is the 99.9% baghouse removal efficiency.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Mill 13 (P053)

Activity Description: Batch ball mill No. 13

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
batch ball mill no. 13 (production capacity 2800 lbs/hr max) equipped with a baghouse	OAC rule 3745-17-07(A)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-31-05(A)(3) (PTI # 13-3176)	0.01 grain/dscf of exhaust gases Visible particulate emissions shall not exceed 5% opacity from any stack.

2. Additional Terms and Conditions

None

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1.0 to 8.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. 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 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.

IV. Reporting Requirements

1. 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.

IV. Reporting Requirements (continued)

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

V. Testing Requirements

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

1.a Emission Limitation:
Visible particulate emissions shall not exceed 5% opacity from any stack.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

1.b Emission Limitation:
0.01 grain per dry standard cubic feet of exhaust gases

Applicable Compliance Method:
Compliance with the hourly emission limitation may be determined through the use of the U.S. EPA database, FIRE 6.22 emission factor for ceramic clay milling (0.12 lb of particulate emissions/ton milled, with fabric collector) multiplied by the maximum production rate for the emissions unit (1.4 tons/hr), multiplied by (1 hr/60 min), multiplied by (7000 grains/lb) and divided by the baghouse rated exhaust flow rate of 2500 dscf/min.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: PERC Mikron classification system (P057)

Activity Description: PERC powder Mikron classification system

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
PERC powder mikron classification system that separates glass powders by particle size, equipped with a baghouse	OAC rule 3745-31-05(A)(3) (PTI#13-3323)	0.1 lb/hr of particulate emissions Visible particulate emissions from the stack shall not exceed 5% opacity at all times.
	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(A)	The emission limitations specified by this rule are less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

None

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1.0 to 8.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. 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 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.

IV. Reporting Requirements

1. 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.

IV. Reporting Requirements (continued)

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

V. Testing Requirements

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

1.a Emission Limitation:
Visible particulate emissions from the stack shall not exceed 5% opacity at all times.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

1.b Emission Limitation:
0.1 lb/hr of particulate emissions

Applicable Compliance Method:
Compliance with the hourly emission limitation may be determined through the use of the U.S. EPA database, FIRE 6.22 emission factor for ceramic product manufacturing, comminution with a fabric filter (0.12 lb/ton) which is multiplied by the maximum production rate for the emissions unit (0.75 ton/hr).

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: FEM (E&SG) P111-1 (P061)

Activity Description: Continuous electric melter

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
150 lbs/hr electric, glass melter equipped with a baghouse	OAC rule 3745-31-05(A)(3) (PTI#13-3509)	0.05 lb/hr of particulate emissions 0.22 ton/yr of particulate emissions The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A). See A.II.2 below.
	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

2. Additional Terms and Conditions

None

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1.0 to 8.0 inches of water while the emissions unit is in operation.

2. This emissions unit shall not be used for leaded glass melting.

III. Monitoring and/or Record Keeping Requirements

1. 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 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 weekly basis.

IV. Reporting Requirements

1. 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.

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

3. The permittee shall submit deviation (excursion) reports that identify all periods of time during which this emissions unit was used for leaded glass melting. These reports shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

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

1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

1.b Emission Limitation:
0.05 lb/hr of particulate emissions

Applicable Compliance Method:
Compliance with the hourly emission limitation may be determined through the use of the following equation:

PE = CL * SF * DC * E where

PE = particulate emissions (lbs/hr)
CL = cycle load in lbs/cycle (125 lbs product/hr)
SF = factor of safety (1.04)
DC = dust collector efficiency (1 - 0.99)
E = particulate emissions (PE) from all stages of the melting process (0.04 lb PE/lb product). E was established based on the emission factors and transfer efficiencies for the various stages of the melting process submitted in Permit to Install application #13-3509, dated December 1, 1998.

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

1.c Emission Limitation:
0.22 ton/yr of particulate emissions

Applicable Compliance Method:
Compliance with the annual limitation shall be assumed as long as compliance with the hourly limitation is maintained (the annual limitation was calculated by multiplying the hourly limitation by 8760, and then dividing by 2000).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: FEM (E&SG) P111-3 (P063)

Activity Description: Continuous electric melter

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
150 lbs/hr electric, glass melter equipped with a baghouse	OAC rule 3745-31-05(A)(3) (PTI#13-3509)	0.05 lb/hr of particulate emissions 0.22 ton/yr of particulate emissions The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A). See A.II.2 below.
	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

2. Additional Terms and Conditions

None

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1.0 to 8.0 inches of water while the emissions unit is in operation.

2. This emissions unit shall not be used for leaded glass melting.

III. Monitoring and/or Record Keeping Requirements

1. 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 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 weekly basis.

IV. Reporting Requirements

1. 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.

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

3. The permittee shall submit deviation (excursion) reports that identify all periods of time during which this emissions unit was used for leaded glass melting. These reports shall be submitted within 30 after the deviation occurs.

V. Testing Requirements

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

1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

1.b Emission Limitation:
0.05 lb/hr of particulate emissions

Applicable Compliance Method:
Compliance with the hourly emission limitation may be determined through the use of the following equation:

PE = CL * SF * DC * E where

PE = particulate emissions (lbs/hr)
CL = cycle load in lbs/cycle (125 lbs product/hr)
SF = factor of safety (1.04)
DC = dust collector efficiency (1 - 0.99)
E = particulate emissions (PE) from all stages of the melting process (0.04 lb PE/lb product). E was established based on the emission factors and transfer efficiencies for the various stages of the melting process submitted in Permit to Install application #13-3509, dated December 1, 1998.

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

Compliance with the annual limitation shall be assumed as long as compliance with the hourly limitation is maintained (the annual limitation was calculated by multiplying the hourly limitation by 8760, and then dividing by 2000).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: FEM (E&SG) Melter 1 (P064)

Activity Description: Batch electric melter

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
220 lbs product/cycle electric, glass melter (large melter J) equipped with a baghouse	OAC rule 3745-31-05(A)(3) (PTI#13-3509)	0.01 lb/hr of particulate emissions 0.05 ton/yr of particulate emissions Lead: Combined limitation of 0.30 ton/yr. See A.I.2.a below. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).
	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

2. Additional Terms and Conditions

2.a The total lead emissions from emissions units P064 - P069 shall not exceed 0.30 ton/yr.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1.0 to 8.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. 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 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 weekly basis.

IV. Reporting Requirements

1. 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.

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

3. The permittee shall submit annual reports that specify the total particulate and lead emissions from this emissions unit. These reports shall be submitted by January 31 of each year and cover the previous calender year.

V. Testing Requirements

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

1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

1.b Emission Limitations:
0.01 lb/hr of particulate emissions
0.05 ton/yr of particulate emissions

Applicable Compliance Methods:
Compliance with the hourly emission limitation may be determined through the use of the U.S. EPA database, FIRE 6.22 emission factor for frit smelting with a fabric filter (0.02 lb/ton) which is multiplied by the maximum production rate for the emissions unit (220 lbs/hr) and divided by 2000 lbs/ton.

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

Compliance with the tons per year limitation shall be assumed as long as compliance is maintained with the lbs PE/hr limitation (the annual limitation was calculated by multiplying the hourly limitation by 8760, and then dividing by 2000).

1.c Emission Limitation:
Lead emissions, combined emission limitation of 0.30 ton/yr for emissions units P064-P069.

Applicable Compliance Method:
Pursuant to the requirements of Permit to Install 13-3509 issued June 16, 1999, compliance with the lead emission limitation shall be demonstrated provided the permittee remains in compliance with the particulate emission limitation for this emissions unit.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Method 12 of 40 CFR Part 60, Appendix A.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: FEM (E&SG) Melter 2 (P065)

Activity Description: Batch electric melter

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
220 lbs product/cycle electric, glass melter (large melter K) equipped with a baghouse	OAC rule 3745-31-05(A)(3) (PTI#13-3509)	0.01 lb/hr of particulate emissions 0.05 ton/yr of particulate emissions Lead: Combined limitation of 0.30 ton/yr. See A.I.2.a below. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).
	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

2. Additional Terms and Conditions

2.a The total lead emissions from emissions units P064 - P069 shall not exceed 0.30 ton/yr.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1.0 to 8.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. 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 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 weekly basis.

IV. Reporting Requirements

1. 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.

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

3. The permittee shall submit annual reports that specify the total particulate and lead emissions from this emissions unit. These reports shall be submitted by January 31 of each year and cover the previous calender year.

V. Testing Requirements

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

1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

1.b Emission Limitations:
0.01 lb/hr of particulate emissions
0.05 ton/yr of particulate emissions

Applicable Compliance Methods:
Compliance with the hourly emission limitation may be determined through the use of the U.S. EPA database, FIRE 6.22 emission factor for frit smelting with a fabric filter (0.02 lb/ton) which is multiplied by the maximum production rate for the emissions unit (220 lbs/hr) and divided by 2000 lbs/ton.

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

Compliance with the tons per year limitation shall be assumed as long as compliance is maintained with the lbs PE/hr limitation (the annual limitation was calculated by multiplying the hourly limitation by 8760, and then dividing by 2000).

1.c Emission Limitation:
Lead emissions, combined emission limitation of 0.30 ton/yr for emissions units P064-P069.

Applicable Compliance Method:
Pursuant to the requirements of Permit to Install 13-3509 issued June 16, 1999, compliance with the lead emission limitation shall be demonstrated provided the permittee remains in compliance with the particulate emission limitation for this emissions unit.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Method 12 of 40 CFR Part 60, Appendix A.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: FEM (E&SG) Melter 3 (P066)

Activity Description: Batch electric melter

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
220 lbs product/cycle electric, glass melter (large melter G) equipped with a baghouse	OAC rule 3745-31-05(A)(3) (PTI#13-3509)	0.01 lb/hr of particulate emissions 0.05 ton/yr of particulate emissions Lead: Combined limitation of 0.30 ton/yr. See A.I.2.a below. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).
	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

2. Additional Terms and Conditions

2.a The total lead emissions from emissions units P064 - P069 shall not exceed 0.30 ton/yr.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1.0 to 8.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. 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 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 weekly basis.

IV. Reporting Requirements

1. 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.

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

3. The permittee shall submit annual reports that specify the total particulate and lead emissions from this emissions unit. These reports shall be submitted by January 31 of each year and cover the previous calender year.

V. Testing Requirements

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

1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

1.b Emission Limitations:
0.01 lb/hr of particulate emissions
0.05 ton/yr of particulate emissions

Applicable Compliance Methods:
Compliance with the hourly emission limitation may be determined through the use of the U.S. EPA database, FIRE 6.22 emission factor for frit smelting with a fabric filter (0.02 lb/ton) which is multiplied by the maximum production rate for the emissions unit (220 lbs/hr) and divided by 2000 lbs/ton.

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

Compliance with the tons per year limitation shall be assumed as long as compliance is maintained with the lbs PE/hr limitation (the annual limitation was calculated by multiplying the hourly limitation by 8760, and then dividing by 2000).

1.c Emission Limitation:
Lead emissions, combined emission limitation of 0.30 ton/yr for emissions units P064-P069.

Applicable Compliance Method:
Pursuant to the requirements of Permit to Install 13-3509 issued June 16, 1999, compliance with the lead emission limitation shall be demonstrated provided the permittee remains in compliance with the particulate emission limitation for this emissions unit.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Method 12 of 40 CFR Part 60, Appendix A.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: FEM (E&SG) Melter 5 (P067)

Activity Description: Batch electric melter

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
220 lbs product/cycle electric, glass melter (large melter I) equipped with a baghouse	OAC rule 3745-31-05(A)(3) (PTI#13-3509)	0.01 lb/hr of particulate emissions 0.05 ton/yr of particulate emissions Lead: Combined limitation of 0.30 ton/yr. See A.I.2.a below. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).
	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

2. Additional Terms and Conditions

2.a The total lead emissions from emissions units P064 - P069 shall not exceed 0.30 ton/yr.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1.0 to 8.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. 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 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 weekly basis.

IV. Reporting Requirements

1. 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.

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

3. The permittee shall submit annual reports that specify the total particulate and lead emissions from this emissions unit. These reports shall be submitted by January 31 of each year and cover the previous calender year.

V. Testing Requirements

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

1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

1.b Emission Limitations:
0.01 lb/hr of particulate emissions
0.05 ton/yr of particulate emissions

Applicable Compliance Methods:
Compliance with the hourly emission limitation may be determined through the use of the U.S. EPA database, FIRE 6.22 emission factor for frit smelting with a fabric filter (0.02 lb/ton) which is multiplied by the maximum production rate for the emissions unit (220 lbs/hr) and divided by 2000 lbs/ton.

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

Compliance with the tons per year limitation shall be assumed as long as compliance is maintained with the lbs PE/hr limitation (the annual limitation was calculated by multiplying the hourly limitation by 8760, and then dividing by 2000).

1.c Emission Limitation:
Lead emissions, combined emission limitation of 0.30 ton/yr for emissions units P064-P069.

Applicable Compliance Method:
Pursuant to the requirements of Permit to Install 13-3509 issued June 16, 1999, compliance with the lead emission limitation shall be demonstrated provided the permittee remains in compliance with the particulate emission limitation for this emissions unit.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Method 12 of 40 CFR Part 60, Appendix A.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: FEM (E&SG) Melter 9 (P068)

Activity Description: Batch electric melter

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
33 lbs product/cycle electric, glass melter (small melter C) equipped with a baghouse	OAC rule 3745-31-05(A)(3) (PTI#13-3509)	0.01 lb/hr of particulate emissions 0.05 ton/yr of particulate emissions Lead: Combined limitation of 0.30 ton/yr. See A.I.2.a below. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).
	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

2. Additional Terms and Conditions

2.a The total lead emissions from emissions units P064 - P069 shall not exceed 0.30 ton/yr.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1.0 to 8.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. 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 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 weekly basis.

IV. Reporting Requirements

1. 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.

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

3. The permittee shall submit annual reports that specify the total particulate and lead emissions from this emissions unit. These reports shall be submitted by January 31 of each year and cover the previous calender year.

V. Testing Requirements

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

1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

1.b Emission Limitations:
0.01 lb/hr of particulate emissions
0.05 ton/yr of particulate emissions

Applicable Compliance Methods:
Compliance with the hourly emission limitation may be determined through the use of the U.S. EPA database, FIRE 6.22 emission factor for frit smelting with a fabric filter (0.02 lb/ton) which is multiplied by the maximum production rate for the emissions unit (220 lbs/hr) and divided by 2000 lbs/ton.

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

Compliance with the tons per year limitation shall be assumed as long as compliance is maintained with the lbs PE/hr limitation (the annual limitation was calculated by multiplying the hourly limitation by 8760, and then dividing by 2000).

1.c Emission Limitation:
Lead emissions, combined emission limitation of 0.30 ton/yr for emissions units P064-P069.

Applicable Compliance Method:
Pursuant to the requirements of Permit to Install 13-3509 issued June 16, 1999, compliance with the lead emission limitation shall be demonstrated provided the permittee remains in compliance with the particulate emission limitation for this emissions unit.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Method 12 of 40 CFR Part 60, Appendix A.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: FEM (E&SG) Melter 10 (P069)

Activity Description: Batch electric melter

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
33 lbs product/cycle electric, glass melter (small melter D) equipped with a baghouse	OAC rule 3745-31-05(A)(3) (PTI#13-3509)	0.01 lb/hr of particulate emissions 0.05 ton/yr of particulate emissions Lead: Combined limitation of 0.30 ton/yr. See A.I.2.a below. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).
	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

2. Additional Terms and Conditions

2.a The total lead emissions from emissions units P064 - P069 shall not exceed 0.30 ton/yr.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1.0 to 8.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. 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 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 weekly basis.

IV. Reporting Requirements

1. 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.

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

3. The permittee shall submit annual reports that specify the total particulate and lead emissions from this emissions unit. These reports shall be submitted by January 31 of each year and cover the previous calender year.

V. Testing Requirements

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

1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

1.b Emission Limitations:
0.01 lb/hr of particulate emissions
0.05 ton/yr of particulate emissions

Applicable Compliance Methods:
Compliance with the hourly emission limitation may be determined through the use of the U.S. EPA database, FIRE 6.22 emission factor for frit smelting with a fabric filter (0.02 lb/ton) which is multiplied by the maximum production rate for the emissions unit (220 lbs/hr) and divided by 2000 lbs/ton.

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

Compliance with the tons per year limitation shall be assumed as long as compliance is maintained with the lbs PE/hr limitation (the annual limitation was calculated by multiplying the hourly limitation by 8760, and then dividing by 2000).

1.c Emission Limitation:
Lead emissions, combined emission limitation of 0.30 ton/yr for emissions units P064-P069.

Applicable Compliance Method:
Pursuant to the requirements of Permit to Install 13-3509 issued June 16, 1999, compliance with the lead emission limitation shall be demonstrated provided the permittee remains in compliance with the particulate emission limitation for this emissions unit.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Method 12 of 40 CFR Part 60, Appendix A.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: FEM (E&SG) Alcohol milling expansion (P071)

Activity Description: Friction dryers 1, 2 & 3
with packed bed scrubber for alcohol emissions.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
friction dryers 1, 2, and 3 for drying methyl and isopropyl alcohol from fine particle specialty glass (frit) controlled with a common packed bed scrubber	OAC rule 3745-31-05(A)(3) (PTI #13-03740)	0.12 lb/hr of particulate emissions (PE) 0.53 TPY PE 1.0 lb/hr of volatile organic compound (VOC) emissions 2.37 TPY VOC See A.I.2.a below. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).
	OAC rule 3745-17-11(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).
	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-21-07(G)(2)	Exempt, see A.II.3 below.

2. Additional Terms and Conditions

2.a The permittee shall employ a packed bed scrubber for the control of VOC emissions from this emissions unit.

II. Operational Restrictions

1. The pressure drop across the scrubber shall be continuously maintained at a value of not less than 3.5 inches of water at all times while the emissions unit is in operation.

II. Operational Restrictions (continued)

2. The scrubber water flow rate shall be continuously maintained at a value of not less than 5.5 gallons per minute at all times while the emissions unit is in operation.

3. To avoid the emission limitations/control requirements contained in OAC rule 3745-21-07(G)(2), no photochemically reactive materials (i.e., as raw materials or cleanup materials) shall be employed in this emissions unit.

Note: The definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).

III. Monitoring and/or Record Keeping Requirements

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

2. The permittee shall collect and record the following information for each day when this emissions unit is in operation:

a. The pressure drop across the scrubber, in inches of water, on a daily basis.

b. The scrubber water flow rate, in gallons per minute, on a daily basis.

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

3. The permittee shall maintain annual records of the amounts of frit, methanol and isopropyl alcohol processed in this emissions unit, in pounds.

4. The permittee shall maintain records for each material employed in this emissions unit that indicate whether or not the material is a photochemically reactive material.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:

a. The pressure drop across the scrubber.

b. The scrubber water flow rate.

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

3. The permittee shall submit deviation (excursion) reports that identify all periods of time when a photochemically reactive material is employed in this emissions unit.

These reports shall be submitted within 30 days after each occurrence.

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation:
0.12 lb/hr of PE

Applicable Compliance Method:
Compliance with the hourly particulate emission limitation may be based on use of the U.S. EPA database, FIRE 6.22 emission factor for frit smelting (16.0 lbs PE/ton) multiplied by the maximum frit production rate for this emissions unit (15.0 lbs/hr) and then dividing by 2000 pounds/ton.

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

1.b Emission Limitation:
0.53 TPY PE

Applicable Compliance Method:
Compliance with the tons per year limitation shall be assumed as long as compliance is maintained with the lbs PE/hr limitation (the annual limitation was calculated by multiplying the hourly limitation by 8760, and then dividing by 2000).

1.c Emission Limitation:
1.0 lb/hr of VOC emissions

Applicable Compliance Method:
This emission limitation was established based upon the use of the maximum hourly uncontrolled VOC emission rate during a batch cycle of 20.0 lbs VOC/hr (based on emission testing conducted on an existing dryer at another facility) multiplied by the design control efficiency of the packed bed scrubber (1-0.95).

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

1.d Emission Limitation:
2.37 TPY VOC

Applicable Compliance Method:
This emission limitation was established based upon the maximum uncontrolled VOC emission rate of 260 lbs VOC/day multiplied by the design control efficiency of the packed bed scrubber (1-0.95) and 365 days/yr, and then dividing by 2000 lbs/ton.

1.e Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Dry batch ball mill #14 w/Mikron classifier (P072)

Activity Description: Perc Cover Coating Mill w/ PERC powder Mikron classification system

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
batch ball mill no. 14 (production capacity 1425 lbs/hr max) with Mikron classifier and pneumatic transport equipped with three baghouses	OAC rule 3745-17-07(A)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is equivalent to the hourly emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-31-05(A)(3) (PTI # 13-03667)	3.27 lbs/hr of particulate emissions (PE) 14.32 TPY PE Visible particulate emissions shall not exceed 5% opacity, as a 6-minute average from any stack.

2. Additional Terms and Conditions

None

II. Operational Restrictions

1. The pressure drop across each baghouse shall be maintained within the range of 1.0 to 8.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

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

IV. Reporting Requirements

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

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

V. Testing Requirements

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

1.a Emission Limitation:
Visible particulate emissions shall not exceed 5% opacity, as a 6-minute average from any stack.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

1.b Emission Limitation:
3.27 lbs/hr of particulate emissions (PE)

Applicable Compliance Method:
Compliance with the hourly emission limitation may be determined by summing the controlled particulate emission rates (based upon the company-supplied emission data from the application for PTI 13-03667) from milling, pneumatic transport, and classification as follows:

0.1975 lb PE/hr (milling) + 0.0775 lb PE/hr (pneumatic transport) + 0.153 lb PE/hr (classification) = 0.428 lb PE/hr

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

1.c Emission Limitation:
14.32 TPY PE

Applicable Compliance Method:
Compliance with the tons per year limitation shall be assumed as long as compliance is maintained with the lbs PE/hr limitation (the annual limitation was calculated by multiplying the hourly limitation by 8760, and then dividing by 2000).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Raw material receiving and transport to storage (P901)

Activity Description: Unloading of raw material from trucks, and rail road cars and transport to storage bins.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
Unloading of raw material, from trucks, and rail road cars and transport to storage bins. Particulate emissions are controlled by 24 baghouses.	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-11(B)(1)	47.7 lbs/hr of particulate emissions
	OAC rule 3745-17-07(B)	Visible particulate emissions of fugitive dust from the railcar unloading and transport system shall not exceed 20% opacity as a 3-minute average.
bulk truck quartz unloading system	OAC rule 3745-17-08(B)(3)(b)	See A.I.2.a below.
	OAC rule 3745-31-05(A)(3) (PTI # 13-3073)	0.04 lb/hr of particulate emissions from the bulk truck quartz unloading system, 0.18 TPY no visible particulate emissions from the bulk truck quartz unloading system The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1), and 3745-17-08(B)(3)(b).

2. Additional Terms and Conditions

2.a The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM). These measures shall include, but not be limited to, the following:

i. the installation and use of enclosures vented to a cartridge filter; and

ii. 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.

II. Operational Restrictions

1. The permittee shall operate the dedicated baghouse(s) associated with the equipment in operation for control of fugitive particulate emissions. The control equipment identification developed by the Ferro Corporation for these baghouses consists of the following:

BIN#1, Bin#2, BIN#3, BIN#4, BIN#5, BIN#6, BIN#7, BIN#8, BIN#16, BIN#20, RR-recycle, Drum unl.FF1, Drum unl.FF2, Drum unl.FF3, Drum unl.FF4, F034-FF, PnTrspt.FF1, PnTrspt.FF2, PnTrspt.FF3, PnTrspt.FF4, RR FF Main, RR Quartz unl., RR Quartz unl.1 and RR Quartz unl.2.

2. The pressure drop across each of the baghouses shall be maintained within the range of 1.0 to 8.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

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

2. The permittee shall perform daily checks for visible particulate emissions from the non-stack egress points from the building housing this emissions unit. These egress points shall include, but not be limited to: doorways, windows, and roof monitors. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

IV. Reporting Requirements

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

IV. Reporting Requirements (continued)

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

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

V. Testing Requirements

1. Compliance with the emission limitations/control requirements in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

1.b Emission Limitation:
Visible particulate emissions of fugitive dust from the railcar unloading and transport system shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3). The points of observation for the visible emissions shall include any non-stack egress points from the building housing this emissions unit. Such egress points shall include, but are not limited to, doorways, windows, and roof monitors.

1.c Emission Limitation:
47.7 lbs/hr of particulate emissions

Applicable Compliance Method:
Compliance may be determined by multiplying the emissions units maximum hourly material handling rate of 73 tons/hr and the combined uncontrolled Ohio EPA RACM emission factors in Table 2.9-1 for feed materials receiving and feed materials transfer to storage [(1.5 lbs/ton)x(1.0)x(1 - 0.999),] where 100% is the captured percentage of all particulate emissions and 99.9% is the baghouse removal efficiency.

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

1.d Emission Limitation:
0.18 ton/yr of particulate emissions

Applicable Compliance Method:
Compliance with the annual limitation shall be assumed as long as compliance with the hourly limitation is maintained (the annual limitation was calculated by multiplying the hourly limitation by 8760, and then dividing by 2000).

V. Testing Requirements (continued)

1.e Emission Limitation:
0.04 lb/hr of particulate emissions

Applicable Compliance Method:
Compliance may be determined by multiplying the emissions units maximum hourly material handling rate of 25 tons/hr and the combined uncontrolled Ohio EPA RACM emission factors in Table 2.9-1 for feed materials receiving and feed materials transfer to storage [(1.5 lbs/ton)x(1.0)x(1 - 0.999),] where 100% is the captured percentage of all particulate emissions and 99.9% is the baghouse removal efficiency.

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

1.f Emission Limitation:
no visible particulate emissions from the bulk truck quartz unloading system

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 22 and the procedures specified in OAC rule 3745-17-03(B)(4).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Raw material weighing and mixing (P902)

Activity Description: Raw material weighing, mixing and transporting into portable bins.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
Weigh bins, belt conveyor, and raw material receiving/transport. Particulate emissions are controlled by 9 baghouses which serve to control the emissions from three separate material handling systems that consist of 3 baghouses for each product line.	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-07(B)	Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.
	OAC rule 3745-17-08(B)	See A.I.2.a below.
	OAC rule 3745-17-11(B)(1)	44.7 lbs/hr of particulate emissions

2. Additional Terms and Conditions

2.a The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM). These measures shall include, but not be limited to, the following:

i. the installation and use of hoods, fans, and other equipment to adequately enclose, contain, capture, and vent the fugitive dust; and

ii. 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.

II. Operational Restrictions

1. The permittee shall operate 3 baghouses for control of the particulate emissions whenever each material handling system is in operation. The control equipment identification developed by the Ferro Corporation for these baghouses consist of the following:

F047-FF1, F047-FF2, F047-FF3, P019FF-1, P019FF-2, P019FF-3, P019FF-5, P019FF-6 and P019FF-7.

II. Operational Restrictions (continued)

2. The pressure drop across all baghouses shall be maintained within the range of 1.0 to 8.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across all the baghouses while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across each baghouse in operation once per day.

2. The permittee shall perform daily checks for visible particulate emissions from the non-stack egress points from the building housing this emissions unit. These egress points shall include, but not be limited to: doorways, windows, and roof monitors. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

IV. Reporting Requirements

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

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

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

V. Testing Requirements

1. Compliance with the emission limitations/control requirements in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

V. Testing Requirements (continued)

1.b Emission Limitation:
Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3). The points of observation for the visible emissions shall include any non-stack egress points from the building housing this emissions unit. Such egress points shall include, but are not limited to, doorways, windows, and roof monitors.

1.c Emission Limitation:
44.7 lbs/hr of particulate emissions

Applicable Compliance Method:
Compliance may be determined by multiplying the emissions unit's maximum hourly material handling rate of 50.7 tons/hr and the combined uncontrolled Ohio EPA RACM emission factors in Table 2.9-1 for material batch weighing and material mixing [(0.06 lb/ton)x(1.0)x(1 - 0.999)], where 100% is the captured percentage of all particulate emissions and 99.9% is the baghouse removal efficiency.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Nos. 1, 2 Continuous Mills, Nos. 4, 5 Batch Mills (P903)

Activity Description: Conveying and feeding of frit material into the mill, classifying and screening the grined frit material and bagging of the screened product.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
Conveying and feeding of frit material into the mill, classifying and screening the ground frit material and bagging of the screened product. Particulate emissions are controlled by seven baghouses, one each for mills 1 & 2, two in parallel for mill 4, two in parallel for mill 5, and a shared baghouse for mills 4 & 5.	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-07(B)	Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.
	OAC rule 3745-17-08(B)	See A.I.2.a below.
	OAC rule 3745-17-11(B)(1)	2.58 lbs/hr of particulate emissions

2. Additional Terms and Conditions

2.a The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM). These measures shall include, but not be limited to, the following:

i. the installation and use of hoods, fans, and other equipment to adequately enclose, contain, capture, and vent the fugitive dust; and

ii. 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.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1.0 to 8.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. 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 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 once per day.

2. The permittee shall perform daily checks for visible fugitive particulate emissions from the non-stack egress points from the building housing this emissions unit. These egress points shall include, but not be limited to: doorways, windows, and roof monitors. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

IV. Reporting Requirements

1. 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.

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

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

V. Testing Requirements

1. Compliance with the emission limitations/control requirements in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

V. Testing Requirements (continued)

1.b Emission Limitation:
Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3). The points of observation for the visible emissions shall include any non-stack egress points from the building housing this emissions unit. Such egress points shall include, but are not limited to, doorways, windows, and roof monitors.

1.c Emission Limitation:
2.58 lbs/hr of particulate emissions

Applicable Compliance Method:
Compliance with the hourly emission limitation may be determined through the use of the U.S. EPA database, FIRE 6.22 emission factor for ceramic clay milling (0.12 lb of particulate emissions/ton milled, with fabric collector) multiplied by the maximum production rate for the emissions unit (3.0 tons/hr).

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Smelter #3 (P906)

Activity Description: Continuous smelting of raw materials to produce molten frit.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
continuous frit smelter #3 (production capacity: 1800 lbs/hr max.) equipped with four venturi scrubbers which operate independently and in parallel	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-11(B)(1)	3.82 lbs/hr of particulate emissions

2. Additional Terms and Conditions

None

II. Operational Restrictions

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

2. The pH of the scrubber liquor in each scrubber shall be maintained within the range of 6 and 10.

3. The pressure drop across each scrubber shall be continuously maintained at a value of not less than 30 inches of water at all times while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to continuously monitor and record the pH of the scrubber liquor and the pressure drop across each scrubber while the emissions unit is in operation. The monitoring devices and any recorders shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day for each scrubber:

a. The pH of the scrubber liquor.

b. The pressure drop across the scrubber, in inches of water.

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

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

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

3. The permittee shall maintain records of production run times and the amount of frit processed in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:

a. The pressure drop across the scrubber.

b. The pH of the scrubber liquor.

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

3. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

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

1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

1.b Emission Limitation:
3.82 lbs/hr of particulate emissions

Applicable Compliance Method:
Compliance shall be based upon the results of the emission testing specified in section A.V.1.c.

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

The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit expiration.

The emission testing shall be conducted to demonstrate compliance with the particulate emission limitation.

The following test method shall be employed to demonstrate compliance with the particulate emission limitation: Methods 1-5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The test(s) shall be conducted while at least 5 of the following emissions units (P032, P906, P908, P909, P910, P911, P912, P913, P914, and P925) are vented to three of the venturi scrubbers. The emissions units shall be operated at or near their maximum capacities, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

V. Testing Requirements (continued)

The test(s) shall be conducted simultaneously at the exhaust stacks of the venturi scrubbers that are in operation during the compliance demonstration. The total particulate emission rate shall be the sum of the emission rates from each of the scrubbers in operation during the compliance demonstration. The total particulate emissions from all operating scrubbers will be divided equally to each operating smelter.

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

Personnel from the appropriate Ohio EPA District Office or local air agency 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Smelter #6 (P908)

Activity Description: Continuous smelting of raw materials to produce molten frit.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
continuous frit smelter #6 (production capacity: 1800 lbs/hr max.) equipped with four venturi scrubbers which operate independently and in parallel	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-11(B)(1)	3.82 lbs/hr of particulate emissions

2. Additional Terms and Conditions

None

II. Operational Restrictions

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

2. The pH of the scrubber liquor in each scrubber shall be maintained within the range of 6 and 10.

3. The pressure drop across each scrubber shall be continuously maintained at a value of not less than 30 inches of water at all times while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to continuously monitor and record the pH of the scrubber liquor and the pressure drop across each scrubber while the emissions unit is in operation. The monitoring devices and any recorders shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day for each scrubber:

a. The pH of the scrubber liquor.

b. The pressure drop across the scrubber, in inches of water.

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

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

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

3. The permittee shall maintain records of production run times and the amount of frit processed in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:

a. The pressure drop across the scrubber.

b. The pH of the scrubber liquor.

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

3. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

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

1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

1.b Emission Limitation:
3.82 lbs/hr of particulate emissions

Applicable Compliance Method:
Compliance shall be based upon the results of the emission testing specified in section A.V.1.c.

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

The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit expiration.

The emission testing shall be conducted to demonstrate compliance with the particulate emission limitation.

The following test method shall be employed to demonstrate compliance with the particulate emission limitation: Methods 1-5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The test(s) shall be conducted while at least 5 of the following emissions units (P032, P906, P908, P909, P910, P911, P912, P913, P914, and P925) are vented to three of the venturi scrubbers. The emissions units shall be operated at or near their maximum capacities, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

V. Testing Requirements (continued)

The test(s) shall be conducted simultaneously at the exhaust stacks of the venturi scrubbers that are in operation during the compliance demonstration. The total particulate emission rate shall be the sum of the emission rates from each of the scrubbers in operation during the compliance demonstration. The total particulate emissions from all operating scrubbers will be divided equally to each operating smelter.

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

Personnel from the appropriate Ohio EPA District Office or local air agency 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Smelter #7 (P909)

Activity Description: Continuous smelting of raw materials to produce molten frit.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
continuous frit smelter # 7 (production capacity: 2500 lbs/hr max) equipped with four venturi scrubbers which operate independently and in parallel.	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-11(B)(1)	4.76 lbs/hr of particulate emissions

2. Additional Terms and Conditions

None

II. Operational Restrictions

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

2. The pH of the scrubber liquor in each scrubber shall be maintained within the range of 6 and 10.

3. The pressure drop across each scrubber shall be continuously maintained at a value of not less than 30 inches of water at all times while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to continuously monitor and record the pH of the scrubber liquor and the pressure drop across each scrubber while the emissions unit is in operation. The monitoring devices and any recorders shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day for each scrubber:

a. The pH of the scrubber liquor.

b. The pressure drop across the scrubber, in inches of water.

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

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

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

3. The permittee shall maintain records of production run times and the amount of frit processed in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:

a. The pressure drop across the scrubber.

b. The pH of the scrubber liquor.

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

3. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

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

1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

1.b Emission Limitation:
4.76 lbs/hr of particulate emissions

Applicable Compliance Method:
Compliance shall be based upon the results of the emission testing specified in section A.V.1.c.

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

The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit expiration.

The emission testing shall be conducted to demonstrate compliance with the particulate emission limitation.

The following test method shall be employed to demonstrate compliance with the particulate emission limitation: Methods 1-5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The test(s) shall be conducted while at least 5 of the following emissions units (P032, P906, P908, P909, P910, P911, P912, P913, P914, and P925) are vented to three of the venturi scrubbers. The emissions units shall be operated at or near their maximum capacities, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

V. Testing Requirements (continued)

The test(s) shall be conducted simultaneously at the exhaust stacks of the venturi scrubbers that are in operation during the compliance demonstration. The total particulate emission rate shall be the sum of the emission rates from each of the scrubbers in operation during the compliance demonstration. The total particulate emissions from all operating scrubbers will be divided equally to each operating smelter.

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

Personnel from the appropriate Ohio EPA District Office or local air agency 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Smelter #8 (P910)

Activity Description: Continuous smelting of raw materials to produce molten frit.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
continuous frit smelter #8 (production capacity: 2200 lbs/hr max.) equipped with four venturi scrubbers which operate independently and in parallel	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-11(B)(1)	4.37 lbs/hr of particulate emissions

2. Additional Terms and Conditions

None

II. Operational Restrictions

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

2. The pH of the scrubber liquor in each scrubber shall be maintained within the range of 6 and 10.

3. The pressure drop across each scrubber shall be continuously maintained at a value of not less than 30 inches of water at all times while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to continuously monitor and record the pH of the scrubber liquor and the pressure drop across each scrubber while the emissions unit is in operation. The monitoring devices and any recorders shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day for each scrubber:

a. The pH of the scrubber liquor.

b. The pressure drop across the scrubber, in inches of water.

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

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

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

3. The permittee shall maintain records of production run times and the amount of frit processed in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:

a. The pressure drop across the scrubber.

b. The pH of the scrubber liquor.

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

3. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

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

1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

1.b Emission Limitation:
4.37 lbs/hr of particulate emissions

Applicable Compliance Method:
Compliance shall be based upon the results of the emission testing specified in section A.V.1.c.

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

The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit expiration.

The emission testing shall be conducted to demonstrate compliance with the particulate emission limitation.

The following test method shall be employed to demonstrate compliance with the particulate emission limitation: Methods 1-5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The test(s) shall be conducted while at least 5 of the following emissions units (P032, P906, P908, P909, P910, P911, P912, P913, P914, and P925) are vented to three of the venturi scrubbers. The emissions units shall be operated at or near their maximum capacities, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

V. Testing Requirements (continued)

The test(s) shall be conducted simultaneously at the exhaust stacks of the venturi scrubbers that are in operation during the compliance demonstration. The total particulate emission rate shall be the sum of the emission rates from each of the scrubbers in operation during the compliance demonstration. The total particulate emissions from all operating scrubbers will be divided equally to each operating smelter.

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

Personnel from the appropriate Ohio EPA District Office or local air agency 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Smelter #9 (P911)

Activity Description: Continuous smelting of raw materials to produce molten frit.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
continuous frit smelter #9 (production capacity: 2000 lbs/hr max.) equipped with four venturi scrubbers which operate independently and in parallel	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-11(B)(1)	4.10 lbs/hr of particulate emissions

2. Additional Terms and Conditions

None

II. Operational Restrictions

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

2. The pH of the scrubber liquor in each scrubber shall be maintained within the range of 6 and 10.

3. The pressure drop across each scrubber shall be continuously maintained at a value of not less than 30 inches of water at all times while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to continuously monitor and record the pH of the scrubber liquor and the pressure drop across each scrubber while the emissions unit is in operation. The monitoring devices and any recorders shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day for each scrubber:

a. The pH of the scrubber liquor.

b. The pressure drop across the scrubber, in inches of water.

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

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

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

3. The permittee shall maintain records of production run times and the amount of frit processed in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:

a. The pressure drop across the scrubber.

b. The pH of the scrubber liquor.

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

3. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

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

1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

1.b Emission Limitation:
4.10 lbs/hr of particulate emissions

Applicable Compliance Method:
Compliance shall be based upon the results of the emission testing specified in section A.V.1.c.

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

The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit expiration.

The emission testing shall be conducted to demonstrate compliance with the particulate emission limitation.

The following test method shall be employed to demonstrate compliance with the particulate emission limitation: Methods 1-5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The test(s) shall be conducted while at least 5 of the following emissions units (P032, P906, P908, P909, P910, P911, P912, P913, P914, and P925) are vented to three of the venturi scrubbers. The emissions units shall be operated at or near their maximum capacities, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

V. Testing Requirements (continued)

The test(s) shall be conducted simultaneously at the exhaust stacks of the venturi scrubbers that are in operation during the compliance demonstration. The total particulate emission rate shall be the sum of the emission rates from each of the scrubbers in operation during the compliance demonstration. The total particulate emissions from all operating scrubbers will be divided equally to each operating smelter.

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

Personnel from the appropriate Ohio EPA District Office or local air agency 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Smelter #10 (P912)

Activity Description: Continuous smelting of raw materials to produce molten frit.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
continuous frit smelter #10 (production capacity: 3000 lbs/hr max.) equipped with four venturi scrubbers which operate independently and in parallel	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-11(B)(1)	3.82 lbs/hr of particulate emissions

2. Additional Terms and Conditions

None

II. Operational Restrictions

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

2. The pH of the scrubber liquor in each scrubber shall be maintained within the range of 6 and 10.

3. The pressure drop across each scrubber shall be continuously maintained at a value of not less than 30 inches of water at all times while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to continuously monitor and record the pH of the scrubber liquor and the pressure drop across each scrubber while the emissions unit is in operation. The monitoring devices and any recorders shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day for each scrubber:

a. The pH of the scrubber liquor.

b. The pressure drop across the scrubber, in inches of water.

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

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

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

3. The permittee shall maintain records of production run times and the amount of frit processed in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:

a. The pressure drop across the scrubber.

b. The pH of the scrubber liquor.

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

3. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

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

1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

1.b Emission Limitation:
3.82 lbs/hr of particulate emissions

Applicable Compliance Method:
Compliance shall be based upon the results of the emission testing specified in section A.V.1.c.

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

The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit expiration.

The emission testing shall be conducted to demonstrate compliance with the particulate emission limitation.

The following test method shall be employed to demonstrate compliance with the particulate emission limitation: Methods 1-5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The test(s) shall be conducted while at least 5 of the following emissions units (P032, P906, P908, P909, P910, P911, P912, P913, P914, and P925) are vented to three of the venturi scrubbers. The emissions units shall be operated at or near their maximum capacities, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

V. Testing Requirements (continued)

The test(s) shall be conducted simultaneously at the exhaust stacks of the venturi scrubbers that are in operation during the compliance demonstration. The total particulate emission rate shall be the sum of the emission rates from each of the scrubbers in operation during the compliance demonstration. The total particulate emissions from all operating scrubbers will be divided equally to each operating smelter.

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

Personnel from the appropriate Ohio EPA District Office or local air agency 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

VI. Miscellaneous Requirements

1. The permittee modified this emissions unit without first applying for and obtaining a permit to install, in violation of ORC Section 3704 and OAC Chapter 3745-31. Therefore, as the initial step for this emissions unit to achieve compliance with the applicable requirements, the permittee shall submit a complete permit to install application within 2 months following the issuance of this permit.

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Smelter #22 (P913)

Activity Description: Continuous smelting of raw materials to produce molten frit.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
continuous frit smelter #22 (production capacity: 2800 lbs/hr max.) equipped with four venturi scrubbers which operate independently and in parallel	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-11(B)(1)	5.13 lbs/hr of particulate emissions

2. Additional Terms and Conditions

None

II. Operational Restrictions

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

2. The pH of the scrubber liquor in each scrubber shall be maintained within the range of 6 and 10.

3. The pressure drop across each scrubber shall be continuously maintained at a value of not less than 30 inches of water at all times while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to continuously monitor and record the pH of the scrubber liquor and the pressure drop across each scrubber while the emissions unit is in operation. The monitoring devices and any recorders shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day for each scrubber:

a. The pH of the scrubber liquor.

b. The pressure drop across the scrubber, in inches of water.

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

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

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

3. The permittee shall maintain records of production run times and the amount of frit processed in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:

a. The pressure drop across the scrubber.

b. The pH of the scrubber liquor.

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

3. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

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

1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

1.b Emission Limitation:
5.13 lbs/hr of particulate emissions

Applicable Compliance Method:
Compliance shall be based upon the results of the emission testing specified in section A.V.1.c.

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

The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit expiration.

The emission testing shall be conducted to demonstrate compliance with the particulate emission limitation.

The following test method shall be employed to demonstrate compliance with the particulate emission limitation: Methods 1-5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The test(s) shall be conducted while at least 5 of the following emissions units (P032, P906, P908, P909, P910, P911, P912, P913, P914, and P925) are vented to three of the venturi scrubbers. The emissions units shall be operated at or near their maximum capacities, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

V. Testing Requirements (continued)

The test(s) shall be conducted simultaneously at the exhaust stacks of the venturi scrubbers that are in operation during the compliance demonstration. The total particulate emission rate shall be the sum of the emission rates from each of the scrubbers in operation during the compliance demonstration. The total particulate emissions from all operating scrubbers will be divided equally to each operating smelter.

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

Personnel from the appropriate Ohio EPA District Office or local air agency 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Smelter #24 (P914)

Activity Description: Continuous smelting of raw materials to produce molten fritt.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
continuous frit smelter #24 (production capacity: 2800 lbs/hr max.) equipped with four venturi scrubbers which operate independently and in parallel	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-11(B)(1)	5.13 lbs/hr of particulate emissions

2. Additional Terms and Conditions

None

II. Operational Restrictions

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

2. The pH of the scrubber liquor in each scrubber shall be maintained within the range of 6 and 10.

3. The pressure drop across each scrubber shall be continuously maintained at a value of not less than 30 inches of water at all times while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to continuously monitor and record the pH of the scrubber liquor and the pressure drop across each scrubber while the emissions unit is in operation. The monitoring devices and any recorders shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day for each scrubber:

a. The pH of the scrubber liquor.

b. The pressure drop across the scrubber, in inches of water.

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

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

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

3. The permittee shall maintain records of production run times and the amount of frit processed in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:

a. The pressure drop across the scrubber.

b. The pH of the scrubber liquor.

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

3. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

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

1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

1.b Emission Limitation:
5.13 lbs/hr of particulate emissions

Applicable Compliance Method:
Compliance shall be based upon the results of the emission testing specified in section A.V.1.c.

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

The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit expiration.

The emission testing shall be conducted to demonstrate compliance with the particulate emission limitation.

The following test method shall be employed to demonstrate compliance with the particulate emission limitation: Methods 1-5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The test(s) shall be conducted while at least 5 of the following emissions units (P032, P906, P908, P909, P910, P911, P912, P913, P914, and P925) are vented to three of the venturi scrubbers. The emissions units shall be operated at or near their maximum capacities, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

V. Testing Requirements (continued)

The test(s) shall be conducted simultaneously at the exhaust stacks of the venturi scrubbers that are in operation during the compliance demonstration. The total particulate emission rate shall be the sum of the emission rates from each of the scrubbers in operation during the compliance demonstration. The total particulate emissions from all operating scrubbers will be divided equally to each operating smelter.

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

Personnel from the appropriate Ohio EPA District Office or local air agency 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: ESG-Speciality lead glass melter (P915)

Activity Description: EMS lead gas/O2 continuous melter, 1 small electric batch melter

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
specialty lead glass flake melter equipped with a baghouse and HEPA filter. The max. process weight rate is 150 lbs/hr.	OAC rule 3745-31-05(A)(3) (PTI#13-3201)	1.07 lbs/hr of particulate emissions 0.64 lb/hr of lead emissions Visible particulate emissions from any stack shall not exceed 10% opacity as a 6-minute average. Compliance with this rule also includes compliance with OAC rules 3745-17-07(B) and 3745-17-08(B).
	OAC rule 3745-17-07(A)	The emission limitations specified by this rule are less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(B)	Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.
	OAC rule 3745-17-08(B)	See A.I.2.a below.

2. Additional Terms and Conditions

2.a The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM). These measures shall include, but not be limited to, the following:

i. the installation and use of hoods, fans, and other equipment to adequately enclose, contain, capture, and vent the fugitive dust to stack; and

ii. 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.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1.0 to 8.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. 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 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.

2. The permittee shall perform daily checks for visible particulate emissions from the non-stack egress points from the building housing this emissions unit. These egress points shall include, but not be limited to: doorways, windows, and roof monitors. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

IV. Reporting Requirements

1. 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.

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

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

V. Testing Requirements

1. Compliance with the emission limitations/control requirements in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
No visible particulate emissions from any stack shall exceed 10% opacity as a 6-minute average.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

V. Testing Requirements (continued)

1.b Emission Limitation:
1.07 lbs/hr of particulate emissions

Applicable Compliance Method:
Compliance with the hourly emission limitation may be determined through the use of the U.S. EPA database, FIRE 6.22 emission factor for frit smelting with a fabric filter (0.02 lb/ton) which is multiplied by the maximum production rate for the emissions unit (220 lbs/hr) and divided by 2000 lbs/ton.

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

1.c Emission Limitation:
0.64 lb/hr of lead emissions

Applicable Compliance Method:
Based on engineering estimates provided in the permit to install application for this emissions unit, lead emissions can account for up to 60 percent of the particulate emissions. Lead emissions may be determined by multiplying the calculated particulate emission rate in section A.V.1.b above by 60 percent (0.6).

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1-4 and 12 of 40 CFR Part 60, Appendix A.

1.d Emission Limitation:
Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3). The points of observation for visible emissions shall include any non-stack egress points from the building housing this emissions unit. Such egress points shall include, but are not limited to, doorways, windows, and roof monitors.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: SM#3FF (P917)

Activity Description: FlexKleen dust collector.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
feeding, crushing and bagging operations for smelter #3 (production capacity 1800 lbs/hr max) equipped with a baghouse	OAC rule 3745-17-11(B)(1)	3.82 lbs/hr of particulate emissions
	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-07(B)	Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.
	OAC rule 3745-17-08(B)	See A.I.2.a below.

2. Additional Terms and Conditions

2.a The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM). These measures shall include, but not be limited to, the following:

i. the installation and use of hoods, fans, and other equipment to adequately enclose, contain, capture, and vent the fugitive dust to stack; and

ii. 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.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1.0 to 8.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. 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 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 once per day.

2. The permittee shall perform daily checks for visible fugitive particulate emissions from the non-stack egress points from the building housing this emissions unit. These egress points shall include, but not be limited to: doorways, windows, and roof monitors. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

IV. Reporting Requirements

1. The permittee shall submit 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.

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

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

V. Testing Requirements

1. Compliance with the emission limitations/control requirements in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

V. Testing Requirements (continued)

1.b Emission Limitation:
Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3). The points of observation for visible emissions shall include any non-stack egress points from the building housing this emissions unit. Such egress points shall include, but are not limited to, doorways, windows, and roof monitors.

1.c Emission Limitation:
3.82 lbs/hr of particulate emissions

Applicable Compliance Method:
Compliance may be determined by multiplying an assumed PE grain loading emission factor of 0.03 gr/dscf from the baghouse oulet* by the baghouse rated exhaust flow rate of 4000 dscf/min, multiplying by 60 min/hr and dividing by 7000 grains/lb.

*The grain loading emission factor is based upon the baghouse manufacturer's design filtering efficiency.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: SM#4FF (P918)

Activity Description: Flexkleen dust collector

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
feeding, crushing and bagging operations for smelter #4 (production capacity 3000 lbs/hr max) equipped with a baghouse	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(B)	Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.
	OAC rule 3745-17-08(B)	See A.I.2.a below.
	OAC rule 3745-31-05(A)(3) (PTI#13-2079)	0.01 grain/dry standard cubic feet of exhaust gases The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-07(B), and 3745-17-08(B).
	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

2. Additional Terms and Conditions

2.a The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM). These measures shall include, but not be limited to, the following:

i. the installation and use of hoods, fans, and other equipment to adequately enclose, contain, capture, and vent the fugitive dust to stack; and

ii. 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.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1.0 to 8.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. 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 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 once per day.

2. The permittee shall perform daily checks for visible fugitive particulate emissions from the non-stack egress points from the building housing this emissions unit. These egress points shall include, but not be limited to: doorways, windows, and roof monitors. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

IV. Reporting Requirements

1. 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.

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

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

V. Testing Requirements

1. Compliance with the emission limitations/control requirements in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3). The points of observation for visible emissions shall include any non-stack egress points from the building housing this emissions unit. Such egress points shall include, but are not limited to, doorways, windows, and roof monitors.

V. Testing Requirements (continued)

1.b Emission Limitation:
0.01 grain/dry standard cubic feet of exhaust gases

Applicable Compliance Method:
Compliance shall be determined through the emission testing requirement in section A.V.1.c.

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

The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit expiration.

The emission testing shall be conducted to demonstrate compliance with the particulate emission limitation.

The following test method shall be employed to demonstrate compliance with the allowable particulate emission limitation: Methods 1-5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

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

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

Personnel from the appropriate Ohio EPA District Office or local air agency 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

1.d Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: SM#6FF (P920)

Activity Description: Flexkleen dust collector

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
feeding, crushing and bagging operations for smelter #6 (production capacity 1800 lbs/hr max) equipped with a baghouse	OAC rule 3745-17-11(B)(1)	3.82 lbs/hr of particulate emissions
	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-07(B)	Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.
	OAC rule 3745-17-08(B)	See A.I.2.a below.

2. Additional Terms and Conditions

2.a The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM). These measures shall include, but not be limited to, the following:

i. the installation and use of hoods, fans, and other equipment to adequately enclose, contain, capture, and vent the fugitive dust to stack; and

ii. 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.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1.0 to 8.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. 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 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 once per day.

2. The permittee shall perform daily checks for visible fugitive particulate emissions from the non-stack egress points from the building housing this emissions unit. These egress points shall include, but not be limited to: doorways, windows, and roof monitors. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

IV. Reporting Requirements

1. 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.

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

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

V. Testing Requirements

1. Compliance with the emission limitations/control requirements in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

V. Testing Requirements (continued)

1.b Emission Limitation:
Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3). The points of observation for visible emissions shall include any non-stack egress points from the building housing this emissions unit. Such egress points shall include, but are not limited to, doorways, windows, and roof monitors.

1.c Emission Limitation:
3.82 lbs/hr of particulate emissions

Applicable Compliance Method:
Compliance may be determined by multiplying an assumed PE grain loading emission factor of 0.03 gr/dscf from the baghouse oulet* by the baghouse rated exhaust flow rate of 3500 dscf/min, multiplying by 60 min/hr and dividing by 7000 grains/lb.

*The grain loading emission factor is based upon the baghouse manufacturer's design filtering efficiency.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: SM#7FF (P921)

Activity Description: Flexkleen dust collector

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
feeding, crushing and bagging operations for smelter #7 (production capacity 2500 lbs/hr max) equipped with a baghouse	OAC rule 3745-17-11(B)(1)	4.76 lbs/hr of particulate emissions
	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-07(B)	Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.
	OAC rule 3745-17-08(B)	See A.I.2.a below.

2. Additional Terms and Conditions

2.a The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM). These measures shall include, but not be limited to, the following:

i. the installation and use of hoods, fans, and other equipment to adequately enclose, contain, capture, and vent the fugitive dust to stack; and

ii. 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.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1.0 to 8.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. 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 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 once per day.

2. The permittee shall perform daily checks for visible fugitive particulate emissions from the non-stack egress points from the building housing this emissions unit. These egress points shall include, but not be limited to: doorways, windows, and roof monitors. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

IV. Reporting Requirements

1. 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.

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

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

V. Testing Requirements

1. Compliance with the emission limitations/control requirements in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

V. Testing Requirements (continued)

1.b Emission Limitation:
Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3). The points of observation for visible emissions shall include any non-stack egress points from the building housing this emissions unit. Such egress points shall include, but are not limited to, doorways, windows, and roof monitors.

1.c Emission Limitation:
4.76 lbs/hr of particulate emissions

Applicable Compliance Method:
Compliance may be determined by multiplying an assumed PE grain loading emission factor of 0.03 gr/dscf from the baghouse oulet* by the baghouse rated exhaust flow rate of 3500 dscf/min, multiplying by 60 min/hr and dividing by 7000 grains/lb.

*The grain loading emission factor is based upon the baghouse manufacturer's design filtering efficiency.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: SM#8FF (P922)

Activity Description: Flexkleen dust collector

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
feeding, crushing and bagging operations for smelter #8 (production capacity 2200 lbs/hr max) equipped with a baghouse	OAC rule 3745-17-11(B)(1)	4.37 lbs/hr of particulate emissions
	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-07(B)	Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.
	OAC rule 3745-17-08(B)	See A.I.2.a below.

2. Additional Terms and Conditions

2.a The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM). These measures shall include, but not be limited to, the following:

i. the installation and use of hoods, fans, and other equipment to adequately enclose, contain, capture, and vent the fugitive dust to stack; and

ii. 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.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1.0 to 8.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. 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 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 once per day.

2. The permittee shall perform daily checks for visible fugitive particulate emissions from the non-stack egress points from the building housing this emissions unit. These egress points shall include, but not be limited to: doorways, windows, and roof monitors. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

IV. Reporting Requirements

1. The permittee shall submit 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.

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

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

V. Testing Requirements

1. Compliance with the emission limitations/control requirements in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

V. Testing Requirements (continued)

1.b Emission Limitation:
Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3). The points of observation for visible emissions shall include any non-stack egress points from the building housing this emissions unit. Such egress points shall include, but are not limited to, doorways, windows, and roof monitors.

1.c Emission Limitation:
4.37 lbs/hr of particulate emissions

Applicable Compliance Method:
Compliance may be determined by multiplying an assumed PE grain loading emission factor of 0.03 gr/dscf from the baghouse oulet* by the baghouse rated exhaust flow rate of 3500 dscf/min, multiplying by 60 min/hr and dividing by 7000 grains/lb.

*The grain loading emission factor is based upon the baghouse manufacturer's design filtering efficiency.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: SM#9FF (P923)

Activity Description: Flexkleen dust collector

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
feeding, crushing and bagging operations for smelter #9 (production capacity 2000 lbs/hr max) equipped with a baghouse	OAC rule 3745-17-11(B)(1)	4.10 lbs/hr of particulate emissions
	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-07(B)	Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.
	OAC rule 3745-17-08(B)	See A.I.2.a below.

2. Additional Terms and Conditions

2.a The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM). These measures shall include, but not be limited to, the following:

i. the installation and use of hoods, fans, and other equipment to adequately enclose, contain, capture, and vent the fugitive dust to stack; and

ii. 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.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1.0 to 8.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. 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 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 once per day.

2. The permittee shall perform daily checks for visible fugitive particulate emissions from the non-stack egress points from the building housing this emissions unit. These egress points shall include, but not be limited to: doorways, windows, and roof monitors. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

IV. Reporting Requirements

1. 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.

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

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

V. Testing Requirements

1. Compliance with the emission limitations/control requirements in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

V. Testing Requirements (continued)

1.b Emission Limitation:
Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3). The points of observation for visible emissions shall include any non-stack egress points from the building housing this emissions unit. Such egress points shall include, but are not limited to, doorways, windows, and roof monitors.

1.c Emission Limitation:
4.10 lbs/hr of particulate emissions

Applicable Compliance Method:
Compliance may be determined by multiplying an assumed PE grain loading emission factor of 0.03 gr/dscf from the baghouse oulet* by the baghouse rated exhaust flow rate of 3500 dscf/min, multiplying by 60 min/hr and dividing by 7000 grains/lb.

*The grain loading emission factor is based upon the baghouse manufacturer's design filtering efficiency.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: SM#10FF (P924)

Activity Description: Flexkleen dust collector

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
feeding, crushing and bagging operations for smelter #10 (production capacity 3000 lbs/hr max) equipped with a baghouse	OAC rule 3745-17-11(B)(1)	3.82 lbs/hr of particulate emissions
	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-07(B)	Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.
	OAC rule 3745-17-08(B)	See A.I.2.a below.

2. Additional Terms and Conditions

2.a The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM). These measures shall include, but not be limited to, the following:

i. the installation and use of hoods, fans, and other equipment to adequately enclose, contain, capture, and vent the fugitive dust to stack; and

ii. 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.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1.0 to 8.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. 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 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 once per day.

2. The permittee shall perform daily checks for visible fugitive particulate emissions from the non-stack egress points from the building housing this emissions unit. These egress points shall include, but not be limited to: doorways, windows, and roof monitors. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

IV. Reporting Requirements

1. 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.

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

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

V. Testing Requirements

1. Compliance with the emission limitations/control requirements in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

V. Testing Requirements (continued)

1.b Emission Limitation:
Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3). The points of observation for visible emissions shall include any non-stack egress points from the building housing this emissions unit. Such egress points shall include, but are not limited to, doorways, windows, and roof monitors.

1.c Emission Limitation:
3.82 lbs/hr of particulate emissions

Applicable Compliance Method:
Compliance may be determined by multiplying an assumed PE grain loading emission factor of 0.03 gr/dscf from the baghouse oulet* by the baghouse rated exhaust flow rate of 3500 dscf/min, multiplying by 60 min/hr and dividing by 7000 grains/lb.

*The grain loading emission factor is based upon the baghouse manufacturer's design filtering efficiency.

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

VI. Miscellaneous Requirements

1. The permittee modified this emissions unit without first applying for and obtaining a permit to install, in violation of ORC Section 3704 and OAC Chapter 3745-31. Therefore, as the initial step for this emissions unit to achieve compliance with the applicable requirements, the permittee shall submit a complete permit to install application within 2 months following the issuance of this permit.

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Smelter # 12 (P925)

Activity Description: Continuous smelting of raw materials to produce molten frit.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
continuous frit smelter #12 (production capacity: 3000 lbs/hr max.) equipped with 4 venturi scrubbers which operate independently and in parallel	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-31-05(A)(3) (PTI#13-2079)	0.88 lb of particulate emissions in the exhaust gases per ton of frit fired The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).

2. Additional Terms and Conditions

None

II. Operational Restrictions

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

2. The pH of the scrubber liquor in each scrubber shall be maintained within the range of 6 and 10.

3. The pressure drop across each scrubber shall be continuously maintained at a value of not less than 30 inches of water at all times while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to continuously monitor and record the pH of the scrubber liquor and the pressure drop across each scrubber while the emissions unit is in operation. The monitoring devices and any recorders shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day for each scrubber:

a. The pH of the scrubber liquor.

b. The pressure drop across the scrubber, in inches of water.

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

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

3. The permittee shall maintain records of production run times and the amount of frit processed in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:

a. The pressure drop across the scrubber.

b. The pH of the scrubber liquor.

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

3. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

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

1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

1.b Emission Limitation:
0.88 lb of particulate emissions in the exhaust gases per ton of frit fired

Applicable Compliance Method:
Compliance shall be based upon the results of the emission testing specified in section A.V.1.c.

V. Testing Requirements (continued)

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

The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit expiration.

The emission testing shall be conducted to demonstrate compliance with the particulate emission limitation.

The following test method shall be employed to demonstrate compliance with the particulate emission limitation: Methods 1-5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The test(s) shall be conducted while at least 5 of the following emissions units (P032, P906, P908, P909, P910, P911, P912, P913, P914, and P925) are vented to three of the venturi scrubbers. The emissions units shall be operated at or near their maximum capacities, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

The test(s) shall be conducted simultaneously at the exhaust stacks of the venturi scrubbers that are in operation during the compliance demonstration. The total particulate emission rate shall be the sum of the emission rates from each of the scrubbers in operation during the compliance demonstration. The total particulate emissions from all operating scrubbers will be divided equally to each operating smelter.

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

Personnel from the appropriate Ohio EPA District Office or local air agency 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: SM#12FF (P926)

Activity Description: Flexkleen dust collector

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
feeding, crushing and bagging operations for smelter #12 (production capacity 3000 lbs/hr max) equipped with a baghouse	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(B)	Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.
	OAC rule 3745-17-08(B)	See A.I.2.a below.
	OAC rule 3745-31-05(A)(3) (PTI#13-2079)	0.01 grain/dry standard cubic feet of exhaust gases The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-07(B), and 3745-17-08(B).
	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

2. Additional Terms and Conditions

2.a The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM). These measures shall include, but not be limited to, the following:

i. the installation and use of hoods, fans, and other equipment to adequately enclose, contain, capture, and vent the fugitive dust to stack; and

ii. 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.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1.0 to 8.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. 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 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 once per day.

2. The permittee shall perform daily checks for visible fugitive particulate emissions from the non-stack egress points from the building housing this emissions unit. These egress points shall include, but not be limited to: doorways, windows, and roof monitors. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

IV. Reporting Requirements

1. 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.

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

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

V. Testing Requirements

1. Compliance with the emission limitations/control requirement in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3). The points of observation for visible emissions shall include any non-stack egress points from the building housing this emissions unit. Such egress points shall include, but are not limited to, doorways, windows, and roof monitors.

V. Testing Requirements (continued)

1.b Emission Limitation:
0.01 grain/dry standard cubic feet of exhaust gases

Applicable Compliance Method:
Compliance shall be determined through the emission testing requirement in section A.V.1.c.

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

The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit expiration.

The emission testing shall be conducted to demonstrate compliance with the particulate emission limitation.

The following test method shall be employed to demonstrate compliance with the particulate emission limitation: Methods 1-5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

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

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

Personnel from the appropriate Ohio EPA District Office or local air agency 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

1.d Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: SM#22FF (P927)

Activity Description: Flexkleen dust collector

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
feeding, crushing and bagging operations for smelter #22 (production capacity 2800 lbs/hr max) equipped with a baghouse	OAC rule 3745-17-11(B)(1)	3.82 lbs/hr of particulate emissions
	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-07(B)	Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.
	OAC rule 3745-17-08(B)	See A.I.2.a below.

2. Additional Terms and Conditions

2.a The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM). These measures shall include, but not be limited to, the following:

i. the installation and use of hoods, fans, and other equipment to adequately enclose, contain, capture, and vent the fugitive dust to stack; and

ii. 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.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1.0 to 8.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. 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 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 once per day.

2. The permittee shall perform daily checks for visible fugitive particulate emissions from the non-stack egress points from the building housing this emissions unit. These egress points shall include, but not be limited to: doorways, windows, and roof monitors. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall submit quarterly 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.

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

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

V. Testing Requirements

1. Compliance with the emission limitations/control requirements in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

1.b Emission Limitation:
Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3). The points of observation for visible emissions shall include any non-stack egress points from the building housing this emissions unit. Such egress points shall include, but are not limited to, doorways, windows, and roof monitors.

V. Testing Requirements (continued)

1.c Emission Limitation:
3.82 lbs/hr of particulate emissions

Applicable Compliance Method:
Compliance may be determined by multiplying an assumed PE grain loading emission factor of 0.03 gr/dscf from the baghouse oulet* by the baghouse rated exhaust flow rate of 3500 dscf/min, multiplying by 60 min/hr and dividing by 7000 grains/lb.

*The grain loading emission factor is based upon the baghouse manufacturer's design filtering efficiency.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: SM#24FF (P929)

Activity Description: Flexkleen dust collector

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
feeding, crushing and bagging operations for smelter #24 (production capacity 2800 lbs/hr max) equipped with a baghouse	OAC rule 3745-17-11(B)(1)	5.13 lbs/hr of particulate emissions
	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-07(B)	Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.
	OAC rule 3745-17-08(B)	See A.I.2.a below.

2. Additional Terms and Conditions

2.a The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM). These measures shall include, but not be limited to, the following:

i. the installation and use of hoods, fans, and other equipment to adequately enclose, contain, capture, and vent the fugitive dust to stack; and

ii. 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.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1.0 to 8.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. 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 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 once per day.

2. The permittee shall perform daily checks for visible fugitive particulate emissions from the non-stack egress points from the building housing this emissions unit. These egress points shall include, but not be limited to: doorways, windows, and roof monitors. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

IV. Reporting Requirements

1. 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.

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

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

V. Testing Requirements

1. Compliance with the emission limitations/control requirements in sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:
Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average.

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

V. Testing Requirements (continued)

1.b Emission Limitation:
Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3). The points of observation for visible emissions shall include any non-stack egress points from the building housing this emissions unit. Such egress points shall include, but are not limited to, doorways, windows, and roof monitors.

1.c Emission Limitation:
5.13 lbs/hr of particulate emissions

Applicable Compliance Method:
Compliance may be determined by multiplying an assumed PE grain loading emission factor of 0.03 gr/dscf from the baghouse oulet* by the baghouse rated exhaust flow rate of 3500 dscf/min, multiplying by 60 min/hr and dividing by 7000 grains/lb.

*The grain loading emission factor is based upon the baghouse manufacturer's design filtering efficiency.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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