



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

11/14/01

CERTIFIED MAIL

**RE: Preliminary Proposed Title V
Chapter 3745-77 permit**

06-41-18-0064
Titanium Metals Corporation
Thomas J. Bottorf
100 Titanium Way
P.O. Box 309
Toronto, OH 43964-0309

Dear Thomas J. Bottorf:

Enclosed is the Ohio EPA Preliminary Proposed Title V permit that was issued in draft form on 12/29/00. The comment period for the Draft permit has ended. We are now ready to submit this permit to USEPA for approval.

We are submitting this for your review and comment. If you do not agree with the Preliminary Proposed Title V permit as written, you now have the opportunity to raise your concerns. **Please submit, in writing, any comments you may have within fourteen (14) days from your receipt of this letter to:**

Ohio Environmental Protection Agency
Jim Orlemann, Manager, Engineering Section
Division of Air Pollution Control
P.O.Box 1049
Columbus, OH 43216-1049

and

Southeast District Office
2195 Front Street
Logan, OH 43138
(740) 385-8501

Also, if you believe that it is necessary to have an informal conference with us, then, as part of your written comments, you should request a conference concerning the written comments.

If comments are not submitted within fourteen (14) days of your receipt of this letter, we will forward the proposed permit to USEPA for approval. All comments received will be carefully considered before proceeding to the proposed permit.

Very truly yours,

Thomas G. Rigo, Manager
Field Operations and Permit Section
Division of Air Pollution Control

cc: Southeast District Office
File, DAPC PMU



State of Ohio Environmental Protection Agency

PRELIMINARY PROPOSED TITLE V PERMIT

Issue Date: 11/14/01	Effective Date: To be entered upon final issuance	Expiration Date: To be entered upon final issuance
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This document constitutes issuance of a Title V permit for Facility ID: 06-41-18-0064 to:
Titanium Metals Corporation
 100 Titanium Way
 P.O. Box 309
 Toronto, OH 43964-0309

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

B009 (No. 4 Package Boiler) Clayton Industries Inc. - 20.92 MMBtu/hr	P041 (Plate Pickler) Heil - Custom Design	P063 (Reheat Furnace #12) Forge Box Furnace - Pittsburgh Industrial Furnace Co. - 10 MMBtu/hr
P003 (#1 Grinder) Midwest Grinder - 6040	P044 (Hot Mill Finishing Fce.) Electric Furnace Co. - 3704-F - 6.6 MMBTU/hr - Registration 12/27/76	P067 (#8 Midwest Grinder) Midwest Grinder
P004 (Burning Torches and Burn Shed) Linde - CM-37	P046 (Ingot Heat Fce. #32) Flinn & Dreffein - 18 MMBTU/hr - Registration 4/4/77	P069 (Ingot Heating Furnace No. 1) Natural gas fire batch furnace - 25 MMBtu/hr
P008 (Tysaman Saws) Tysaman - 122-BD, 26" Blade - Registration 12/27/76	P047 (Ingot Heat Fce. #33) Flinn & Dreffein - 18 MMBTU/hr - Registration 4/4/77	P070 (Ingot Heating Furnace No. 2) Natural gas fire batch furnace - 25 MMBtu/hr
P020 (Ingot Heat Fce. #31) Flinn & Dreffein - 18 MMBTU/hr - Registration 4/4/77	P050 (Descal Pickle Line) Allegheny Plastics - Custom Design (includes the welder and torch/weld)	P071 (Ingot Heating Furnace No. 3) Natural gas fire batch furnace - 25 MMBtu/hr
P021 (Ingot Heat Fce. #1) Swindell-Dressler - 14.35 MMBTU/hr - Registration 1/24/77	P051 (Ingot Heat Fce. #34) Flinn & Dreffein - 15.72 MMBTU/hr - Registration 10/10/80	P072 (Ingot Heating Furnace No. 4) Natural gas fire batch furnace - 25 MMBtu/hr
P022 (Ingot Heat Fce. #2) Swindell-Dressler - 8.48 MMBTU/hr - Registration 1/24/77	P054 (#7 Grinder) Midwest Grinder - 4230 - Fixed Hood	P073 (Ingot Heating Furnace No. 5) Natural gas fire batch furnace - 25 MMBtu/hr
P023 (Ingot Heat Fce. #3) Swindell-Dressler - 6.0 MMBTU/hr - Registration 1/24/77	P056 (#5 Grinder) Midwest Grinder - 62	P074 (Ingot Heating Furnace No. 6) Natural gas fire batch furnace - 25 MMBtu/hr
P024 (Ingot Heat Fce. #4) Swindell-Dressler - 6.0 MMBTU/hr - Registration 1/24/77	P057 (#6 Grinder) Midwest Grinder - 62 - Fixed Hood	P076 (Billet Pickle Line) Hydrofluoric and Nitric Acid pickling of billets
P029 (Hot Mill Roughing Fce.) Electric Furnace Co. - 3703-F - 5.4 MMBTU/hr - Registration 12/27/76	P058 (Tysaman Grinder) Tysaman Grinder - Mark 50	P901 (Blast Room) Clemco-Clementina - SCD-2460 (includes material handling)
P030 (Car Bottom Fces.) Salem Brosius - 3606 & 3607 - 2 @ 6.0 MMBTU/hr - Registration 12/27/76	P059 (Fox Grinder #1) Fox Grinder - 1895A	P902 (Descal Pickle Line Shot Blaster) Wheelabrator-Frye 4 W/A Strip Cleaning - On Descal Pickle Line (includes material handling)
P037 (Coil Pickle Line) Production Machinery (includes the welder)	P060 (Fox Grinder #2) Fox Grinder - 1895A	P903 (Pangborn Sandblast Machine) Pangborn - Type ES
P039 (Sheet (Hand) Pickler) Atlas Mineral & Heil Process - Custom design	P062 (Reheat Furnace #11) Forge Box Furnace - Pittsburgh Industrial Furnace Co. - 10 MMBtu/hr	

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 3745-77-04(A) 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:

Southeast District Office
2195 Front Street
Logan, OH 43138
(740) 385-8501

OHIO ENVIRONMENTAL PROTECTION AGENCY

Christopher Jones
Director

PART I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Section

1. Monitoring and Related Recordkeeping and Reporting Requirements

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - i. The date, place (as defined in the permit), and time of sampling or measurements.
 - ii. The date(s) analyses were performed.
 - iii. The company or entity that performed the analyses.
 - iv. The analytical techniques or methods used.
 - v. The results of such analyses.
 - vi. The operating conditions existing at the time of sampling or measurement.
- b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - i. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
 - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be promptly made to the appropriate Ohio EPA District Office or local air agency. These quarterly written reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c)(i) and (ii) pertaining to the submission of monitoring reports every six months and OAC rule 3745-77-07(A)(3)(c)(iii) pertaining to the prompt reporting of all deviations except malfunctions, which shall be reported in accordance with OAC rule 3745-15-06. 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. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.) See B.8 below if no deviations occurred during the quarter.
 - iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted 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. 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, recordkeeping, 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.

- 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 are true, accurate, and complete.

2. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports submitted pursuant to OAC rule 3745-15-06 shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c)(iii) pertaining to the prompt reporting of deviations caused by malfunctions or upsets.

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

3. Risk Management Plans

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

4. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

5. Severability Clause

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

6. General Requirements

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

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.

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.

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.

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 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.

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.

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 appropriate Ohio EPA District Office or local air agency 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.

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.

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).

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.

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, 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; and
- 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 further clarification, the permittee can refer to Engineering Guide #63 that is available in their STARSHIP software package.)

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.

18. Insignificant Activity

Each insignificant activity that has one or more applicable requirements shall comply with those applicable requirements.

B. State Only Enforceable Section

1. 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.

2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted 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.)

3. 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.

4. 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.

5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction 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).

6. 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.

7. 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.

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

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., 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:

B004 - Sunbeam conveyor furnace
B007 - standby boiler #1
B010 - standby boiler #7
P002 - strip grind line
P019 - Z-mill
P028 - pack line oven
P053 - continental saw
P061 - billet polishers (3)
T001 - bulk hydraulic oil storage tank
T002 - forge quench tank
T003 - GFM quench tank
T004 - quench tank (4000-ton press)
F001 - paved roadways and parking areas
F002 - continuous vacuum anneal line
F003 - 2500-ton forging press
F004 - gag press
F005 - bar forging machine
F006 - billet peeler
F007 - GFM torch cut
F008 - lab etch room
F009 - 4000-ton forge press
K001 - alkaline cleaner
Z010 - coil tailing line
Z022 - #1 vacuum creep flattener
Z023 - #2 vacuum creep flattener
Z025 - ingot coating
Z044 - hydrofluoric acid tank
Z045 - hydrofluoric acid tank
Z046 - titanium fluoride solution storage tank #1
Z047 - titanium fluoride solution storage tank #2
Z048 - Z-mill oil storage tank
Z049 - Z-mill oil storage tank
Z052 - clean oil storage tank
Z053 - dirty oil storage tank
Z055 - nitric acid storage tank #1
Z056 - nitric acid storage tank #2
Z073 - titanium fluoride solution storage tank #3
Z075 - hydrofluoric storage tank #3
Z076 - nitric acid storage tank #3
Z079 - blue and bifluoride etch areas

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.

2. The owner/operator shall comply with any applicable State and federal requirements governing the storage, treatment, transportation and disposal of any waste material generated by the operation of the emissions unit.
3. The permittee is hereby notified that this permit, and all Agency records concerning the operation of this permitted emissions unit, are subject to public disclosure in accordance with OAC rule 3745-49-03.

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: No. 4 Package Boiler (B009)
Activity Description: Clayton Industries Inc. - 20.92 MMBtu/hr

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
20.92 mmBtu/hr natural gas-fired boiler	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-10(B)(1)	Particulate emissions (PE) from this emissions unit shall not exceed 0.020 lb/mmBtu of actual heat input.
	OAC rule 3745-31-05 (PTI # 17-1602)	0.0006 lb/mmBtu and 0.05 ton/year (TPY) - sulfur dioxide 0.112 lb/mmBtu and 9.23 TPY - nitrogen oxides 0.035 lb/mmBtu and 2.89 TPY - carbon monoxide 0.0029 lb/mmBtu and 0.23 TPY - volatile organic compounds 0.014 lb/mmBtu and 1.13 TPY - PE The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A) and 3745-17-10(B). See A.I.2.b.

2. Additional Terms and Conditions

- 2.a Since natural gas is the only fuel fired in this emissions unit, OAC Chapter 3745-18 is not applicable. Hence, there is no SO₂ emission limitation from OAC Chapter 3745-18 for this emissions unit.
- 2.b The emission limitations of 0.05 ton of SO₂/year, 9.23 tons of NO_x/year, 2.89 tons of CO/year, 0.23 ton of VOC/year and 1.13 tons of PE/year reflect the potentials to emit for this emissions unit. Therefore, it is not necessary to specify record keeping and/or reporting requirements to ensure compliance with these limits.
- 2.c The natural gas consumption for emissions unit B009 shall not exceed 160,130 thousand cubic feet per year, as a rolling, twelve-month summation.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall collect and record the total quantity of natural gas used in emissions unit B009 during each month, in thousands of cubic feet.
3. The permittee shall collect and record during each month, the updated rolling, 12-month summation for the total natural gas usage in emissions unit B009.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of the rolling, 12-month limitation for natural gas usage.

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 PE shall not exceed 20 percent opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:
OAC rule 3745-17-03(B)(1)

- 1.b Emission Limitation:
0.020 pound PE/mmBtu of actual heat input

Applicable Compliance Method:

Compliance with the PE limitation shall be determined either by stack testing (if required) or by using the AP-42 emission factor for PE resulting from the operation of natural gas-fired fuel burning equipment. The PE factor of 1.9 pounds per million cubic feet shall be divided by the minimum heat content of the natural gas, in Btu per standard cubic foot, to calculate a particulate emission rate in pounds per mmBtu.

The above particulate emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

If required, the permittee shall determine compliance with the above emission limit pursuant to OAC rule 3745-17-03(B)(9).

V. Testing Requirements (continued)

- 1.c.** Emission Limitations:
0.0006 lb of SO₂/mmBtu and 0.05 TPY of SO₂
0.112 lb of NO_x/mmBtu and 9.23 TPY of NO_x
0.035 lb of CO/mmBtu and 2.89 TPY of CO
0.0029 lb of VOC/mmBtu and 0.23 TPY of VOC
0.014 lb of PE/mmBtu and 1.13 TPY of PE

Applicable Compliance Method:

The permittee shall determine compliance with the above lb/mmBtu emission limitations either by stack testing (if required) or by dividing the appropriate emission factor, in lb(s)/mmcf, from USEPA's AP-42, Chapter 1.4 by the minimum heat content, in mmBtu/hr, of the natural gas burned in the emissions unit.

Based on AP-42, 5th Edition (revised 7/98), the emission factors are as follows:

- a. for PE: 1.9 lbs/mmcf
- b. for SO₂: 0.6 lb/mmcf
- c. for NO_x: 100 lbs/mmcf
- d. for CO: 84 lbs/mmcf
- e. for VOC: 5.5 lbs/mmcf

If required, the permittee shall determine compliance with the above lb/mmBtu emission limits based upon the following:

- a. for PE: Method 5, 40 CFR, Part 60, Appendix A
- b. for SO₂: Method 6, 40 CFR, Part 60, Appendix A
- c. for NO_x: Method 7, 40 CFR, Part 60, Appendix A
- d. for CO: Method 10, 40 CFR, Part 60, Appendix A
- e. for VOC: Method 25 or 18, 40 CFR, Part 60, Appendix A

Compliance with the annual emission limitations shall be assumed as long as compliance with the lb/mmBtu emission limitations is maintained [the annual limitations were calculated by multiplying the lb/mmBtu limitations by the maximum heat input to the boiler, and then multiplying by 8760 and 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
20.92 mmBtu/hr natural gas-fired boiler	None	None

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: #1 Grinder (P003)
Activity Description: Midwest Grinder - 6040

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Fixed-Hood Midwest Grinder #1 with dedicated five-module baghouse	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any baghouse stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	9.12 lbs/hr of particulate emissions (PE) from the baghouse. See A.I.2.b.
Fixed-Hood Midwest Grinder #1 and waste baghouse dust collection and handling operations	OAC rule 3745-17-07 (B)(1)	Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a three-minute average.
	OAC rule 3745-17-08 (B)	Reasonably available control measures to minimize or eliminate visible emissions of fugitive dust (See section A.I.2.c.)

2. Additional Terms and Conditions

- 2.a Source P003 shall not be operated without the use of the dust collection system and baghouse.
- 2.b The allowable mass rate of emission of particulate matter was based on Table I of OAC rule 3745-17-11 and was determined to be 9.12 pounds per hour. If the emissions testing required for this emissions unit demonstrates that the allowable emissions rate from Figure II is more stringent than 9.12 lbs/hour, the permittee shall comply with the more stringent limitation.
- 2.c No visible emissions of fugitive dust from the control equipment are authorized by this permit. The permittee shall employ and properly maintain the lids and connecting piping or other comparable equivalent control measures on the receiving bins under the baghouse hoppers, and the collected dust shall be treated with a dust suppressant in sufficient quantities to prevent any visible emissions of fugitive dust during the handling of the collected material.

II. Operational Restrictions

1. Except as provided in the following sentence, the pressure drop across the baghouse or each individual module, which ever is applicable, shall be maintained within the range of 2 to 9 inches of water column while the emissions unit is in operation. This allowable operating parameter may be exceeded while the control equipment is in cleaning mode. A new pressure drop range shall be permissible if stack testing pursuant to V.2 indicates complying emission rates at such new range.
2. PE from this emissions unit shall be captured and vented to the baghouse at a rate sufficient to minimize or eliminate fugitive emissions inside the building.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall inspect the following items on a once-per-week basis while the emissions unit is in operation:
 - a. all air pollution control ductwork located on the outside of the building, for leaks, holes, or other damage;
 - b. all joints and fittings located outside of the building, for leaks or improper sealing;
 - c. the baghouse unit, for leaks or visible emissions; and
 - d. the baghouse dust collection area and hopper for leaks, spills, or other problems.
2. The permittee shall collect the following data for each weekly inspection conducted per A.III.1, above, while the emissions unit is in operation:
 - a. date and time of the inspection pursuant to A.III.1;
 - b. name of person conducting the weekly inspection;
 - c. notation of any problems observed per A.III.1 (if no problems were observed, a note shall be made stating this);
 - d. description of measures taken to correct any problems; and
 - e. date that problem was corrected.
3. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse (or individual modules, whichever is applicable) 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 while the baghouse is in standard, non-cleaning mode.

IV. Reporting Requirements

1. The permittee shall submit quarterly reports summarizing the information in A.III.2. for all days during the calendar quarter when any problem was recorded.
2. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.

V. Testing Requirements

1. Emission Limitation:
9.12 lbs/hr of PE

Compliance Method:
Compliance with this PE limitation shall be determined by emission testing using the method in OAC rule 3745-17-03(B)(10).

V. Testing Requirements (continued)

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within 3 months after permit issuance and within 6 months prior to permit expiration.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable PE rate.
 - c. The following test method shall be employed to demonstrate compliance with the allowable PE rate: Method 5 of 40 CFR, Part 60, Appendix A.
 - d. The tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
 - e. A PE test also shall be conducted at the inlet of the control device to determine the uncontrolled mass rate of emission for the emissions unit, for purposes of applying Figure II of OAC rule 3745-17-11. For this testing, Method 5 of 40 CFR, Part 60, Appendix A shall be employed.

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 tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission tests.

3. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the tests.

4. Compliance with the visible particulate emission limit in section A.I.1. of these terms and conditions shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03(B)(1).
5. Compliance with the fugitive particulate emission limit in section A.I.1. of these terms and conditions shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03(B)(3).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
fixed-hood Midwest Grinder #1 with four-module baghouse	None	None

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: Burning Torches and Burn Shed (P004)
Activity Description: Linde - CM-37

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
carriage driven and hand torches	OAC rule 3745-17-07(B)(1)	Visible particulate emissions (PE) of fugitive dust shall not exceed 20% opacity, as a 3-minute average.
	OAC rule 3745-17-08(B)	Reasonably available control measures to minimize or eliminate visible emissions of fugitive dust See A.I.2.a.
	OAC rule 3745-17-07(A)(1)	Visible PE from the stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	10.0 lbs of PE/hr See A.I.2.b.

2. Additional Terms and Conditions

- 2.a The permittee shall properly maintain the existing partial enclosure to minimize or eliminate visible emissions of fugitive dust.
- 2.b The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 pounds per hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, based on Table I of OAC rule 3745-17-11, the allowable particulate emission limitation is greater than 10 pounds per hour. Therefore, to ensure that Figure II will not be applicable, the particulate emissions are limited to less than 10 pounds per hour.

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible PE from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any abnormal visible emission incident; and
 - e. any corrective actions taken to eliminate the abnormal visible emissions.

IV. Reporting Requirements

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

V. Testing Requirements

1. Compliance with the visible PE limit in section A.I.1. of these terms and conditions shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03(B)(1).
2. Compliance with the PE limit in section A.I.1. of these terms and conditions shall be determined by either the use of an emission factor (0.05 lb of PE/ton of metal processed) found in the U.S. EPA publication titled "Compilation of Air Pollutant Emission Factors," AP-42 (10/86), Table 12.5-1, page 12 (metal scarfing) or by emission testing (if required) using the methods specified in OAC rule 3745-17-03(B)(10).
3. Compliance with the visible particulate emission limit for fugitive dust in section A.I.1. of these terms and conditions shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03(B)(3).
4. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements
 - a. The emission testing shall be conducted within 6 months of permit issuance to demonstrate compliance with the allowable PE rate.
 - b. The following test method shall be employed to demonstrate compliance with the allowable PE rate: Method 5 of 40 CFR, Part 60, Appendix A.
 - c. The tests 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 tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission tests.

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

V. Testing Requirements (continued)

A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the tests.

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
carriage driven and hand torches	None	None

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: Tysaman Saws (P008)

Activity Description: Tysaman - 122-BD, 26" Blade - Registration 12/27/76

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
two abrasive saws with wet fume suppression (water spray)	OAC rule 3745-17-07(A)(1) OAC rule 3745-17-11(B)(1)	Visible particulate emissions (PE) from the saws shall not exceed 20% opacity, as a 6-minute average, except as provided by rule. 6.52 lbs of PE/hr See A.I.2.b.

2. Additional Terms and Conditions

- 2.a The Tysaman saws shall only be operated with the wet fume suppression equipment in operation.
- 2.b The allowable mass rate of emission of particulate matter was based on Table I of OAC rule 3745-17-11 and was determined to be 6.52 pounds per hour. If the emissions testing required for this emissions unit demonstrates that the allowable emissions rate from Figure II is more stringent than 6.52 lbs/hour, the permittee shall comply with the more stringent limitation.

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible PE from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any abnormal visible emission incident; and
 - e. any corrective actions taken to eliminate the abnormal visible emissions.

IV. Reporting Requirements

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

V. Testing Requirements

1. Compliance with the visible PE limit in section A.I.1 of these terms and conditions shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03(B)(1).
2. Compliance with the PE limit in section A.I.1. of these terms and conditions shall be determined based on the results of emission testing conducted in accordance with Methods 1 - 5 of 40 CFR, Part 60, Appendix A and may also be determined by multiplying the emission factor, 0.1 lb of PE/ton of metal processed, found in the U.S. EPA publication titled "Compilation of Air Pollutant Emission Factors," AP-42 (10/86), Table 12.5-1, page 12, by the maximum process weight rate, in tons per hour.
3. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within 3 months after permit issuance and within 6 months prior to permit expiration.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable PE rate.
 - c. The following test method shall be employed to demonstrate compliance with the allowable PE rate: Method 5 of 40 CFR, Part 60, Appendix A.
 - d. The tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
 - e. A PE test also shall be conducted at the inlet of the control device to determine the uncontrolled mass rate of emission for the emissions unit, for purposes of applying Figure II of OAC rule 3745-17-11. For this testing, Method 5 of 40 CFR, Part 60, Appendix A shall be employed.

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 tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission tests.

4. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the tests.

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
two abrasive saws with wet fume suppression (water spray)	None	None

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: Ingot Heat Fce. #31 (P020)
Activity Description: Flinn & Dreffein - 18 MMBTU/hr - Registration 4/4/77

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
ingot heat furnace #31 (18 mmBtu/hr)	OAC rule 3745-17-07(A)(1)	none (refer to section A.1.2.b of the terms and conditions of the permit)
	OAC rule 3745-17-11(B)(1)	none (refer to section A.1.2.a of terms and conditions of the permit)
	OAC rule 3745-18-06(E)(2)	55.4 lbs/hr of sulfur dioxide

2. Additional Terms and Conditions

- 2.a Since the raw materials introduced into this emissions unit do not contribute to particulate emissions, and since the gaseous fuel is exempt pursuant to OAC rule 3745-17-11(A)(4), there is no particulate emission limitation imposed by this applicable requirement.
- 2.b This emissions unit is exempt from the visible PE limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because there is no applicable PE limitation in OAC rule 3745-17-11.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

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

IV. Reporting Requirements

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

V. Testing Requirements

1. Compliance with the emission limitation in section A.1.1 of these terms and conditions shall be determined in accordance with the following method:

Facility Name: **Titanium Metals Corporation**

Facility ID: **06-41-18-0064**

Emissions Unit: **Ingot Heat Fce. #31 (P020)**

V. Testing Requirements (continued)

Emission Limitation:
55.4 lbs/hr of SO₂

Applicable Compliance Method:

The permittee shall determine compliance with the above limit based upon multiplying the AP-42 emission factor for SO₂ emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit. Therefore, the emission factor of 0.6 pound of SO₂ produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate an SO₂ emission rate in pounds per hour.

The above SO₂ emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
ingot heat furnace #31 (18 mmBtu/hr)	None	None

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: Ingot Heat Fce. #1 (P021)
Activity Description: Swindell-Dressler - 14.35 MMBTU/hr - Registration 1/24/77

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

- 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
ingot heat furnace #1 (14.35 mmBtu/hr)	OAC rule 3745-17-07(A)(1)	none (refer to section A.1.2.b of the terms and conditions of the permit)
	OAC rule 3745-17-11(B)(1)	none (refer to section A.1.2.a of terms and conditions of the permit)
	OAC rule 3745-18-06(E)(2)	55.4 lbs/hr of sulfur dioxide

2. Additional Terms and Conditions

- Since the raw materials introduced into this emissions unit do not contribute to particulate emissions, and since the gaseous fuel is exempt pursuant to OAC rule 3745-17-11(A)(4), there is no particulate emission limitation imposed by this applicable requirement.
- This emissions unit is exempt from the visible PE limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because there is no applicable PE limitation in OAC rule 3745-17-11.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

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

IV. Reporting Requirements

- 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

- Compliance with the emission limitation in section A.1.1 of these terms and conditions shall be determined in accordance with the following method:

Facility Name: **Titanium Metals Corporation**

Facility ID: **06-41-18-0064**

Emissions Unit: **Ingot Heat Fce. #1 (P021)**

V. Testing Requirements (continued)

Emission Limitation:
55.4 lbs/hr of SO₂

Applicable Compliance Method:

The permittee shall determine compliance with the above limit based upon multiplying the AP-42 emission factor for SO₂ emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit. Therefore, the emission factor of 0.6 pound of SO₂ produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate an SO₂ emission rate in pounds per hour.

The above SO₂ emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Ingot Heat Fce. #2 (P022)
Activity Description: Swindell-Dressler - 8.48 MMBTU/hr - Registration 1/24/77

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
ingot heat furnace #2 (8.48 mmBtu/hr)	OAC rule 3745-17-07(A)(1)	none (refer to section A.1.2.b of the terms and conditions of the permit)
	OAC rule 3745-17-11(B)(1)	none (refer to section A.1.2.a of terms and conditions of the permit)
	OAC rule 3745-18-06(E)(2)	55.4 lbs/hr of sulfur dioxide

2. Additional Terms and Conditions

- 2.a Since the raw materials introduced into this emissions unit do not contribute to particulate emissions, and since the gaseous fuel is exempt pursuant to OAC rule 3745-17-11(A)(4), there is no particulate emission limitation imposed by this applicable requirement.
- 2.b This emissions unit is exempt from the visible PE limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because there is no applicable PE limitation in OAC rule 3745-17-11.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

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

IV. Reporting Requirements

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

V. Testing Requirements

1. Compliance with the emission limitation in section A.1.1 of these terms and conditions shall be determined in accordance with the following method:

V. Testing Requirements (continued)

Emission Limitation:
55.4 lbs/hr of SO₂

Applicable Compliance Method:

The permittee shall determine compliance with the above limit based upon multiplying the AP-42 emission factor for SO₂ emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit. Therefore, the emission factor of 0.6 pound of SO₂ produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate an SO₂ emission rate in pounds per hour.

The above SO₂ emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Sheet (Hand) Pickler (P039)
Activity Description: Atlas Mineral & Heil Process - Custom design

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
sheet (hand) pickler, with Xerxes scrubber	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the wet scrubber shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	1.15 lbs/hr of particulate emissions (PE) See A.I.2.a.

2. Additional Terms and Conditions

- 2.a The allowable mass rate of emission of particulate matter was based on Table I of OAC rule 3745-17-11 and was determined to be 1.15 pounds per hour. If the emissions testing required for this emissions unit demonstrates that the allowable emissions rate from Figure II is more stringent than 1.15 lbs/hour, the permittee shall comply with the more stringent limitation.
- 2.b The sheet pickler shall not be operated without the wet scrubber being in operation.

II. Operational Restrictions

1. The permittee shall follow the manufacturer's recommended maintenance, at the recommended intervals, on fresh solvent pumps, recirculating pumps, discharge pumps, and other liquid pumps, in addition to the exhaust system, scrubber fans, and motors associated with those pumps and fans.
2. The scrubber internals and mist eliminators shall be cleaned at intervals sufficient to prevent buildup of solids or other fouling.
3. The pressure drop across the scrubber for this emissions unit shall be continuously maintained at a value of not less than 2.0 inches of water column.
4. The scrubber water flow rate for this emissions unit shall be maintained at not less than 200 gallons per minute at all times.
5. The pH of the scrubber water for this emissions unit shall be maintained at not less than 5 at all times.
6. The scrubber system shall be operated continuously (i.e., 8760 hours per year) unless the pickling/rinse tanks are empty or covered.

III. Monitoring and/or Record Keeping Requirements

1. Inspection of each scrubber shall be conducted at sufficient intervals and shall include the following:
 - i. cleaning or replacement of any plugged spray nozzles or other liquid delivery devices;
 - ii. repair or replacement of missing, misaligned, or damaged baffles, trays, or other internal components;
 - iii. repair or replacement of droplet eliminator elements, as needed;
 - iv. repair or replacement of heat exchanger elements used to control the temperature of fluids entering or leaving the scrubber; and
 - v. adjustment of damper settings for consistency with the required air flow.
2. The permittee shall maintain a log documenting inspections, repairs, and maintenance as described in A.II.1, A.II.2, and A.III.1, above.
3. The permittee shall properly operate and maintain equipment to continuously monitor the static pressure drop across the scrubber and the scrubber water flow rate while this emissions unit is in operation. Appropriate procedures and analytical methods shall be followed to sample and analyze the scrubber water for pH. The monitoring devices and any recorders shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.
4. The permittee shall collect and record the following information each week:
 - a. the pressure drop across the scrubber, in inches of water column;
 - b. the scrubber water flow rate, in gallons per minute;
 - c. the operating times for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit; and
 - d. the scrubber water pH.

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 the levels specified in the Operational Restrictions above:
 - a. the static pressure drop across the scrubber;
 - b. the scrubber water flow rate; and,
 - c. the scrubber water pH.
2. The permittee shall immediately report to Ohio EPA all periods of time during which the scrubber system was not operated while source P039 was in operation. These reports shall include any corrective action or preventive measures taken.

V. Testing Requirements

1. Compliance with the visible particulate emission limit in section A.I.1. of these terms and conditions shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03(B)(1).
2. Compliance with the PE limit of 1.15 pounds per hour shall be determined in accordance with OAC rule 3745-17-03(B)(10). No testing is specifically required by this permit but, if appropriate, may be requested pursuant to OAC rule 3745-15-04(A). Such testing may be requested at opacity levels less than those required by the visible particulate emissions limit in Section A.I.

V. Testing Requirements (continued)

3. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within 3 months after permit issuance and within 6 months prior to permit expiration.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable PE rate.
 - c. The following test method shall be employed to demonstrate compliance with the allowable PE rate: Method 5 of 40 CFR, Part 60, Appendix A.
 - d. The tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
 - e. A PE test also shall be conducted at the inlet of the control device to determine the uncontrolled mass rate of emission for the emissions unit, for purposes of applying Figure II of OAC rule 3745-17-11. For this testing, Method 5 of 40 CFR, Part 60, Appendix A shall be employed.

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 tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission tests.

4. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the tests.

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
sheet (hand) pickler, with wet scrubber	None	None

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: Plate Pickler (P041)
Activity Description: Heil - Custom Design

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
plate pickler, with wet scrubber	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the wet scrubber shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	9.84 lbs/hr of particulate emissions (PE) See A.I.2.a.

2. Additional Terms and Conditions

- 2.a The allowable mass rate of emission of particulate matter was based on Table I of OAC rule 3745-17-11 and was determined to be 9.84 pounds per hour. If the emissions testing required for this emissions unit demonstrates that the allowable emissions rate from Figure II is more stringent than 9.84 lbs/hour, the permittee shall comply with the more stringent limitation.
- 2.b The plate pickler shall not be operated without the wet scrubber being in operation.

II. Operational Restrictions

1. The permittee shall follow the manufacturer's recommended maintenance, at the recommended intervals, on fresh solvent pumps, recirculating pumps, discharge pumps, and other liquid pumps, in addition to the exhaust system, scrubber fans, and motors associated with those pumps and fans.
2. The scrubber internals and mist eliminators shall be cleaned at intervals sufficient to prevent buildup of solids or other fouling.

III. Monitoring and/or Record Keeping Requirements

1. Inspection of each scrubber shall be conducted at sufficient intervals and shall include the following:
 - i. cleaning or replacement of any plugged spray nozzles or other liquid delivery devices;
 - ii. repair or replacement of missing, misaligned, or damaged baffles, trays, or other internal components;
 - iii. repair or replacement of droplet eliminator elements, as needed;
 - iv. repair or replacement of heat exchanger elements used to control the temperature of fluids entering or leaving the scrubber; and
 - v. adjustment of damper settings for consistency with the required air flow.
2. The permittee shall maintain a log documenting inspections, repairs, and maintenance as described in A.II.1, A.II.2, and A.III.1., above.

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

3. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

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

V. Testing Requirements

1. Compliance with the visible particulate emission limit in section A.I.1. of these terms and conditions shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03(B)(1).
2. Compliance with the PE limit of 9.84 pounds per hour shall be determined in accordance with OAC rule 3745-17-03(B)(10). No testing is specifically required by this permit but, if appropriate, may be requested pursuant to OAC rule 3745-15-04(A). Such testing may be requested at opacity levels less than those required by the visible particulate emissions limit in Section A.I.
3. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within 3 months after permit issuance and within 6 months prior to permit expiration.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable PE rate.
 - c. The following test method shall be employed to demonstrate compliance with the allowable PE rate: Method 5 of 40 CFR, Part 60, Appendix A.
 - d. The tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
 - e. A PE test also shall be conducted at the inlet of the control device to determine the uncontrolled mass rate of emission for the emissions unit, for purposes of applying Figure II of OAC rule 3745-17-11. For this testing, Method 5 of 40 CFR, Part 60, Appendix A shall be employed.

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 tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission tests.

Facility Name: **Titanium Metals Corporation**

Facility ID: **06-41-18-0064**

Emissions Unit: **Plate Pickler (P041)**

V. Testing Requirements (continued)

4. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the tests.

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
plate pickler, with wet scrubber	None	None

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: Hot Mill Finishing Fce. (P044)

Activity Description: Electric Furnace Co. - 3704-F - 6.6 MMBTU/hr - Registration 12/27/76

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
hot mill finishing furnace (6.6 mmBtu/hr)	OAC rule 3745-17-07(A)(1)	none (refer to section A.1.2.b of the terms and conditions of the permit)
	OAC rule 3745-17-11(B)(1)	none (refer to section A.1.2.a of terms and conditions of the permit)
	OAC rule 3745-18-06(E)(2)	18.3 lbs/hr of sulfur dioxide

2. Additional Terms and Conditions

- 2.a Since the raw materials introduced into this emissions unit do not contribute to particulate emissions, and since the gaseous fuel is exempt pursuant to OAC rule 3745-17-11(A)(4), there is no particulate emission limitation imposed by this applicable requirement.
- 2.b This emissions unit is exempt from the visible PE limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because there is no applicable PE limitation in OAC rule 3745-17-11.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

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

IV. Reporting Requirements

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

V. Testing Requirements

1. Compliance with the emission limitation in section A.1.1 of these terms and conditions shall be determined in accordance with the following method:

V. Testing Requirements (continued)

Emission Limitation:
18.3 lbs/hr of SO₂

Applicable Compliance Method:

The permittee shall determine compliance with the above limit based upon multiplying the AP-42 emission factor for SO₂ emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit. Therefore, the emission factor of 0.6 pound of SO₂ produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate an SO₂ emission rate in pounds per hour.

The above SO₂ emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
hot mill finishing furnace (6.6 mmBtu/hr)	None	None

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: Ingot Heat Fce. #32 (P046)

Activity Description: Flinn & Dreffein - 18 MMBTU/hr - Registration 4/4/77

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
ingot heat furnace #32 (18 mmBtu/hr)	OAC rule 3745-17-07(A)(1)	none (refer to section A.1.2.b of the terms and conditions of the permit)
	OAC rule 3745-17-11(B)(1)	none (refer to section A.1.2.a of terms and conditions of the permit)
	OAC rule 3745-18-06(E)(2)	55.4 lbs/hr of sulfur dioxide

2. Additional Terms and Conditions

- 2.a Since the raw materials introduced into this emissions unit do not contribute to particulate emissions, and since the gaseous fuel is exempt pursuant to OAC rule 3745-17-11(A)(4), there is no particulate emission limitation imposed by this applicable requirement.
- 2.b This emissions unit is exempt from the visible PE limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because there is no applicable PE limitation in OAC rule 3745-17-11.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

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

IV. Reporting Requirements

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

V. Testing Requirements

1. Compliance with the emission limitation in section A.1.1 of these terms and conditions shall be determined in accordance with the following method:

V. Testing Requirements (continued)

Emission Limitation:
55.4 lbs/hr of SO₂

Applicable Compliance Method:

The permittee shall determine compliance with the above limit based upon multiplying the AP-42 emission factor for SO₂ emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit. Therefore, the emission factor of 0.6 pound of SO₂ produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate an SO₂ emission rate in pounds per hour.

The above SO₂ emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
ingot heat furnace #32 (18 mmBtu/hr)	None	None

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: Ingot Heat Fce. #33 (P047)
Activity Description: Flinn & Dreffein - 18 MMBTU/hr - Registration 4/4/77

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
ingot heat furnace #33 (18 mmBtu/hr)	OAC rule 3745-17-07(A)(1)	none (refer to section A.1.2.b of the terms and conditions of the permit)
	OAC rule 3745-17-11(B)(1)	none (refer to section A.1.2.a of terms and conditions of the permit)
	OAC rule 3745-18-06(E)(2)	55.4 lbs/hr of sulfur dioxide

2. Additional Terms and Conditions

- 2.a Since the raw materials introduced into this emissions unit do not contribute to particulate emissions, and since the gaseous fuel is exempt pursuant to OAC rule 3745-17-11(A)(4), there is no particulate emission limitation imposed by this applicable requirement.
- 2.b This emissions unit is exempt from the visible PE limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because there is no applicable PE limitation in OAC rule 3745-17-11.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

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

IV. Reporting Requirements

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

V. Testing Requirements

1. Compliance with the emission limitation in section A.1.1 of these terms and conditions shall be determined in accordance with the following method:

V. Testing Requirements (continued)

Emission Limitation:
55.4 lbs/hr of SO₂

Applicable Compliance Method:

The permittee shall determine compliance with the above limit based upon multiplying the AP-42 emission factor for SO₂ emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit. Therefore, the emission factor of 0.6 pound of SO₂ produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate an SO₂ emission rate in pounds per hour.

The above SO₂ emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
ingot heat furnace #33 (18 mmBtu/hr)	None	None

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: Descale Pickle Line (P050)

Activity Description: Allegheny Plastics - Custom Design (includes the welder and torch/weld)

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
descale pickle line, with venturi scrubber	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the wet scrubber shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	13.18 lbs/hr of particulate emissions (PE) See A.I.2.a.

2. Additional Terms and Conditions

- 2.a The allowable mass rate of emission of particulate matter was based on Table I of OAC rule 3745-17-11 and was determined to be 13.18 pounds per hour. If the emissions testing required for this emissions unit demonstrates that the allowable emissions rate from Figure II is more stringent than 13.18 lbs/hour, the permittee shall comply with the more stringent limitation.
- 2.b The descale pickler shall not be operated without the wet scrubber being in operation.

II. Operational Restrictions

1. The permittee shall follow the manufacturer's recommended maintenance, at the recommended intervals, on fresh solvent pumps, recirculating pumps, discharge pumps, and other liquid pumps, in addition to the exhaust system, scrubber fans, and motors associated with those pumps and fans.
2. The scrubber internals and mist eliminators shall be cleaned at intervals sufficient to prevent buildup of solids or other fouling.

III. Monitoring and/or Record Keeping Requirements

1. Inspection of each scrubber shall be conducted at sufficient intervals and shall include the following:
 - i. cleaning or replacement of any plugged spray nozzles or other liquid delivery devices;
 - ii. repair or replacement of missing, misaligned, or damaged baffles, trays, or other internal components;
 - iii. repair or replacement of droplet eliminator elements, as needed;
 - iv. repair or replacement of heat exchanger elements used to control the temperature of fluids entering or leaving the scrubber; and
 - v. adjustment of damper settings for consistency with the required air flow.
2. The permittee shall maintain a log documenting inspections, repairs, and maintenance as described in A.II.1, A.II.2, and A.III.1, above.

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

3. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

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

V. Testing Requirements

1. Compliance with the visible particulate emission limit in section A.I.1. of these terms and conditions shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03(B)(1).
2. Compliance with the PE limit of 13.18 pounds per hour shall be determined in accordance with OAC rule 3745-17-03(B)(10). No testing is specifically required by this permit but, if appropriate, may be requested pursuant to OAC rule 3745-15-04(A). Such testing may be requested at opacity levels less than those required by the visible particulate emissions limit in Section A.I.
3. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within 3 months after permit issuance and within 6 months prior to permit expiration.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable PE rate.
 - c. The following test method shall be employed to demonstrate compliance with the allowable PE rate: Method 5 of 40 CFR, Part 60, Appendix A.
 - d. The tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
 - e. A PE test also shall be conducted at the inlet of the control device to determine the uncontrolled mass rate of emission for the emissions unit, for purposes of applying Figure II of OAC rule 3745-17-11. For this testing, Method 5 of 40 CFR, Part 60, Appendix A shall be employed.

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 tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission tests.

Facility Name: **Titanium Metals Corporation**

Facility ID: **06-41-18-0064**

Emissions Unit: **Descale Pickle Line (P050)**

V. Testing Requirements (continued)

4. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the tests.

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
descale pickle line, with venturi scrubber	None	None

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: Ingot Heat Fce. #34 (P051)

Activity Description: Flinn & Dreffein - 15.72 MMBTU/hr - Registration 10/10/80

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
ingot heat furnace #34 (15.72 mmBtu/hr)	OAC rule 3745-17-07(A)(1)	none (refer to section A.1.2.b of the terms and conditions of the permit)
	OAC rule 3745-17-11(B)(1)	none (refer to section A.1.2.a of terms and conditions of the permit)
	OAC rule 3745-18-06(E)(2)	55.4 lbs/hr of sulfur dioxide

2. Additional Terms and Conditions

- 2.a Since the raw materials introduced into this emissions unit do not contribute to particulate emissions, and since the gaseous fuel is exempt pursuant to OAC rule 3745-17-11(A)(4), there is no particulate emission limitation imposed by this applicable requirement.
- 2.b This emissions unit is exempt from the visible PE limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because there is no applicable PE limitation in OAC rule 3745-17-11.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

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

IV. Reporting Requirements

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

V. Testing Requirements

1. Compliance with the emission limitation in section A.1.1 of these terms and conditions shall be determined in accordance with the following method:

V. Testing Requirements (continued)

Emission Limitation:
55.4 lbs/hr of SO₂

Applicable Compliance Method:

The permittee shall determine compliance with the above limit based upon multiplying the AP-42 emission factor for SO₂ emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit. Therefore, the emission factor of 0.6 pound of SO₂ produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate an SO₂ emission rate in pounds per hour.

The above SO₂ emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Midwest Grinder #7 with five-module baghouse	None	None

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: #5 Grinder (P056)
Activity Description: Midwest Grinder - 62

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Fixed-hood Midwest Grinder #5 with five-module baghouse	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any baghouse stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	6.89 lbs/hr of particulate emissions (PE) from the baghouse. See A.I.2.b.
Midwest Grinder #5 and waste baghouse dust collection and handling operations	OAC rule 3745-17-07 (B)(1)	Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a three-minute average.
	OAC rule 3745-17-08 (B)	Reasonably available control measures to minimize or eliminate visible emissions of fugitive dust (See section A.I.2.c.)

2. Additional Terms and Conditions

- 2.a Source P056 shall not be operated without the use of the dust collection system and baghouse.
- 2.b The allowable mass rate of emission of particulate matter was based on Table I of OAC rule 3745-17-11 and was determined to be 6.89 pounds per hour. If the emissions testing required for this emissions unit demonstrates that the allowable emissions rate from Figure II is more stringent than 6.89 lbs/hour, the permittee shall comply with the more stringent limitation.
- 2.c No visible emissions of fugitive dust from the control equipment are authorized by this permit. The permittee shall employ and properly maintain the lids and connecting piping or other comparable equivalent control measures on the receiving bins under the baghouse hoppers, and the collected dust shall be treated with a dust suppressant in sufficient quantities to prevent any visible emissions of fugitive dust during the handling of the collected material.

II. Operational Restrictions

1. Except as provided in the following sentence, the pressure drop across the baghouse or each individual module, which ever is applicable, shall be maintained within the range of 2 to 9 inches of water column while the emissions unit is in operation. This allowable operating parameter may be exceeded while the control equipment is in cleaning mode. A new pressure drop range shall be permissible if stack testing pursuant to V.2 indicates complying emission rates at such new range.
2. PE from this emissions unit shall be captured and vented to the baghouse at a rate sufficient to minimize or eliminate fugitive emissions inside the building.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall inspect the following items on a once-per-week basis while the emissions unit is in operation:
 - a. all air pollution control ductwork located on the outside of the building, for leaks, holes, or other damage;
 - b. all joints and fittings located outside of the building, for leaks or improper sealing;
 - c. the baghouse unit, for leaks or visible emissions; and
 - d. the baghouse dust collection area and hopper for leaks, spills, or other problems.
2. The permittee shall collect the following data for each weekly inspection conducted per A.III.1, above, while the emissions unit is in operation:
 - a. date and time of the inspection pursuant to A.III.1;
 - b. name of person conducting the weekly inspection;
 - c. notation of any problems observed per A.III.1 (if no problems were observed, a note shall be made stating this);
 - d. description of measures taken to correct any problems; and
 - e. date that problem was corrected.
3. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse (or individual modules, whichever is applicable) 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 while the baghouse is in standard, non-cleaning mode.

IV. Reporting Requirements

1. The permittee shall submit quarterly reports summarizing the information in A.III.2. for all days during the calendar quarter when any problem was recorded.
2. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.

V. Testing Requirements

1. Emission Limitation:
6.89 lbs/hr of PE

Compliance Method:
Compliance with this PE limitation shall be determined by emission testing using the methods in OAC rule 3745-17-03(B)(10).

V. Testing Requirements (continued)

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within 3 months after permit issuance and within 6 months prior to permit expiration.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable PE rate.
 - c. The following test method shall be employed to demonstrate compliance with the allowable PE rate: Method 5 of 40 CFR, Part 60, Appendix A.
 - d. The tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
 - e. A PE test also shall be conducted at the inlet of the control device to determine the uncontrolled mass rate of emission for the emissions unit, for purposes of applying Figure II of OAC rule 3745-17-11. For this testing, Method 5 of 40 CFR, Part 60, Appendix A shall be employed.

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 tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission tests.

3. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the tests.

4. Compliance with the visible particulate emission limit in section A.I.1. of these terms and conditions shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03(B)(1).
5. Compliance with the fugitive particulate emission limit in section A.I.1. of these terms and conditions shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03(B)(3).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
fixed-hood Midwest Grinder #5 with five-module baghouse	None	None

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: #6 Grinder (P057)
Activity Description: Midwest Grinder - 62 - Fixed Hood

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
fixed-hood Midwest Grinder #6 with five-module baghouse	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any baghouse stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	7.22 lbs/hr of particulate emissions (PE) from the baghouse. See A.I.2.b.
Midwest Grinder #6 and waste baghouse dust collection and handling operations	OAC rule 3745-17-07 (B)(1)	Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a three-minute average.
	OAC rule 3745-17-08 (B)	Reasonably available control measures to minimize or eliminate visible emissions of fugitive dust (See section A.I.2.c.)

2. Additional Terms and Conditions

- 2.a Source P057 shall not be operated without the use of the dust collection system and baghouse.
- 2.b The allowable mass rate of emission of particulate matter was based on Table I of OAC rule 3745-17-11 and was determined to be 7.22 pounds per hour. If the emissions testing required for this emissions unit demonstrates that the allowable emissions rate from Figure II is more stringent than 7.22 lbs/hour, the permittee shall comply with the more stringent limitation.
- 2.c No visible emissions of fugitive dust from the control equipment are authorized by this permit. The permittee shall employ and properly maintain the lids and connecting piping or other comparable equivalent control measures on the receiving bins under the baghouse hoppers, and the collected dust shall be treated with a dust suppressant in sufficient quantities to prevent any visible emissions of fugitive dust during the handling of the collected material.

II. Operational Restrictions

1. Except as provided in the following sentence, the pressure drop across the baghouse or each individual module, which ever is applicable, shall be maintained within the range of 2 to 9 inches of water column while the emissions unit is in operation. This allowable operating parameter may be exceeded while the control equipment is in cleaning mode. A new pressure drop range shall be permissible if stack testing pursuant to V.2 indicates complying emission rates at such new range.
2. PE from this emissions unit shall be captured and vented to the baghouse at a rate sufficient to minimize or eliminate fugitive emissions inside the building.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall inspect the following items on a once-per-week basis while the emissions unit is in operation:
 - a. all air pollution control ductwork located on the outside of the building, for leaks, holes, or other damage;
 - b. all joints and fittings located outside of the building, for leaks or improper sealing;
 - c. the baghouse unit, for leaks or visible emissions; and
 - d. the baghouse dust collection area and hopper for leaks, spills, or other problems.
2. The permittee shall collect the following data for each weekly inspection conducted per A.III.1, above, while the emissions unit is in operation:
 - a. date and time of the inspection pursuant to A.III.1;
 - b. name of person conducting the weekly inspection;
 - c. notation of any problems observed per A.III.1 (if no problems were observed, a note shall be made stating this);
 - d. description of measures taken to correct any problems; and
 - e. date that problem was corrected.
3. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse (or individual modules, whichever is applicable) 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 while the baghouse is in standard, non-cleaning mode.

IV. Reporting Requirements

1. The permittee shall submit quarterly reports summarizing the information in A.III.2. for all days during the calendar quarter when any problem was recorded.
2. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.

V. Testing Requirements

1. Emission Limitation:
7.22 lbs/hr of PE

Compliance Method:
Compliance with this PE limitation shall be determined by emission testing using the method in OAC rule 3745-17-03(B)(10).

V. Testing Requirements (continued)

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within 3 months after permit issuance and within 6 months prior to permit expiration.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable PE rate.
 - c. The following test method shall be employed to demonstrate compliance with the allowable PE rate: Method 5 of 40 CFR, Part 60, Appendix A.
 - d. The tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
 - e. A PE test also shall be conducted at the inlet of the control device to determine the uncontrolled mass rate of emission for the emissions unit, for purposes of applying Figure II of OAC rule 3745-17-11. For this testing, Method 5 of 40 CFR, Part 60, Appendix A shall be employed.

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 tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission tests.

3. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the tests.

4. Compliance with the visible particulate emission limit in section A.I.1 of these terms and conditions shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03(B)(1).
5. Compliance with the fugitive particulate emission limit in section A.I.1 of these terms and conditions shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03(B)(3).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
fixed-hood Midwest Grinder #6 with five-module baghouse	None	None

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: Tysaman Grinder (P058)
Activity Description: Tysaman Grinder - Mark 50

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Tysaman Grinder with five-module baghouse	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any baghouse stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	6.6 lbs/hr of particulate emissions (PE) from the baghouse. See A.I.2.b.
Tysaman Grinder and waste baghouse dust collection and handling operations	OAC rule 3745-17-07 (B)(1)	Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a three-minute average.
	OAC rule 3745-17-08 (B)	Reasonably available control measures to minimize or eliminate visible emissions of fugitive dust (See section A.I.2.c.)

2. Additional Terms and Conditions

- 2.a Source P058 shall not be operated without the use of the dust collection system and baghouse.
- 2.b The allowable mass rate of emission of particulate matter was based on Table I of OAC rule 3745-17-11 and was determined to be 6.6 pounds per hour. If the emissions testing required for this emissions unit demonstrates that the allowable emissions rate from Figure II is more stringent than 6.6 lbs/hour, the permittee shall comply with the more stringent limitation.
- 2.c No visible emissions of fugitive dust from the control equipment are authorized by this permit. The permittee shall employ and properly maintain the lids and connecting piping or other comparable equivalent control measures on the receiving bins under the baghouse hoppers, and the collected dust shall be treated with a dust suppressant in sufficient quantities to prevent any visible emissions of fugitive dust during the handling of the collected material.

II. Operational Restrictions

1. Except as provided in the following sentence, the pressure drop across the baghouse or each individual module, which ever is applicable, shall be maintained within the range of 2 to 9 inches of water column while the emissions unit is in operation. This allowable operating parameter may be exceeded while the control equipment is in cleaning mode. A new pressure drop range shall be permissible if stack testing pursuant to V.2 indicates complying emission rates at such new range.
2. PE from this emissions unit shall be captured and vented to the baghouse at a rate sufficient to minimize or eliminate fugitive emissions inside the building.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall inspect the following items on a once-per-week basis while the emissions unit is in operation:
 - a. all air pollution control ductwork located on the outside of the building, for leaks, holes, or other damage;
 - b. all joints and fittings located outside of the building, for leaks or improper sealing;
 - c. the baghouse unit, for leaks or visible emissions; and
 - d. the baghouse dust collection area and hopper for leaks, spills, or other problems.
2. The permittee shall collect the following data for each weekly inspection conducted per A.III.1, above, while the emissions unit is in operation:
 - a. date and time of the inspection pursuant to A.III.1;
 - b. name of person conducting the weekly inspection;
 - c. notation of any problems observed per A.III.1 (if no problems were observed, a note shall be made stating this);
 - d. description of measures taken to correct any problems; and
 - e. date that problem was corrected.
3. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse (or individual modules, whichever is applicable) 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 while the baghouse is in standard, non-cleaning mode.

IV. Reporting Requirements

1. The permittee shall submit quarterly reports summarizing the information in A.III.2. for all days during the calendar quarter when any problem was recorded.
2. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.

V. Testing Requirements

1. Emission Limitation:
6.6 lbs/hr of PE

Compliance Method:
Compliance with this PE limitation shall be determined by emission testing using the methods in OAC rule 3745-17-03(B)(10).

V. Testing Requirements (continued)

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within 3 months after permit issuance and within 6 months prior to permit expiration.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable PE rate.
 - c. The following test method shall be employed to demonstrate compliance with the allowable PE rate: Method 5 of 40 CFR, Part 60, Appendix A.
 - d. The tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
 - e. A PE test also shall be conducted at the inlet of the control device to determine the uncontrolled mass rate of emission for the emissions unit, for purposes of applying Figure II of OAC rule 3745-17-11. For this testing, Method 5 of 40 CFR, Part 60, Appendix A shall be employed.

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 tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission tests.

3. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the tests.

4. Compliance with the visible particulate emission limit in section A.I.1. of these terms and conditions shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03(B)(1).
5. Compliance with the fugitive particulate emission limit in section A.I.1. of these terms and conditions shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03(B)(3).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Tysaman Grinder with five-module baghouse	None	None

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: Fox Grinder #1 (P059)
Activity Description: Fox Grinder - 1895A

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Fox Grinder #1 with fabric filter	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any baghouse stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	See A.I.2.b.
	OAC rule 3745-31-05 (PTI #17-516)	0.029 gr PE/dscf of exhaust gases from the baghouse, 4.28 lbs/hr of particulate emissions (PE) from the baghouse
		The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B), 3745-17-07(B), and 3745-17-08(B).
Fox Grinder #1 fugitive emissions from grinding room and waste baghouse dust handling	OAC rule 3745-17-07(B)(1)	Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a three-minute average.
	OAC rule 3745-17-08 (B)	Reasonably available control measures to minimize or eliminate visible emissions of fugitive dust (See section A.I.2.c.)

2. Additional Terms and Conditions

- 2.a Source P059 shall not be operated without the use of the dust collection system and baghouse.
- 2.b The allowable mass rate of emission of particulate matter was based on PTI #17-516. This limitation is more stringent than Table I of OAC rule 3745-17-11 and is based on BAT.

2. Additional Terms and Conditions (continued)

- 2.c** No visible emissions of fugitive dust from the control equipment are authorized by this permit. The permittee shall employ and properly maintain the lids and connecting piping or other comparable equivalent control measures on the receiving bins under the baghouse hoppers, and the collected dust shall be treated with a dust suppressant in sufficient quantities to prevent any visible emissions of fugitive dust during the handling of the collected material.

II. Operational Restrictions

1. All PE from this emissions unit shall be captured and vented to the baghouse.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall inspect the following items on a once-per-week basis while the emissions unit is in operation:
 - a. all air pollution control ductwork located on the outside of the building, for leaks, holes, or other damage;
 - b. all joints and fittings located outside of the building, for leaks or improper sealing;
 - c. the baghouse unit, for leaks or visible emissions;
 - d. the baghouse dust collection area and hopper for leaks, spills, or other problems.
2. The permittee shall collect the following data for each weekly inspection while the emission unit is in operation:
 - a. date and time of the inspection pursuant to A.III.1;
 - b. name of person conducting the weekly inspection;
 - c. notation of any problems observed per A.III.1, (if no problems were observed, a note shall be made stating this);
 - d. description of measures taken to correct any problems; and
 - e. date that problem was corrected.
3. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall submit quarterly reports summarizing the information in A.III.2 for all days during each calendar quarter when any problem was recorded.
2. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which visible emissions are observed from the stack as recorded in A.III.3, above.

V. Testing Requirements

1. Emission Limitation:
4.28 lbs/hr and 0.029 gr/dscf of PE from the baghouse

Compliance Method:

Compliance with these PE limitations shall be determined by emission testing using Method 5 of 40 CFR, Part 60, Appendix A.

V. Testing Requirements (continued)

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within 6 months after permit issuance and within 6 months prior to permit expiration.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable hourly PE rate and PE concentration.
 - c. The following test method shall be employed to demonstrate compliance with the allowable PE rate and PE concentration: Method 5 of 40 CFR, Part 60, Appendix A.
 - d. The tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
 - e. A PE test also shall be conducted at the inlet of the control device to determine the uncontrolled mass rate of emission for the emissions unit, for purposes of applying Figure II of OAC rule 3745-17-11. For this testing, Method 5 of 40 CFR, Part 60, Appendix A shall be employed.

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 tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission tests.

3. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the tests.

4. Compliance with the visible particulate emission limit in section A.I.1. of these terms and conditions shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03(B)(1).
5. Compliance with the fugitive particulate emission limit in section A.I.1. of these terms and conditions shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03(B)(3).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Fox Grinder #1 with fabric filter	None	None

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: Fox Grinder #2 (P060)
Activity Description: Fox Grinder - 1895A

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Fox Grinder #2 with fabric filter	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any baghouse stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	See A.I.2.b.
	OAC rule 3745-31-05 (PTI #17-516)	0.029 gr PE/dscf of exhaust gases from the baghouse, 4.28 lbs/hr of particulate emissions (PE) from the baghouse. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B), 3745-17-07(B), and 3745-17-08(B).
Fox Grinder #2 fugitive emissions from grinding room and waste baghouse dust handling	OAC rule 3745-17-07(B)(1)	Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a three-minute average.
	OAC rule 3745-17-08(B)	Reasonably available control measures to minimize or eliminate visible emissions of fugitive dust (See section A.I.2.c.)

2. Additional Terms and Conditions

- 2.a Source P060 shall not be operated without the use of the dust collection system and baghouse.
- 2.b The allowable mass rate of emission of particulate matter was based on PTI #17-516. This limitation is more stringent than Table I of OAC rule 3745-17-11 and is based on BAT.

2. Additional Terms and Conditions (continued)

- 2.c** No visible emissions of fugitive dust from the control equipment are authorized by this permit. The permittee shall employ and properly maintain the lids and connecting piping or other comparable equivalent control measures on the receiving bins under the baghouse hoppers, and the collected dust shall be treated with a dust suppressant in sufficient quantities to prevent any visible emissions of fugitive dust during the handling of the collected material.

II. Operational Restrictions

1. All PE from this emissions unit shall be captured and vented to the baghouse.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall inspect the following items on a once-per-week while the emissions unit is in operation:
 - a. all air pollution control ductwork located on the outside of the building, for leaks, holes, or other damage;
 - b. all joints and fittings located outside of the building, for leaks or improper sealing;
 - c. the baghouse unit, for leaks or visible emissions;
 - d. the baghouse dust collection area and hopper for leaks, spills, or other problems.
2. The permittee shall collect the following data for each weekly inspection while the emission unit is in operation:
 - a. date and time of the inspection pursuant to A.III.1;
 - b. name of person conducting the weekly inspection;
 - c. notation of any problems observed per A.III.1, (if no problems were observed, a note shall be made stating this);
 - d. description of measures taken to correct any problems; and
 - e. date that problem was corrected.
3. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall submit quarterly reports summarizing the information in A.III.2 for all days during each calendar quarter when any problem was recorded.
2. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which visible emissions are observed from the stack as recorded in A.III.3, above.

V. Testing Requirements

1. Emission Limitation:
4.28 lbs/hr and 0.029 gr/dscf of PE from the baghouse

Compliance Method:

Compliance with these PE limitations shall be determined by emission testing using Method 5 of 40 CFR, Part 60, Appendix A.

V. Testing Requirements (continued)

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within 6 months after permit issuance and within 6 months prior to permit expiration.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable hourly PE rate and PE concentration.
 - c. The following test method shall be employed to demonstrate compliance with the allowable PE rate and PE concentration: Method 5 of 40 CFR, Part 60, Appendix A.
 - d. The tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
 - e. A PE test also shall be conducted at the inlet of the control device to determine the uncontrolled mass rate of emission for the emissions unit, for purposes of applying Figure II of OAC rule 3745-17-11. For this testing, Method 5 of 40 CFR, Part 60, Appendix A shall be employed.

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 tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission tests.

3. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the tests.

4. Compliance with the visible particulate emission limit in section A.I.1. of these terms and conditions shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03(B)(1).
5. Compliance with the fugitive particulate emission limit in section A.I.1. of these terms and conditions shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03(B)(3).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Fox Grinder #2 with fabric filter	None	None

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: Reheat Furnace #11 (P062)

Activity Description: Forge Box Furnace - Pittsburgh Industrial Furnace Co. - 10 MMBtu/hr

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
natural gas-fired reheat furnace # 11 (10 mmBtu/hr)	OAC rule 3745-17-07(A)(1)	none (refer to section A.I.2.b of the terms and conditions of the permit)
	OAC rule 3745-17-11(B)(1)	none (refer to section A.I.2.a of terms and conditions of the permit)
	OAC rule 3745-18-06(E)(2)	55.4 lbs/hr of sulfur dioxide
	OAC rule 3745-31-05 (PTI # 17-1518)	particulate emissions (PE): 0.13 lb/hr and 0.58 TPY SO ₂ : 0.0058 lb/hr and 0.03 TPY VOC: 0.027 lb/hr and 0.12 TPY NO _x : 1.36 lbs/hr and 5.95 TPY CO: 0.34 lb/hr and 1.49 TPY
		The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B), and 3745-18-06(E).

2. Additional Terms and Conditions

- 2.a Since the raw materials introduced into this emissions unit do not contribute to particulate emissions, and since the gaseous fuel is exempt pursuant to OAC rule 3745-17-11(A)(4), there is no particulate emission limitation imposed by this applicable requirement.
- 2.b This emissions unit is exempt from the visible PE limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because there is no applicable PE limitation in OAC rule 3745-17-11.
- 2.c The emission limitations in Section A.I.1. were established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to specify record keeping and/or reporting requirements to ensure compliance with these limits.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

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

IV. Reporting Requirements

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

V. Testing Requirements

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

- 1.a. Emission Limitation:
55.4 lbs/hr SO₂

Applicable Compliance Method:

Compliance with the above limitation shall be determined by either multiplying the AP-42 emission factor for SO₂ emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 6 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 0.6 pound of SO₂ produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate an SO₂ emission rate in pounds per hour.

The above SO₂ emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

- 1.b. Emission Limitation:
0.13 lb/hr of PE

Applicable Compliance Method:

Compliance with the above limitation shall be determined by either multiplying the AP-42 factor for PE emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 5 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 1.9 pounds of PE (filterable) produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a PE emissions rate in pounds per hour.

The above PE emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

- 1.c. Emission Limitation:
0.58 TPY of PE

Applicable Compliance Method:

As long as compliance is maintained with the hourly PE limitation, compliance with the annual PE emission limitation for unit P062 will be shown (the annual PE limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

V. Testing Requirements (continued)

- 1.d.** Emission Limitation:
1.36 lbs/hr of NOx

Applicable Compliance Method:

Compliance with the above limitation shall be determined by either multiplying the AP-42 emission factor for NOx emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 7 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 100 pounds (uncontrolled) of NOx produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a NOx emission rate in pounds per hour.

The above NOx emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-1.

- 1.e.** Emission Limitation:
5.95 TPY of NOx

Applicable Compliance Method:

As long as compliance is maintained with the hourly NOx limitation, compliance with the annual NOx emission limitation for unit P062 will be shown (the annual NOx emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

- 1.f.** Emission Limitation:
0.34 lb/hr of CO

Applicable Compliance Method:

Compliance with the above limitation shall be determined by either multiplying the AP-42 emission factor for CO emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 10 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 84 pounds of CO produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a CO emission rate in pounds per hour.

The above CO emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-1.

- 1.g.** Emission Limitation:
1.49 TPY of CO

Applicable Compliance Method:

As long as compliance is maintained with the hourly CO emission limitation, compliance with the annual CO emission limitation for unit P062 will be shown (the annual CO emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

- 1.h.** Emission Limitation:
0.0058 lb/hr SO2

Applicable Compliance Method:

Compliance with the above limitation shall be determined by either multiplying the AP-42 emission factor for SO2 emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 6 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 0.6 pound of SO2 produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a SO2 emission rate in pounds per hour.

The above SO2 emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

V. Testing Requirements (continued)

- 1.i.** Emission Limitation:
0.03 TPY of SO₂

Applicable Compliance Method:

As long as compliance is maintained with the hourly SO₂ emission limitation, compliance with the annual SO₂ emission limitation for unit P062 will be shown (the annual SO₂ emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

- 1.j.** Emission Limitation:
0.027 lb/hr of VOC

Applicable Compliance Method:

Compliance with the above limitation shall be determined by either multiplying the AP-42 emission factor for VOC emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 25 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 5.5 pounds of VOC produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a VOC emission rate in pounds per hour.

The above VOC emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

- 1.k.** Emission Limitation:
0.12 TPY of VOC

Applicable Compliance Method:

As long as compliance is maintained with the hourly VOC emission limitation, compliance with the annual VOC emission limitation for unit P062 will be shown (the annual VOC emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
natural gas-fired reheat furnace # 11 (10 mmBtu/hr)	None	None

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: Reheat Furnace #12 (P063)

Activity Description: Forge Box Furnace - Pittsburgh Industrial Furnace Co. - 10 MMBtu/hr

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
natural gas-fired reheat furnace # 12 (10 mmBtu/hr)	OAC rule 3745-17-07(A)(1)	none (refer to section A.I.2.b of the terms and conditions of the permit)
	OAC rule 3745-17-11(B)(1)	none (refer to section A.I.2.a of terms and conditions of the permit)
	OAC rule 3745-18-06(E)(2)	55.4 lbs/hr of sulfur dioxide
	OAC rule 3745-31-05 (PTI # 17-1518)	particulate emissions (PE): 0.13 lb/hr and 0.58 TPY SO ₂ : 0.0058 lb/hr and 0.03 TPY VOC: 0.027 lb/hr and 0.12 TPY NO _x : 1.36 lbs/hr and 5.95 TPY CO: 0.34 lb/hr and 1.49 TPY
		The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B), and 3745-18-06(E).

2. Additional Terms and Conditions

- 2.a Since the raw materials introduced into this emissions unit do not contribute to particulate emissions, and since the gaseous fuel is exempt pursuant to OAC rule 3745-17-11(A)(4), there is no particulate emission limitation imposed by this applicable requirement.
- 2.b This emissions unit is exempt from the visible PE limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because there is no applicable PE limitation in OAC rule 3745-17-11.
- 2.c The emission limitations in Section A.I.1 were established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to specify record keeping and/or reporting requirements to ensure compliance with these limits.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

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

IV. Reporting Requirements

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

V. Testing Requirements

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

- 1.a. Emission Limitation:
55.4 lbs/hr SO₂

Applicable Compliance Method:

Compliance with the above limitation shall be determined by either multiplying the AP-42 emission factor for SO₂ emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 6 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 0.6 pound of SO₂ produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a SO₂ emission rate in pounds per hour.

The above SO₂ emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

- 1.b. Emission Limitation:
0.13 lb/hr of PE

Applicable Compliance Method:

Compliance with the above limitation shall be determined by either multiplying the AP-42 factor for PE emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 5 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 1.9 pounds of PE (filterable) produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a PE emissions rate in pounds per hour.

The above PE emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

- 1.c. Emission Limitation:
0.58 TPY of PE

Applicable Compliance Method:

As long as compliance is maintained with the hourly PE limitation, compliance with the annual PE emission limitation for unit P063 will be shown (the annual PE limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

V. Testing Requirements (continued)

- 1.d.** Emission Limitation:
1.36 lbs/hr of NOx

Applicable Compliance Method:

Compliance with the above limitation shall be determined by either multiplying the AP-42 emission factor for NOx emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 7 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 100 pounds (uncontrolled) of NOx produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a NOx emission rate in pounds per hour.

The above NOx emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-1.

- 1.e.** Emission Limitation:
5.95 TPY of NOx

Applicable Compliance Method:

As long as compliance is maintained with the hourly NOx limitation, compliance with the annual NOx emission limitation for unit P063 will be shown (the annual NOx emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

- 1.f.** Emission Limitation:
0.34 lb/hr of CO

Applicable Compliance Method:

Compliance with the above limitation shall be determined by either multiplying the AP-42 emission factor for CO emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 10 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 84 pounds of CO produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a CO emission rate in pounds per hour.

The above CO emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-1.

- 1.g.** Emission Limitation:
1.49 TPY of CO

Applicable Compliance Method:

As long as compliance is maintained with the hourly CO emission limitation, compliance with the annual CO emission limitation for unit P063 will be shown (the annual CO emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

- 1.h.** Emission Limitation:
0.0058 lb/hr SO2

Applicable Compliance Method:

Compliance with the above limitation shall be determined by either multiplying the AP-42 emission factor for SO2 emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 6 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 0.6 pound of SO2 produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a SO2 emission rate in pounds per hour.

The above SO2 emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

V. Testing Requirements (continued)

- 1.i.** Emission Limitation:
0.03 TPY of SO₂

Applicable Compliance Method:

As long as compliance is maintained with the hourly SO₂ emission limitation, compliance with the annual SO₂ emission limitation for unit P063 will be shown (the annual SO₂ emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

- 1.j.** Emission Limitation:
0.027 lb/hr of VOC

Applicable Compliance Method:

Compliance with the above limitation shall be determined by either multiplying the AP-42 emission factor for VOC emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 25 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 5.5 pounds of VOC produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a VOC emission rate in pounds per hour.

The above VOC emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

- 1.k.** Emission Limitation:
0.12 TPY of VOC

Applicable Compliance Method:

As long as compliance is maintained with the hourly VOC emission limitation, compliance with the annual VOC emission limitation for unit P063 will be shown (the annual VOC emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
natural gas-fired reheat furnace # 12 (10 mmBtu/hr)	None	None

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: #8 Midwest Grinder (P067)
Activity Description: Midwest Grinder

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
#8 Midwest Grinder fixed hard wheel movable table surface grinder with three-module baghouse	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any baghouse stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule. See A.I.2.b, below; 0.69 lb/hr of particulate emissions (PE) from the baghouse; 3.0 tons of PE per year from the baghouse The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B), 3745-17-07(B), and 3745-17-08(B).
	OAC rule 3745-17-11(B)(1)	
	OAC rule 3745-31-05 (PTI #17-1585)	
#8 Midwest Grinder and waste baghouse dust collection and handling operations	OAC rule 3745-17-07 (B)(1)	Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a three-minute average. Reasonably available control measures to minimize or eliminate visible emissions of fugitive dust (See section A.I.2.c.)
	OAC rule 3745-17-08 (B)	

2. Additional Terms and Conditions

- 2.a Source P067 shall not be operated without the use of the dust collection system and baghouse.
- 2.b The allowable mass rate of emission of particulate matter based on Table I of OAC rule 3745-17-11 is less stringent than limits set in PTI #17-1585 issued October 29, 1997.
- 2.c No visible emissions of fugitive dust from the control equipment are authorized by this permit. The permittee shall employ and properly maintain the lids and connecting piping or other comparable or equivalent control measures on the receiving bins under the baghouse hoppers, and the collected dust shall be treated with a dust suppressant in sufficient quantities to prevent any visible emissions of fugitive dust during the handling of the collected material.

II. Operational Restrictions

1. Except as provided in the following sentence, the pressure drop across the baghouse or each individual module, which ever is applicable, shall be maintained within the range of 2 to 9 inches of water column while the emissions unit is in operation. This allowable operating parameter may be exceeded while the control equipment is in cleaning mode. A new pressure drop range shall be permissible if stack testing pursuant to V.2 indicates complying emission rates at such new range.
2. The permittee shall maintain the PE collection system for this emission unit in order to minimize or eliminate fugitive emissions from escaping the collection point.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall inspect the following items on a once-per-week basis while the emissions unit is in operation:
 - a. all air pollution control ductwork located on the outside of the building, for leaks, holes, or other damage;
 - b. all joints and fittings located outside of the building, for leaks or improper sealing;
 - c. the baghouse unit, for leaks or visible emissions; and
 - d. the baghouse dust collection area and hopper for leaks, spills, or other problems.
2. The permittee shall collect the following data for each weekly inspection conducted per A.III.1, above, while the emissions unit is in operation:
 - a. date and time of the inspection pursuant to A.III.1;
 - b. name of person conducting the weekly inspection;
 - c. notation of any problems observed per A.III.1 (if no problems were observed, a note shall be made stating this);
 - d. description of measures taken to correct any problems; and
 - e. date that problem was corrected.
3. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse (or individual modules, whichever is applicable) 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 while the baghouse is in standard, non-cleaning mode.

IV. Reporting Requirements

1. The permittee shall submit quarterly reports summarizing the information in A.III.2 for all days during each calendar quarter when any problem was recorded.
2. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.

V. Testing Requirements

1. Emission Limitation:
0.69 lb/hr of PE from the baghouse

Compliance Method:

Compliance with this PE limitation shall be determined by emission testing using the method in OAC rule 3745-17-03(B)(10).

2. Emission Limitation:
3.0 TPY of PE from the baghouse

Compliance Method:

Compliance with this PE limitation shall be determined by multiplying the tested hourly PE emission rate, in lbs/hr, by the annual hours of operation of this emissions unit, and dividing by 2000 lbs/ton.

V. Testing Requirements (continued)

3. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within 6 months after permit issuance and within 6 months prior to permit expiration.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable hourly PE rate and PE concentration.
 - c. The following test method shall be employed to demonstrate compliance with the allowable PE rate and PE concentration: Method 5 of 40 CFR, Part 60, Appendix A.
 - d. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

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 tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission tests.

4. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the tests.

5. Compliance with the visible particulate emission limit in section A.I.1. of these terms and conditions shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03(B)(1).
6. Compliance with the fugitive particulate emission limit in section A.I.1. of these terms and conditions shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03(B)(3).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
#8 Midwest Grinder fixed hard wheel movable table surface grinder with three-module baghouse	None	None

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: Ingot Heating Furnace No. 1 (P069)
Activity Description: Natural gas fire batch furnace - 25 MMBtu/hr

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
ingot heat furnace #1 (25 mmBtu/hr)	OAC rule 3745-17-07(A)(1)	none (refer to section A.I.2.b of the terms and conditions of the permit)
	OAC rule 3745-17-11(B)(1)	none (refer to section A.I.2.a of terms and conditions of the permit)
	OAC rule 3745-18-06(E)(2)	The emission limitation specified by this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05.
	OAC rule 3745-31-05 (PTI # 17-1602)	particulate emissions (PE): 0.34 lb/hr sulfur dioxide (SO ₂): 0.016 lb/hr volatile organic compounds (VOC): 0.07 lb/hr nitrogen oxides (NO _x): 1.85 lbs/hr carbon monoxide (CO): 0.88 lb/hr
		Visible PE from any stack associated with this emissions unit shall not exceed 5 percent opacity, as a six-minute average.
		See A.I.2.d.

2. Additional Terms and Conditions

- 2.a Since the raw materials introduced into this emissions unit do not contribute to PE, and since the gaseous fuel is exempt pursuant to OAC rule 3745-17-11(A)(4), there is no PE limitation imposed by this applicable requirement.
- 2.b This emissions unit is exempt from the visible PE limitations specified in OAC rule 3745-17-07(A), pursuant to OAC rule 3745-17-07(A)(3)(h), because there is no applicable PE limitation in OAC rule 3745-17-11.
- 2.c The emission limitations in A.I.1 are based on the maximum usage; thus, hourly usage record keeping is not required.
- 2.d The total combined annual emissions, in tons per year (TPY), of PE, SO₂, CO, VOC and NO_x from emissions units P069 through P074 shall not exceed the following: PE = 2.70, SO₂ = 0.12, CO = 6.90, VOC = 0.54 and NO_x = 14.59 TPY. The individual TPY emissions of PE, SO₂, CO, VOC and NO_x from each of emissions units P069 through P074 shall not exceed the following: PE = 1.5, SO₂ = 0.07, CO = 3.85, VOC = 0.31, and NO_x = 8.10.

2. Additional Terms and Conditions (continued)

- 2.e The natural gas usage for emissions units P069 through P074 combined shall not exceed a total of 382,718 thousand cubic feet per year, as a rolling, twelve-month summation.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall collect and record the following information each month for emissions units P069 through P074:
 - a. the total volume of natural gas used in all of the emissions units in thousands of cubic feet; and
 - b. the total volume of natural gas used in all of the emissions units (P069 through P074), as a rolling, 12-month summation, in thousands of cubic feet.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month limitation for natural gas usage for emissions units P069 through P074 combined.
3. The permittee shall submit annual reports that specify the total NO_x, SO₂, CO, VOC and PE emissions from emissions units P069 through P074 combined, for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Compliance with the emission limitations in sections A.I.1 and A.I.2. of these terms and conditions shall be determined in accordance with the following methods:
 - 1.a. Emission Limitation:
0.34 lb/hr and 1.5 TPY of PE

Applicable Compliance Method:

Compliance with the above hourly PE limitation shall be determined by either multiplying the AP-42 factor for PE (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 5 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 1.9 pounds of PE (filterable) produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired, in millions of cubic feet per hour, in the furnace to calculate a PE rate in pounds per hour.

The above PE emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

As long as compliance is maintained with the hourly PE limitation, compliance with the annual PE limitation for unit P069 will be shown (the annual PE limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

V. Testing Requirements (continued)

- 1.b** Emission Limitation:
2.70 TPY of PE combined from emissions units P069 through P074

Applicable Compliance Method:

Compliance with the above annual PE limitation shall be determined by multiplying the emission factor of 1.9 lbs of PE produced per million cubic feet of natural gas fired by the sum of the monthly gas usages recorded per section A.III.2.b. for each calendar year, in thousands of cubic feet, and divided by the product of 1,000 times 2000 lbs/ton.

- 1.c** Emission Limitation
1.85 lbs/hr and 8.10 TPY of NO_x

Applicable Compliance Method:

Compliance with the above hourly NO_x emission limitation shall be determined by either multiplying the AP-42 emission factor for NO_x emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 7 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 100 pounds (uncontrolled) of NO_x produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a NO_x emission rate in pounds per hour.

The above NO_x emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-1.

As long as compliance is maintained with the hourly NO_x emission limitation, compliance with the annual NO_x emission limitation for unit P069 will be shown (the annual NO_x emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

- 1.d** Emission Limitation:
14.59 TPY of NO_x combined from emissions units P069 through P074

Applicable Compliance Method:

Compliance with the above annual NO_x emission limitation shall be determined by multiplying the emission factor of 100 lbs of NO_x (uncontrolled) produced per million cubic feet of natural gas fired by the sum of the monthly gas usages recorded per section A.III.2.b. for each calendar year, in thousands of cubic feet, and divided by the product of 1,000 times 2000 lbs/ton.

- 1.e.** Emission Limitation:
0.88 lb/hr and 3.85 TPY of CO

Applicable Compliance Method:

Compliance with the above hourly CO emission limitation shall be determined by either multiplying the AP-42 emission factor for CO emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 10 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 84 pounds of CO produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a CO emission rate in pounds per hour.

The above CO emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-1.

As long as compliance is maintained with the hourly CO emission limitation, compliance with the annual CO emission limitation for unit P069 will be shown (the annual CO emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

V. Testing Requirements (continued)

- 1.f.** Emission Limitation:
6.90 TPY of CO combined from emissions units P069 through P074

Applicable Compliance Method:

Compliance with the above annual CO emission limitation shall be determined by multiplying the emission factor of 84 lbs of CO produced per million cubic feet of natural gas fired by the sum of the monthly gas usages recorded per section A.III.2.b. for each calendar year, in thousands of cubic feet, and divided by the product of 1,000 times 2000 lbs/ton.

- 1.g** Emission Limitation:
0.016 lb/hr and 0.07 TPY of SO₂

Applicable Compliance Method:

Compliance with the above hourly SO₂ emission limitation shall be determined by either multiplying the AP-42 emission factor for SO₂ emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 6 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 0.6 pound of SO₂ produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a SO₂ emission rate in pounds per hour.

The above SO₂ emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

As long as compliance is maintained with the hourly SO₂ emission limitation, compliance with the annual SO₂ emission limitation for unit P069 will be shown (the annual SO₂ emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

- 1.h** Emission Limitation:
0.12 TPY of SO₂ combined from emissions units P069 through P074

Applicable Compliance Method:

Compliance with the above annual SO₂ emission limitation shall be determined by multiplying the emission factor of 0.6 lb of CO produced per million cubic feet of natural gas fired by the sum of the monthly gas usages recorded per section A.III.2.b. for each calendar year, in thousands of cubic feet, and divided by the product of 1,000 times 2000 lbs/ton.

- 1.i** Emission Limitation:
0.07 lb/hr and 0.31 TPY of VOC

Applicable Compliance Method:

Compliance with the above hourly VOC emission limitation shall be determined by either multiplying the AP-42 emission factor for VOC emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 18 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 5.5 pounds of VOC produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a VOC emission rate in pounds per hour.

The above VOC emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

As long as compliance is maintained with the hourly VOC emission limitation, compliance with the annual VOC emission limitation for unit P069 will be shown (the annual VOC emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

V. Testing Requirements (continued)

- 1.j** Emission Limitation
0.54 TPY of VOC combined from emissions units P069 through P074

Applicable Compliance Method:

Compliance with the above annual VOC emission limitation shall be determined by multiplying the emission factor of 5.5 lbs of VOC produced per million cubic feet of natural gas fired by the sum of the monthly gas usages recorded per section A.III.2.b. for each calendar year, in thousands of cubic feet, and divided by the product of 1,000 times 2000 lbs/ton.

- 1.k** Emission Limitation:
Visible PE shall not exceed 5 percent opacity, as a six-minute average.

Applicable Compliance Method:

Compliance shall be determined using Method 9 of 40 CFR, Part 60, Appendix A.

- 2.** Compliance with the annual natural gas usage limitation in Section A.1.2.e of these terms and conditions shall be based upon the rolling, twelve-month summations of the monthly gas usages recorded pursuant to Section A.III.2.c.
- 3.** The permittee shall conduct, or have conducted, emission testing for one of the identical emission units P069, P070, P071, P072, P073, and P074 in accordance with the following requirements:
- the emission testing shall be conducted within 6 months after startup of the emissions unit;
 - the emission testing shall be conducted to demonstrate compliance with the allowable emission rate of 1.85 pounds of NOx/hour;
 - the following test method shall be employed to demonstrate compliance with the allowable NOx emission rate: Method 7 of 40 CFR, Part 60, Appendix A.
 - the test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
- 4.** 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, and the person(s) who will be conducting the test. Failure to submit such notification for review and approval prior to the test may result in the appropriate Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test.

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test shall be signed by the person or persons responsible for the test and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test. 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
ingot heat furnace #1 (25mmBtu/hr)	None	None

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: Ingot Heating Furnace No. 2 (P070)
Activity Description: Natural gas fire batch furnace - 25 MMBtu/hr

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
ingot heat furnace #2 (25 mmBtu/hr)	OAC rule 3745-17-07(A)(1)	none (refer to section A.I.2.b of the terms and conditions of the permit)
	OAC rule 3745-17-11(B)(1)	none (refer to section A.I.2.a of terms and conditions of the permit)
	OAC rule 3745-18-06(E)(2)	The emission limitation specified by this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05.
	OAC rule 3745-31-05 (PTI # 17-1602)	particulate emissions (PE): 0.34 lb/hr sulfur dioxide (SO ₂): 0.016 lb/hr volatile organic compounds (VOC): 0.07 lb/hr nitrogen oxides (NO _x): 1.85 lbs/hr carbon monoxide (CO): 0.88 lb/hr
		Visible PE from any stack associated with this emissions unit shall not exceed 5 percent opacity, as a six-minute average.
		See A.I.2.d.

2. Additional Terms and Conditions

- 2.a Since the raw materials introduced into this emissions unit do not contribute to PE, and since the gaseous fuel is exempt pursuant to OAC rule 3745-17-11(A)(4), there is no PE limitation imposed by this applicable requirement.
- 2.b This emissions unit is exempt from the visible PE limitations specified in OAC rule 3745-17-07(A), pursuant to OAC rule 3745-17-07(A)(3)(h), because there is no applicable PE limitation in OAC rule 3745-17-11.
- 2.c The emission limitations in A.I.1 are based on the maximum usage; thus, hourly usage record keeping is not required.
- 2.d The total combined annual emissions, in tons per year (TPY), of PE, SO₂, CO, VOC and NO_x from emissions units P069 through P074 shall not exceed the following: PE = 2.70, SO₂ = 0.12, CO = 6.90, VOC = 0.54 and NO_x = 14.59 TPY. The individual TPY emissions of PE, SO₂, CO, VOC and NO_x from each of emissions units P069 through P074 shall not exceed the following: PE = 1.5, SO₂ = 0.07, CO = 3.85, VOC = 0.31, and NO_x = 8.10.

2. Additional Terms and Conditions (continued)

- 2.e The natural gas usage for emissions units P069 through P074 combined shall not exceed a total of 382,718 thousand cubic feet per year, as a rolling, twelve-month summation.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall collect and record the following information each month for emissions units P069 through P074:
 - a. the total volume of natural gas used in all of the emissions units in thousands of cubic feet; and
 - b. the total volume of natural gas used in all of the emissions units (P069 through P074), as a rolling, 12-month summation, in thousands of cubic feet.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month limitation for natural gas usage for emissions units P069 through P074 combined.
3. The permittee shall submit annual reports that specify the total NO_x, SO₂, CO, VOC and PE emissions from emissions units P069 through P074 combined, for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Compliance with the emission limitations in sections A.I.1 and A.I.2. of these terms and conditions shall be determined in accordance with the following methods:
 - 1.a. Emission Limitation:
0.34 lb/hr and 1.5 TPY of PE

Applicable Compliance Method:

Compliance with the above hourly PE limitation shall be determined by either multiplying the AP-42 factor for PE (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 5 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 1.9 pounds of PE (filterable) produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired, in millions of cubic feet per hour, in the furnace to calculate a PE rate in pounds per hour.

The above PE emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

As long as compliance is maintained with the hourly PE limitation, compliance with the annual PE limitation for unit P069 will be shown (the annual PE limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

V. Testing Requirements (continued)

- 1.b** Emission Limitation:
2.70 TPY of PE combined from emissions units P069 through P074

Applicable Compliance Method:

Compliance with the above annual PE limitation shall be determined by multiplying the emission factor of 1.9 lbs of PE produced per million cubic feet of natural gas fired by the sum of the monthly gas usages recorded per section A.III.2.b. for each calendar year, in thousands of cubic feet, and divided by the product of 1,000 times 2000 lbs/ton.

- 1.c** Emission Limitation
1.85 lbs/hr and 8.10 TPY of NO_x

Applicable Compliance Method:

Compliance with the above hourly NO_x emission limitation shall be determined by either multiplying the AP-42 emission factor for NO_x emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 7 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 100 pounds (uncontrolled) of NO_x produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a NO_x emission rate in pounds per hour.

The above NO_x emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-1.

As long as compliance is maintained with the hourly NO_x emission limitation, compliance with the annual NO_x emission limitation for unit P069 will be shown (the annual NO_x emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

- 1.d** Emission Limitation:
14.59 TPY of NO_x combined from emissions units P069 through P074

Applicable Compliance Method:

Compliance with the above annual NO_x emission limitation shall be determined by multiplying the emission factor of 100 lbs of NO_x (uncontrolled) produced per million cubic feet of natural gas fired by the sum of the monthly gas usages recorded per section A.III.2.b. for each calendar year, in thousands of cubic feet, and divided by the product of 1,000 times 2000 lbs/ton.

- 1.e.** Emission Limitation:
0.88 lb/hr and 3.85 TPY of CO

Applicable Compliance Method:

Compliance with the above hourly CO emission limitation shall be determined by either multiplying the AP-42 emission factor for CO emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 10 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 84 pounds of CO produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a CO emission rate in pounds per hour.

The above CO emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-1.

As long as compliance is maintained with the hourly CO emission limitation, compliance with the annual CO emission limitation for unit P069 will be shown (the annual CO emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

V. Testing Requirements (continued)

- 1.f.** Emission Limitation:
6.90 TPY of CO combined from emissions units P069 through P074

Applicable Compliance Method:

Compliance with the above annual CO emission limitation shall be determined by multiplying the emission factor of 84 lbs of CO produced per million cubic feet of natural gas fired by the sum of the monthly gas usages recorded per section A.III.2.b. for each calendar year, in thousands of cubic feet, and divided by the product of 1,000 times 2000 lbs/ton.

- 1.g** Emission Limitation:
0.016 lb/hr and 0.07 TPY of SO₂

Applicable Compliance Method:

Compliance with the above hourly SO₂ emission limitation shall be determined by either multiplying the AP-42 emission factor for SO₂ emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 6 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 0.6 pound of SO₂ produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a SO₂ emission rate in pounds per hour.

The above SO₂ emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

As long as compliance is maintained with the hourly SO₂ emission limitation, compliance with the annual SO₂ emission limitation for unit P069 will be shown (the annual SO₂ emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

- 1.h** Emission Limitation:
0.12 TPY of SO₂ combined from emissions units P069 through P074

Applicable Compliance Method:

Compliance with the above annual SO₂ emission limitation shall be determined by multiplying the emission factor of 0.6 lb of CO produced per million cubic feet of natural gas fired by the sum of the monthly gas usages recorded per section A.III.2.b. for each calendar year, in thousands of cubic feet, and divided by the product of 1,000 times 2000 lbs/ton.

- 1.i** Emission Limitation:
0.07 lb/hr and 0.31 TPY of VOC

Applicable Compliance Method:

Compliance with the above hourly VOC emission limitation shall be determined by either multiplying the AP-42 emission factor for VOC emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 18 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 5.5 pounds of VOC produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a VOC emission rate in pounds per hour.

The above VOC emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

As long as compliance is maintained with the hourly VOC emission limitation, compliance with the annual VOC emission limitation for unit P069 will be shown (the annual VOC emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

V. Testing Requirements (continued)

- 1.j** Emission Limitation
0.54 TPY of VOC combined from emissions units P069 through P074

Applicable Compliance Method:

Compliance with the above annual VOC emission limitation shall be determined by multiplying the emission factor of 5.5 lbs of VOC produced per million cubic feet of natural gas fired by the sum of the monthly gas usages recorded per section A.III.2.b. for each calendar year, in thousands of cubic feet, and divided by the product of 1,000 times 2000 lbs/ton.

- 1.k** Emission Limitation:
Visible PE shall not exceed 5 percent opacity, as a six-minute average.

Applicable Compliance Method:

Compliance shall be determined using Method 9 of 40 CFR, Part 60, Appendix A.

- 2.** Compliance with the annual natural gas usage limitation in Section A.1.2.e of these terms and conditions shall be based upon the rolling, twelve-month summations of the monthly gas usages recorded pursuant to Section A.III.2.c.
- 3.** The permittee shall conduct, or have conducted, emission testing for one of the identical emission units P069, P070, P071, P072, P073, and P074 in accordance with the following requirements:
- a. the emission testing shall be conducted within 6 months after startup of the emissions unit;
 - b. the emission testing shall be conducted to demonstrate compliance with the allowable emission rate of 1.85 pounds of NOx/hour;
 - c. the following test method shall be employed to demonstrate compliance with the allowable NOx emission rate: Method 7 of 40 CFR, Part 60, Appendix A.
 - d. the test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
- 4.** 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, and the person(s) who will be conducting the test. Failure to submit such notification for review and approval prior to the test may result in the appropriate Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test.

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test shall be signed by the person or persons responsible for the test and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test. 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
ingot heat furnace #2 (25 mmBtu/hr)	None	None

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: Ingot Heating Furnace No. 3 (P071)
Activity Description: Natural gas fire batch furnace - 25 MMBtu/hr

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
ingot heat furnace #3 (25 mmBtu/hr)	OAC rule 3745-17-07(A)(1)	none (refer to section A.I.2.b of the terms and conditions of the permit)
	OAC rule 3745-17-11(B)(1)	none (refer to section A.I.2.a of terms and conditions of the permit)
	OAC rule 3745-18-06(E)(2)	The emission limitation specified by this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05.
	OAC rule 3745-31-05 (PTI # 17-1602)	particulate emissions (PE): 0.34 lb/hr sulfur dioxide (SO ₂): 0.016 lb/hr volatile organic compounds (VOC): 0.07 lb/hr nitrogen oxides (NO _x): 1.85 lbs/hr carbon monoxide (CO): 0.88 lb/hr Visible PE from any stack associated with this emissions unit shall not exceed 5 percent opacity, as a six-minute average. See A.I.2.d.

2. Additional Terms and Conditions

- 2.a Since the raw materials introduced into this emissions unit do not contribute to PE, and since the gaseous fuel is exempt pursuant to OAC rule 3745-17-11(A)(4), there is no PE limitation imposed by this applicable requirement.
- 2.b This emissions unit is exempt from the visible PE limitations specified in OAC rule 3745-17-07(A), pursuant to OAC rule 3745-17-07(A)(3)(h), because there is no applicable PE limitation in OAC rule 3745-17-11.
- 2.c The emission limitations in A.I.1 are based on the maximum usage; thus, hourly usage record keeping is not required.
- 2.d The total combined annual emissions, in tons per year (TPY), of PE, SO₂, CO, VOC and NO_x from emissions units P069 through P074 shall not exceed the following: PE = 2.70, SO₂ = 0.12, CO = 6.90, VOC = 0.54 and NO_x = 14.59 TPY. The individual TPY emissions of PE, SO₂, CO, VOC and NO_x from each of emissions units P069 through P074 shall not exceed the following: PE = 1.5, SO₂ = 0.07, CO = 3.85, VOC = 0.31, and NO_x = 8.10.

2. Additional Terms and Conditions (continued)

- 2.e The natural gas usage for emissions units P069 through P074 combined shall not exceed a total of 382,718 thousand cubic feet per year, as a rolling, twelve-month summation.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall collect and record the following information each month for emissions units P069 through P074:
 - a. the total volume of natural gas used in all of the emissions units in thousands of cubic feet; and
 - b. the total volume of natural gas used in all of the emissions units (P069 through P074), as a rolling, 12-month summation, in thousands of cubic feet.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month limitation for natural gas usage for emissions units P069 through P074 combined.
3. The permittee shall submit annual reports that specify the total NO_x, SO₂, CO, VOC and PE emissions from emissions units P069 through P074 combined, for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Compliance with the emission limitations in sections A.I.1 and A.I.2. of these terms and conditions shall be determined in accordance with the following methods:
 - 1.a. Emission Limitation:
0.34 lb/hr and 1.5 TPY of PE

Applicable Compliance Method:

Compliance with the above hourly PE limitation shall be determined by either multiplying the AP-42 factor for PE (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 5 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 1.9 pounds of PE (filterable) produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired, in millions of cubic feet per hour, in the furnace to calculate a PE rate in pounds per hour.

The above PE emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

As long as compliance is maintained with the hourly PE limitation, compliance with the annual PE limitation for unit P069 will be shown (the annual PE limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

V. Testing Requirements (continued)

- 1.b** Emission Limitation:
2.70 TPY of PE combined from emissions units P069 through P074

Applicable Compliance Method:

Compliance with the above annual PE limitation shall be determined by multiplying the emission factor of 1.9 lbs of PE produced per million cubic feet of natural gas fired by the sum of the monthly gas usages recorded per section A.III.2.b. for each calendar year, in thousands of cubic feet, and divided by the product of 1,000 times 2000 lbs/ton.

- 1.c** Emission Limitation
1.85 lbs/hr and 8.10 TPY of NOx

Applicable Compliance Method:

Compliance with the above hourly NOx emission limitation shall be determined by either multiplying the AP-42 emission factor for NOx emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 7 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 100 pounds (uncontrolled) of NOx produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a NOx emission rate in pounds per hour.

The above NOx emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-1.

As long as compliance is maintained with the hourly NOx emission limitation, compliance with the annual NOx emission limitation for unit P069 will be shown (the annual NOx emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

- 1.d** Emission Limitation:
14.59 TPY of NOx combined from emissions units P069 through P074

Applicable Compliance Method:

Compliance with the above annual NOx emission limitation shall be determined by multiplying the emission factor of 100 lbs of NOx (uncontrolled) produced per million cubic feet of natural gas fired by the sum of the monthly gas usages recorded per section A.III.2.b. for each calendar year, in thousands of cubic feet, and divided by the product of 1,000 times 2000 lbs/ton.

- 1.e.** Emission Limitation:
0.88 lb/hr and 3.85 TPY of CO

Applicable Compliance Method:

Compliance with the above hourly CO emission limitation shall be determined by either multiplying the AP-42 emission factor for CO emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 10 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 84 pounds of CO produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a CO emission rate in pounds per hour.

The above CO emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-1.

As long as compliance is maintained with the hourly CO emission limitation, compliance with the annual CO emission limitation for unit P069 will be shown (the annual CO emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

V. Testing Requirements (continued)

- 1.f.** Emission Limitation:
6.90 TPY of CO combined from emissions units P069 through P074

Applicable Compliance Method:

Compliance with the above annual CO emission limitation shall be determined by multiplying the emission factor of 84 lbs of CO produced per million cubic feet of natural gas fired by the sum of the monthly gas usages recorded per section A.III.2.b. for each calendar year, in thousands of cubic feet, and divided by the product of 1,000 times 2000 lbs/ton.

- 1.g** Emission Limitation:
0.016 lb/hr and 0.07 TPY of SO₂

Applicable Compliance Method:

Compliance with the above hourly SO₂ emission limitation shall be determined by either multiplying the AP-42 emission factor for SO₂ emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 6 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 0.6 pound of SO₂ produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a SO₂ emission rate in pounds per hour.

The above SO₂ emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

As long as compliance is maintained with the hourly SO₂ emission limitation, compliance with the annual SO₂ emission limitation for unit P069 will be shown (the annual SO₂ emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

- 1.h** Emission Limitation:
0.12 TPY of SO₂ combined from emissions units P069 through P074

Applicable Compliance Method:

Compliance with the above annual SO₂ emission limitation shall be determined by multiplying the emission factor of 0.6 lb of CO produced per million cubic feet of natural gas fired by the sum of the monthly gas usages recorded per section A.III.2.b. for each calendar year, in thousands of cubic feet, and divided by the product of 1,000 times 2000 lbs/ton.

- 1.i** Emission Limitation:
0.07 lb/hr and 0.31 TPY of VOC

Applicable Compliance Method:

Compliance with the above hourly VOC emission limitation shall be determined by either multiplying the AP-42 emission factor for VOC emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 18 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 5.5 pounds of VOC produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a VOC emission rate in pounds per hour.

The above VOC emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

As long as compliance is maintained with the hourly VOC emission limitation, compliance with the annual VOC emission limitation for unit P069 will be shown (the annual VOC emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

V. Testing Requirements (continued)

- 1.j** Emission Limitation
0.54 TPY of VOC combined from emissions units P069 through P074

Applicable Compliance Method:

Compliance with the above annual VOC emission limitation shall be determined by multiplying the emission factor of 5.5 lbs of VOC produced per million cubic feet of natural gas fired by the sum of the monthly gas usages recorded per section A.III.2.b. for each calendar year, in thousands of cubic feet, and divided by the product of 1,000 times 2000 lbs/ton.

- 1.k** Emission Limitation:
Visible PE shall not exceed 5 percent opacity, as a six-minute average.

Applicable Compliance Method:

Compliance shall be determined using Method 9 of 40 CFR, Part 60, Appendix A.

- 2.** Compliance with the annual natural gas usage limitation in Section A.1.2.e of these terms and conditions shall be based upon the rolling, twelve-month summations of the monthly gas usages recorded pursuant to Section A.III.2.c.
- 3.** The permittee shall conduct, or have conducted, emission testing for one of the identical emission units P069, P070, P071, P072, P073, and P074 in accordance with the following requirements:
- the emission testing shall be conducted within 6 months after startup of the emissions unit;
 - the emission testing shall be conducted to demonstrate compliance with the allowable emission rate of 1.85 pounds of NO_x/hour;
 - the following test method shall be employed to demonstrate compliance with the allowable NO_x emission rate: Method 7 of 40 CFR, Part 60, Appendix A.
 - the test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
- 4.** 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, and the person(s) who will be conducting the test. Failure to submit such notification for review and approval prior to the test may result in the appropriate Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test.

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test shall be signed by the person or persons responsible for the test and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test. 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
ingot heat furnace #3 (25 mmBtu/hr)	None	None

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: Ingot Heating Furnace No. 4 (P072)
Activity Description: Natural gas fire batch furnace - 25 MMBtu/hr

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

- 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
ingot heat furnace #4 (25 mmBtu/hr)	OAC rule 3745-17-07(A)(1)	none (refer to section A.I.2.b of the terms and conditions of the permit)
	OAC rule 3745-17-11(B)(1)	none (refer to section A.I.2.a of terms and conditions of the permit)
	OAC rule 3745-18-06(E)(2)	The emission limitation specified by this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05.
	OAC rule 3745-31-05 (PTI # 17-1602)	particulate emissions (PE): 0.34 lb/hr sulfur dioxide (SO ₂): 0.016 lb/hr volatile organic compounds (VOC): 0.07 lb/hr nitrogen oxides (NO _x): 1.85 lbs/hr carbon monoxide (CO): 0.88 lb/hr
		Visible PE from any stack associated with this emissions unit shall not exceed 5 percent opacity, as a six-minute average.
		See A.I.2.d.

2. Additional Terms and Conditions

- Since the raw materials introduced into this emissions unit do not contribute to PE, and since the gaseous fuel is exempt pursuant to OAC rule 3745-17-11(A)(4), there is no PE limitation imposed by this applicable requirement.
- This emissions unit is exempt from the visible PE limitations specified in OAC rule 3745-17-07(A), pursuant to OAC rule 3745-17-07(A)(3)(h), because there is no applicable PE limitation in OAC rule 3745-17-11.
- The emission limitations in A.I.1 are based on the maximum usage; thus, hourly usage record keeping is not required.
- The total combined annual emissions, in tons per year (TPY), of PE, SO₂, CO, VOC and NO_x from emissions units P069 through P074 shall not exceed the following: PE = 2.70, SO₂ = 0.12, CO = 6.90, VOC = 0.54 and NO_x = 14.59 TPY. The individual TPY emissions of PE, SO₂, CO, VOC and NO_x from each of emissions units P069 through P074 shall not exceed the following: PE = 1.5, SO₂ = 0.07, CO = 3.85, VOC = 0.31, and NO_x = 8.10.

2. Additional Terms and Conditions (continued)

- 2.e The natural gas usage for emissions units P069 through P074 combined shall not exceed a total of 382,718 thousand cubic feet per year, as a rolling, twelve-month summation.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall collect and record the following information each month for emissions units P069 through P074:
 - a. the total volume of natural gas used in all of the emissions units in thousands of cubic feet; and
 - b. the total volume of natural gas used in all of the emissions units (P069 through P074), as a rolling, 12-month summation, in thousands of cubic feet.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month limitation for natural gas usage for emissions units P069 through P074 combined.
3. The permittee shall submit annual reports that specify the total NO_x, SO₂, CO, VOC and PE emissions from emissions units P069 through P074 combined, for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Compliance with the emission limitations in sections A.I.1 and A.I.2. of these terms and conditions shall be determined in accordance with the following methods:
 - 1.a. Emission Limitation:
0.34 lb/hr and 1.5 TPY of PE

Applicable Compliance Method:

Compliance with the above hourly PE limitation shall be determined by either multiplying the AP-42 factor for PE (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 5 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 1.9 pounds of PE (filterable) produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired, in millions of cubic feet per hour, in the furnace to calculate a PE rate in pounds per hour.

The above PE emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

As long as compliance is maintained with the hourly PE limitation, compliance with the annual PE limitation for unit P069 will be shown (the annual PE limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

V. Testing Requirements (continued)

- 1.b** Emission Limitation:
2.70 TPY of PE combined from emissions units P069 through P074

Applicable Compliance Method:

Compliance with the above annual PE limitation shall be determined by multiplying the emission factor of 1.9 lbs of PE produced per million cubic feet of natural gas fired by the sum of the monthly gas usages recorded per section A.III.2.b. for each calendar year, in thousands of cubic feet, and divided by the product of 1,000 times 2000 lbs/ton.

- 1.c** Emission Limitation
1.85 lbs/hr and 8.10 TPY of NOx

Applicable Compliance Method:

Compliance with the above hourly NOx emission limitation shall be determined by either multiplying the AP-42 emission factor for NOx emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 7 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 100 pounds (uncontrolled) of NOx produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a NOx emission rate in pounds per hour.

The above NOx emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-1.

As long as compliance is maintained with the hourly NOx emission limitation, compliance with the annual NOx emission limitation for unit P069 will be shown (the annual NOx emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

- 1.d** Emission Limitation:
14.59 TPY of NOx combined from emissions units P069 through P074

Applicable Compliance Method:

Compliance with the above annual NOx emission limitation shall be determined by multiplying the emission factor of 100 lbs of NOx (uncontrolled) produced per million cubic feet of natural gas fired by the sum of the monthly gas usages recorded per section A.III.2.b. for each calendar year, in thousands of cubic feet, and divided by the product of 1,000 times 2000 lbs/ton.

- 1.e.** Emission Limitation:
0.88 lb/hr and 3.85 TPY of CO

Applicable Compliance Method:

Compliance with the above hourly CO emission limitation shall be determined by either multiplying the AP-42 emission factor for CO emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 10 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 84 pounds of CO produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a CO emission rate in pounds per hour.

The above CO emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-1.

As long as compliance is maintained with the hourly CO emission limitation, compliance with the annual CO emission limitation for unit P069 will be shown (the annual CO emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

V. Testing Requirements (continued)

- 1.f.** Emission Limitation:
6.90 TPY of CO combined from emissions units P069 through P074

Applicable Compliance Method:

Compliance with the above annual CO emission limitation shall be determined by multiplying the emission factor of 84 lbs of CO produced per million cubic feet of natural gas fired by the sum of the monthly gas usages recorded per section A.III.2.b. for each calendar year, in thousands of cubic feet, and divided by the product of 1,000 times 2000 lbs/ton.

- 1.g** Emission Limitation:
0.016 lb/hr and 0.07 TPY of SO₂

Applicable Compliance Method:

Compliance with the above hourly SO₂ emission limitation shall be determined by either multiplying the AP-42 emission factor for SO₂ emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 6 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 0.6 pound of SO₂ produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a SO₂ emission rate in pounds per hour.

The above SO₂ emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

As long as compliance is maintained with the hourly SO₂ emission limitation, compliance with the annual SO₂ emission limitation for unit P069 will be shown (the annual SO₂ emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

- 1.h** Emission Limitation:
0.12 TPY of SO₂ combined from emissions units P069 through P074

Applicable Compliance Method:

Compliance with the above annual SO₂ emission limitation shall be determined by multiplying the emission factor of 0.6 lb of CO produced per million cubic feet of natural gas fired by the sum of the monthly gas usages recorded per section A.III.2.b. for each calendar year, in thousands of cubic feet, and divided by the product of 1,000 times 2000 lbs/ton.

- 1.i** Emission Limitation:
0.07 lb/hr and 0.31 TPY of VOC

Applicable Compliance Method:

Compliance with the above hourly VOC emission limitation shall be determined by either multiplying the AP-42 emission factor for VOC emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 18 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 5.5 pounds of VOC produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a VOC emission rate in pounds per hour.

The above VOC emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

As long as compliance is maintained with the hourly VOC emission limitation, compliance with the annual VOC emission limitation for unit P069 will be shown (the annual VOC emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

V. Testing Requirements (continued)

- 1.j** Emission Limitation
0.54 TPY of VOC combined from emissions units P069 through P074

Applicable Compliance Method:

Compliance with the above annual VOC emission limitation shall be determined by multiplying the emission factor of 5.5 lbs of VOC produced per million cubic feet of natural gas fired by the sum of the monthly gas usages recorded per section A.III.2.b. for each calendar year, in thousands of cubic feet, and divided by the product of 1,000 times 2000 lbs/ton.

- 1.k** Emission Limitation:
Visible PE shall not exceed 5 percent opacity, as a six-minute average.

Applicable Compliance Method:

Compliance shall be determined using Method 9 of 40 CFR, Part 60, Appendix A.

- 2.** Compliance with the annual natural gas usage limitation in Section A.1.2.e of these terms and conditions shall be based upon the rolling, twelve-month summations of the monthly gas usages recorded pursuant to Section A.III.2.c.
- 3.** The permittee shall conduct, or have conducted, emission testing for one of the identical emission units P069, P070, P071, P072, P073, and P074 in accordance with the following requirements:
- the emission testing shall be conducted within 6 months after startup of the emissions unit;
 - the emission testing shall be conducted to demonstrate compliance with the allowable emission rate of 1.85 pounds of NOx/hour;
 - the following test method shall be employed to demonstrate compliance with the allowable NOx emission rate: Method 7 of 40 CFR, Part 60, Appendix A.
 - the test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
- 4.** 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, and the person(s) who will be conducting the test. Failure to submit such notification for review and approval prior to the test may result in the appropriate Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test.

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test shall be signed by the person or persons responsible for the test and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test. 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
ingot heat furnace #4 (25 mmBtu/hr)	None	None

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: Ingot Heating Furnace No. 5 (P073)
Activity Description: Natural gas fire batch furnace - 25 MMBtu/hr

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

- 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
ingot heat furnace #5 (25 mmBtu/hr)	OAC rule 3745-17-07(A)(1)	none (refer to section A.I.2.b of the terms and conditions of the permit)
	OAC rule 3745-17-11(B)(1)	none (refer to section A.I.2.a of terms and conditions of the permit)
	OAC rule 3745-18-06(E)(2)	The emission limitation specified by this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05.
	OAC rule 3745-31-05 (PTI # 17-1602)	particulate emissions (PE): 0.34 lb/hr sulfur dioxide (SO ₂): 0.016 lb/hr volatile organic compounds (VOC): 0.07 lb/hr nitrogen oxides (NO _x): 1.85 lbs/hr carbon monoxide (CO): 0.88 lb/hr
		Visible PE from any stack associated with this emissions unit shall not exceed 5 percent opacity, as a six-minute average.
		See A.I.2.d.

2. Additional Terms and Conditions

- Since the raw materials introduced into this emissions unit do not contribute to PE, and since the gaseous fuel is exempt pursuant to OAC rule 3745-17-11(A)(4), there is no PE limitation imposed by this applicable requirement.
- This emissions unit is exempt from the visible PE limitations specified in OAC rule 3745-17-07(A), pursuant to OAC rule 3745-17-07(A)(3)(h), because there is no applicable PE limitation in OAC rule 3745-17-11.
- The emission limitations in A.I.1 are based on the maximum usage; thus, hourly usage record keeping is not required.
- The total combined annual emissions, in tons per year (TPY), of PE, SO₂, CO, VOC and NO_x from emissions units P069 through P074 shall not exceed the following: PE = 2.70, SO₂ = 0.12, CO = 6.90, VOC = 0.54 and NO_x = 14.59 TPY. The individual TPY emissions of PE, SO₂, CO, VOC and NO_x from each of emissions units P069 through P074 shall not exceed the following: PE = 1.5, SO₂ = 0.07, CO = 3.85, VOC = 0.31, and NO_x = 8.10.

2. Additional Terms and Conditions (continued)

- 2.e The natural gas usage for emissions units P069 through P074 combined shall not exceed a total of 382,718 thousand cubic feet per year, as a rolling, twelve-month summation.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall collect and record the following information each month for emissions units P069 through P074:
 - a. the total volume of natural gas used in all of the emissions units in thousands of cubic feet; and
 - b. the total volume of natural gas used in all of the emissions units (P069 through P074), as a rolling, 12-month summation, in thousands of cubic feet.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month limitation for natural gas usage for emissions units P069 through P074 combined.
3. The permittee shall submit annual reports that specify the total NO_x, SO₂, CO, VOC and PE emissions from emissions units P069 through P074 combined, for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Compliance with the emission limitations in sections A.I.1 and A.I.2. of these terms and conditions shall be determined in accordance with the following methods:
 - 1.a. Emission Limitation:
0.34 lb/hr and 1.5 TPY of PE

Applicable Compliance Method:

Compliance with the above hourly PE limitation shall be determined by either multiplying the AP-42 factor for PE (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 5 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 1.9 pounds of PE (filterable) produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired, in millions of cubic feet per hour, in the furnace to calculate a PE rate in pounds per hour.

The above PE emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

As long as compliance is maintained with the hourly PE limitation, compliance with the annual PE limitation for unit P069 will be shown (the annual PE limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

V. Testing Requirements (continued)

- 1.b** Emission Limitation:
2.70 TPY of PE combined from emissions units P069 through P074

Applicable Compliance Method:

Compliance with the above annual PE limitation shall be determined by multiplying the emission factor of 1.9 lbs of PE produced per million cubic feet of natural gas fired by the sum of the monthly gas usages recorded per section A.III.2.b. for each calendar year, in thousands of cubic feet, and divided by the product of 1,000 times 2000 lbs/ton.

- 1.c** Emission Limitation
1.85 lbs/hr and 8.10 TPY of NO_x

Applicable Compliance Method:

Compliance with the above hourly NO_x emission limitation shall be determined by either multiplying the AP-42 emission factor for NO_x emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 7 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 100 pounds (uncontrolled) of NO_x produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a NO_x emission rate in pounds per hour.

The above NO_x emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-1.

As long as compliance is maintained with the hourly NO_x emission limitation, compliance with the annual NO_x emission limitation for unit P069 will be shown (the annual NO_x emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

- 1.d** Emission Limitation:
14.59 TPY of NO_x combined from emissions units P069 through P074

Applicable Compliance Method:

Compliance with the above annual NO_x emission limitation shall be determined by multiplying the emission factor of 100 lbs of NO_x (uncontrolled) produced per million cubic feet of natural gas fired by the sum of the monthly gas usages recorded per section A.III.2.b. for each calendar year, in thousands of cubic feet, and divided by the product of 1,000 times 2000 lbs/ton.

- 1.e.** Emission Limitation:
0.88 lb/hr and 3.85 TPY of CO

Applicable Compliance Method:

Compliance with the above hourly CO emission limitation shall be determined by either multiplying the AP-42 emission factor for CO emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 10 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 84 pounds of CO produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a CO emission rate in pounds per hour.

The above CO emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-1.

As long as compliance is maintained with the hourly CO emission limitation, compliance with the annual CO emission limitation for unit P069 will be shown (the annual CO emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

V. Testing Requirements (continued)

- 1.f.** Emission Limitation:
6.90 TPY of CO combined from emissions units P069 through P074

Applicable Compliance Method:

Compliance with the above annual CO emission limitation shall be determined by multiplying the emission factor of 84 lbs of CO produced per million cubic feet of natural gas fired by the sum of the monthly gas usages recorded per section A.III.2.b. for each calendar year, in thousands of cubic feet, and divided by the product of 1,000 times 2000 lbs/ton.

- 1.g** Emission Limitation:
0.016 lb/hr and 0.07 TPY of SO₂

Applicable Compliance Method:

Compliance with the above hourly SO₂ emission limitation shall be determined by either multiplying the AP-42 emission factor for SO₂ emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 6 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 0.6 pound of SO₂ produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a SO₂ emission rate in pounds per hour.

The above SO₂ emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

As long as compliance is maintained with the hourly SO₂ emission limitation, compliance with the annual SO₂ emission limitation for unit P069 will be shown (the annual SO₂ emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

- 1.h** Emission Limitation:
0.12 TPY of SO₂ combined from emissions units P069 through P074

Applicable Compliance Method:

Compliance with the above annual SO₂ emission limitation shall be determined by multiplying the emission factor of 0.6 lb of CO produced per million cubic feet of natural gas fired by the sum of the monthly gas usages recorded per section A.III.2.b. for each calendar year, in thousands of cubic feet, and divided by the product of 1,000 times 2000 lbs/ton.

- 1.i** Emission Limitation:
0.07 lb/hr and 0.31 TPY of VOC

Applicable Compliance Method:

Compliance with the above hourly VOC emission limitation shall be determined by either multiplying the AP-42 emission factor for VOC emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 18 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 5.5 pounds of VOC produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a VOC emission rate in pounds per hour.

The above VOC emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

As long as compliance is maintained with the hourly VOC emission limitation, compliance with the annual VOC emission limitation for unit P069 will be shown (the annual VOC emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

V. Testing Requirements (continued)

- 1.j** Emission Limitation
0.54 TPY of VOC combined from emissions units P069 through P074

Applicable Compliance Method:

Compliance with the above annual VOC emission limitation shall be determined by multiplying the emission factor of 5.5 lbs of VOC produced per million cubic feet of natural gas fired by the sum of the monthly gas usages recorded per section A.III.2.b. for each calendar year, in thousands of cubic feet, and divided by the product of 1,000 times 2000 lbs/ton.

- 1.k** Emission Limitation:
Visible PE shall not exceed 5 percent opacity, as a six-minute average.

Applicable Compliance Method:

Compliance shall be determined using Method 9 of 40 CFR, Part 60, Appendix A.

- 2.** Compliance with the annual natural gas usage limitation in Section A.1.2.e of these terms and conditions shall be based upon the rolling, twelve-month summations of the monthly gas usages recorded pursuant to Section A.III.2.c.
- 3.** The permittee shall conduct, or have conducted, emission testing for one of the identical emission units P069, P070, P071, P072, P073, and P074 in accordance with the following requirements:
- a. the emission testing shall be conducted within 6 months after startup of the emissions unit;
 - b. the emission testing shall be conducted to demonstrate compliance with the allowable emission rate of 1.85 pounds of NOx/hour;
 - c. the following test method shall be employed to demonstrate compliance with the allowable NOx emission rate: Method 7 of 40 CFR, Part 60, Appendix A.
 - d. the test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
- 4.** 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, and the person(s) who will be conducting the test. Failure to submit such notification for review and approval prior to the test may result in the appropriate Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test.

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test shall be signed by the person or persons responsible for the test and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test. 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
ingot heat furnace #5 (25 mmBtu/hr)	None	None

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: Ingot Heating Furnace No. 6 (P074)
Activity Description: Natural gas fire batch furnace - 25 MMBtu/hr

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
ingot heat furnace #6 (25 mmBtu/hr)	OAC rule 3745-17-07(A)(1)	none (refer to section A.I.2.b of the terms and conditions of the permit)
	OAC rule 3745-17-11(B)(1)	none (refer to section A.I.2.a of the terms and conditions of the permit)
	OAC rule 3745-18-06(E)(2)	The emission limitation specified by this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05.
	OAC rule 3745-31-05 (PTI # 17-1602)	particulate emissions (PE): 0.34 lb/hr sulfur dioxide (SO ₂): 0.016 lb/hr volatile organic compounds (VOC): 0.07 lb/hr nitrogen oxides (NO _x): 1.85 lbs/hr carbon monoxide (CO): 0.88 lb/hr
		Visible PE from any stack associated with this emissions unit shall not exceed 5 percent opacity, as a six-minute average.
		See A.I.2.d.

2. Additional Terms and Conditions

- 2.a Since the raw materials introduced into this emissions unit do not contribute to PE, and since the gaseous fuel is exempt pursuant to OAC rule 3745-17-11(A)(4), there is no PE limitation imposed by this applicable requirement.
- 2.b This emissions unit is exempt from the visible PE limitations specified in OAC rule 3745-17-07(A), pursuant to OAC rule 3745-17-07(A)(3)(h), because there is no applicable PE limitation in OAC rule 3745-17-11.
- 2.c The emission limitations in A.I.1 are based on the maximum usage; thus, hourly usage record keeping is not required.
- 2.d The total combined annual emissions, in tons per year (TPY), of PE, SO₂, CO, VOC and NO_x from emissions units P069 through P074 shall not exceed the following: PE = 2.70, SO₂ = 0.12, CO = 6.90, VOC = 0.54 and NO_x = 14.59 TPY. The individual TPY emissions of PE, SO₂, CO, VOC and NO_x from each of emissions units P069 through P074 shall not exceed the following: PE = 1.5, SO₂ = 0.07, CO = 3.85, VOC = 0.31, and NO_x = 8.10.

2. Additional Terms and Conditions (continued)

- 2.e The natural gas usage for emissions units P069 through P074 combined shall not exceed a total of 382,718 thousand cubic feet per year, as a rolling, twelve-month summation.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall collect and record the following information each month for emissions units P069 through P074:
 - a. the total volume of natural gas used in all of the emissions units in thousands of cubic feet; and
 - b. the total volume of natural gas used in all of the emissions units (P069 through P074), as a rolling, 12-month summation, in thousands of cubic feet.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month limitation for natural gas usage for emissions units P069 through P074 combined.
3. The permittee shall submit annual reports that specify the total NO_x, SO₂, CO, VOC and PE emissions from emissions units P069 through P074 combined, for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Compliance with the emission limitations in sections A.I.1 and A.I.2. of these terms and conditions shall be determined in accordance with the following methods:
 - 1.a. Emission Limitation:
0.34 lb/hr and 1.5 TPY of PE

Applicable Compliance Method:

Compliance with the above hourly PE limitation shall be determined by either multiplying the AP-42 factor for PE (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 5 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 1.9 pounds of PE (filterable) produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired, in millions of cubic feet per hour, in the furnace to calculate a PE rate in pounds per hour.

The above PE emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

As long as compliance is maintained with the hourly PE limitation, compliance with the annual PE limitation for unit P069 will be shown (the annual PE limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

V. Testing Requirements (continued)

- 1.b** Emission Limitation:
2.70 TPY of PE combined from emissions units P069 through P074

Applicable Compliance Method:

Compliance with the above annual PE limitation shall be determined by multiplying the emission factor of 1.9 lbs of PE produced per million cubic feet of natural gas fired by the sum of the monthly gas usages recorded per section A.III.2.b. for each calendar year, in thousands of cubic feet, and divided by the product of 1,000 times 2000 lbs/ton.

- 1.c** Emission Limitation
1.85 lbs/hr and 8.10 TPY of NO_x

Applicable Compliance Method:

Compliance with the above hourly NO_x emission limitation shall be determined by either multiplying the AP-42 emission factor for NO_x emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 7 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 100 pounds (uncontrolled) of NO_x produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a NO_x emission rate in pounds per hour.

The above NO_x emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-1.

As long as compliance is maintained with the hourly NO_x emission limitation, compliance with the annual NO_x emission limitation for unit P069 will be shown (the annual NO_x emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

- 1.d** Emission Limitation:
14.59 TPY of NO_x combined from emissions units P069 through P074

Applicable Compliance Method:

Compliance with the above annual NO_x emission limitation shall be determined by multiplying the emission factor of 100 lbs of NO_x (uncontrolled) produced per million cubic feet of natural gas fired by the sum of the monthly gas usages recorded per section A.III.2.b. for each calendar year, in thousands of cubic feet, and divided by the product of 1,000 times 2000 lbs/ton.

- 1.e.** Emission Limitation:
0.88 lb/hr and 3.85 TPY of CO

Applicable Compliance Method:

Compliance with the above hourly CO emission limitation shall be determined by either multiplying the AP-42 emission factor for CO emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 10 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 84 pounds of CO produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a CO emission rate in pounds per hour.

The above CO emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-1.

As long as compliance is maintained with the hourly CO emission limitation, compliance with the annual CO emission limitation for unit P069 will be shown (the annual CO emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

V. Testing Requirements (continued)

- 1.f.** Emission Limitation:
6.90 TPY of CO combined from emissions units P069 through P074

Applicable Compliance Method:

Compliance with the above annual CO emission limitation shall be determined by multiplying the emission factor of 84 lbs of CO produced per million cubic feet of natural gas fired by the sum of the monthly gas usages recorded per section A.III.2.b. for each calendar year, in thousands of cubic feet, and divided by the product of 1,000 times 2000 lbs/ton.

- 1.g** Emission Limitation:
0.016 lb/hr and 0.07 TPY of SO₂

Applicable Compliance Method:

Compliance with the above hourly SO₂ emission limitation shall be determined by either multiplying the AP-42 emission factor for SO₂ emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 6 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 0.6 pound of SO₂ produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a SO₂ emission rate in pounds per hour.

The above SO₂ emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

As long as compliance is maintained with the hourly SO₂ emission limitation, compliance with the annual SO₂ emission limitation for unit P069 will be shown (the annual SO₂ emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

- 1.h** Emission Limitation:
0.12 TPY of SO₂ combined from emissions units P069 through P074

Applicable Compliance Method:

Compliance with the above annual SO₂ emission limitation shall be determined by multiplying the emission factor of 0.6 lb of CO produced per million cubic feet of natural gas fired by the sum of the monthly gas usages recorded per section A.III.2.b. for each calendar year, in thousands of cubic feet, and divided by the product of 1,000 times 2000 lbs/ton.

- 1.i** Emission Limitation:
0.07 lb/hr and 0.31 TPY of VOC

Applicable Compliance Method:

Compliance with the above hourly VOC emission limitation shall be determined by either multiplying the AP-42 emission factor for VOC emissions (resulting from the operation of natural gas fuel burning equipment) by the maximum hourly natural gas consumption rate of the emissions unit or, if required, by emission testing in accordance with Method 18 of 40 CFR, Part 60, Appendix A. When using the emission factor method, the emission factor of 5.5 pounds of VOC produced per million cubic feet of natural gas fired shall be multiplied by the maximum hourly volume of natural gas fired in the furnace, in millions of cubic feet per hour, to calculate a VOC emission rate in pounds per hour.

The above VOC emission factor was obtained from AP-42, 5th Edition (revised 7/98), Chapter 1.4, Table 1.4-2.

As long as compliance is maintained with the hourly VOC emission limitation, compliance with the annual VOC emission limitation for unit P069 will be shown (the annual VOC emission limitation was calculated by multiplying the hourly limitation by 8760 hours/year, and then dividing the resulting number by 2000 lbs/ton).

V. Testing Requirements (continued)

- 1.j** Emission Limitation
0.54 TPY of VOC combined from emissions units P069 through P074

Applicable Compliance Method:

Compliance with the above annual VOC emission limitation shall be determined by multiplying the emission factor of 5.5 lbs of VOC produced per million cubic feet of natural gas fired by the sum of the monthly gas usages recorded per section A.III.2.b. for each calendar year, in thousands of cubic feet, and divided by the product of 1,000 times 2000 lbs/ton.

- 1.k** Emission Limitation:
Visible PE shall not exceed 5 percent opacity, as a six-minute average.

Applicable Compliance Method:

Compliance shall be determined using Method 9 of 40 CFR, Part 60, Appendix A.

- 2.** Compliance with the annual natural gas usage limitation in Section A.1.2.e of these terms and conditions shall be based upon the rolling, twelve-month summations of the monthly gas usages recorded pursuant to Section A.III.2.c.
- 3.** The permittee shall conduct, or have conducted, emission testing for one of the identical emission units P069, P070, P071, P072, P073, and P074 in accordance with the following requirements:
- the emission testing shall be conducted within 6 months after startup of the emissions unit;
 - the emission testing shall be conducted to demonstrate compliance with the allowable emission rate of 1.85 pounds of NOx/hour;
 - the following test method shall be employed to demonstrate compliance with the allowable NOx emission rate: Method 7 of 40 CFR, Part 60, Appendix A.
 - the test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
- 4.** 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, and the person(s) who will be conducting the test. Failure to submit such notification for review and approval prior to the test may result in the appropriate Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test.

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test shall be signed by the person or persons responsible for the test and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test. 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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Descale Pickle Line Shot Blaster (P902)

Activity Description: Wheelabrator-Frye 4 W/A Strip Cleaning - On Descale Pickle Line (includes material handling)

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
descale pickle line shot blaster with fabric filter	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the fabric filter shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	15.67 lbs of particulate emissions (PE)/hr See A.I.2.b.
fabric filter waste dust handling	OAC rule 3745-17-07(B)(1)	Visible particulate emissions of fugitive dust shall not exceed 20% opacity, as a three-minute average, except as provided by rule.
	OAC rule 3745-17-08(B)	reasonably available control measures to minimize or eliminate visible emissions of fugitive dust (see section A.II.1)

2. Additional Terms and Conditions

- 2.a The permittee shall not operate this emissions unit without the use of the fabric filter.
- 2.b The allowable mass rate of emission of particulate matter was based on Table I of OAC rule 3745-17-11 and was determined to be 15.67 pounds per hour. If the emissions testing required for this emissions unit demonstrates that the allowable emissions rate from Figure II is more stringent than 15.67 lbs/hour, the permittee shall comply with the more stringent limitation.

II. Operational Restrictions

1. The permittee shall employ and maintain lids and connecting piping on the receiving bins under the fabric filter hoppers, and the collected dust shall be treated with a dust suppressant in sufficient quantities to minimize or eliminate visible emissions of fugitive dust during the handling of the collected waste.
2. All PE from the descale pickle line shot blaster shall be vented to the fabric filter. Fugitive emissions are allowed only from the collection point and from the handling of baghouse dust.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall inspect the following items on a once-per-week basis while the emissions unit is in operation:
 - a. all air pollution control ductwork located on the outside of the building, for leaks, holes, or other damage;
 - b. all joints and fittings located outside of the building, for leaks or improper sealing;
 - c. the baghouse unit, for leaks or visible emissions;
 - d. the baghouse stack for unusual visible emissions.
2. The permittee shall collect the following data for each weekly inspection while the emission unit is in operation:
 - a. date and time of the inspection pursuant to A.III.1;
 - b. name of person conducting the weekly inspection;
 - c. notation of any problems observed per A.III.1 (if no problems were observed, a note shall be made stating this);
 - d. description of measures taken to correct any problems; and
 - e. date that problem was corrected.

IV. Reporting Requirements

1. The permittee shall submit annual reports that identify all problems recorded per Section A.III.2. Reports shall include all information recorded, including observations and actions taken to correct the problem(s).
2. The permittee shall submit quarterly visible emission deviation (excursion) reports that identify all periods of time during which the unusual visible emissions were noted from the baghouse stack, per III.1.d, above.

V. Testing Requirements

1. Emission Limitation:
Visible PE from the fabric filter shall not to exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

Compliance with this visible particulate emission limitation shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03(B)(1).

2. Emission Limitations:
15.67 lbs of PE/hr

Applicable Compliance Method:

Compliance with this PE limitation shall be determined by the use of an emission factor found in the U.S. EPA publication titled "Compilation of Air Pollutant Emission Factors," AP-42, Section 13.2.6, Abrasive Blasting (9/97). Specifically, the emission factor [0.69 lb of PE/1000 lbs of abrasive (controlled)] from Table 13.2.6-1 shall be utilized to calculate PE, in lbs of PE/hr, per the following equation:

$$(0.69 \text{ lb of PE}/1000 \text{ lbs of abrasive}) \times (\text{maximum lbs of abrasive/hr})$$

If required, emission testing shall be performed in accordance with Method 5 of 40 CFR, Part 60, Appendix A.

3. Emission Limitation:
Visible PE from any fugitive dust from fabric filter waste dust handling shall not exceed 20% opacity, as a three-minute average, except as provided by rule.

Applicable Compliance method:

Compliance with this visible particulate emission limitation shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03(B)(3).

V. Testing Requirements (continued)

4. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within 6 months after permit issuance and within 6 months prior to permit expiration.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable PE rate.
 - c. The following test method shall be employed to demonstrate compliance with the allowable PE rate: Method 5 of 40 CFR, Part 60, Appendix A.
 - d. The tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
 - e. A PE test also shall be conducted at the inlet of the control device to determine the uncontrolled mass rate of emission for the emissions unit, for purposes of applying Figure II of OAC rule 3745-17-11. For this testing, Method 5 of 40 CFR, Part 60, Appendix A shall be employed.

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 tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission tests.

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the tests.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

- 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
descale pickle line shot blaster with fabric filter	None	None
fabric filter waste dust handling	None	None

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: Pangborn Sandblast Machine (P903)
Activity Description: Pangborn - Type ES

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Pangborn sandblast machine with fabric filter	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the fabric filter shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	14.5 lbs of particulate emissions (PE)/hr See A.I.2.b.
fabric filter waste dust handling	OAC rule 3745-17-07(B)(1)	Visible particulate emissions of fugitive dust shall not exceed 20% opacity, as a three-minute average, except as provided by rule.
	OAC rule 3745-17-08(B)	reasonably available control measures to minimize or eliminate visible emissions of fugitive dust (see section A.II.1)
	OAC rule 3745-31-05 (PTI #17-283)	0.030 grain of PE/dry standard cubic foot (gr/dscf) of exhaust gases The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B), 3745-17-07(B), and 3745-17-08(B).

2. Additional Terms and Conditions

- 2.a The permittee shall not operate this emissions unit without the use of the fabric filter.
- 2.b The allowable mass rate of emission of particulate matter was based on Table I of OAC rule 3745-17-11 and was determined to be 14.5 pounds per hour. If the emissions testing required for this emissions unit demonstrates that the allowable emissions rate from Figure II is more stringent than 14.5 lbs/hour, the permittee shall comply with the more stringent limitation.

II. Operational Restrictions

1. The permittee shall employ and maintain lids and connecting piping on the receiving bins under the fabric filter hoppers, and the collected dust shall be treated with a dust suppressant in sufficient quantities to minimize or eliminate visible emissions of fugitive dust during the handling of the collected waste.
2. The pressure drop across the fabric filter shall be maintained within the range of 2 to 9 inches of water column while the emissions unit is in operation.
3. All PE from the sandblast machine shall be vented to the fabric filter. Fugitive emissions are allowed only from the handling of baghouse dust.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall inspect the following items on a once-per-week basis on while the emissions unit is in operation:
 - a. all air pollution control ductwork located on the outside of the building, for leaks, holes, or other damage;
 - b. all joints and fittings located outside of the building, for leaks or improper sealing; and
 - c. the baghouse unit, for leaks or visible emissions.
2. The permittee shall collect the following data for each weekly inspection while the emission unit is in operation:
 - a. date and time of the inspection pursuant to A.III.1;
 - b. name of person conducting the weekly inspection;
 - c. notation of any problems observed per A.III.1 (if no problems were observed, a note shall be made stating this);
 - d. description of measures taken to correct any problems; and
 - e. date that problem was corrected.
3. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be 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 annual reports that identify all problems recorded per Section A.III.2. Reports shall include all information recorded, including observations and actions taken to correct the problem(s).
2. The permittee shall submit quarterly pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the fabric filter did not comply with the allowable range specified above.

V. Testing Requirements

1. Emission Limitation:
Visible PE from the fabric filter shall not to exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

Compliance with this visible particulate emission limitation shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03(B)(1).

2. Emission Limitations:
14.5 lbs of PE/hr and 0.030 gr of PE/dscf of exhaust gases

Applicable Compliance Method:

Compliance with the PE limitation of 14.5 lbs of PE/hr and 0.030 gr of PE /dscf of exhaust gases shall be determined in accordance with Method 5 of 40 CFR, Part 60, Appendix A.

V. Testing Requirements (continued)

3. Emission Limitation:
Visible PE from any fugitive dust from fabric filter waste dust handling shall not exceed 20% opacity, as a three-minute average, except as provided by rule.
- Applicable Compliance method:
Compliance with this visible particulate emission limitation shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03(B)(3).
4. 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 6 months after permit issuance and within 6 months prior to permit expiration.
 - The emission testing shall be conducted to demonstrate compliance with the allowable PE rate.
 - The following test method shall be employed to demonstrate compliance with the allowable PE rate:
Method 5 of 40 CFR, Part 60, Appendix A.
 - The tests 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.
 - A PE test also shall be conducted at the inlet of the control device to determine the uncontrolled mass rate of emission for the emissions unit, for purposes of applying Figure II of OAC rule 3745-17-11. For this testing, Method 5 of 40 CFR, Part 60, Appendix A shall be employed.

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 tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission tests.

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the tests, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the tests.

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Pangborn sandblast machine with fabric filter	None	None
fabric filter waste dust handling	None	None

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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